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TCS IT Wiz
2018
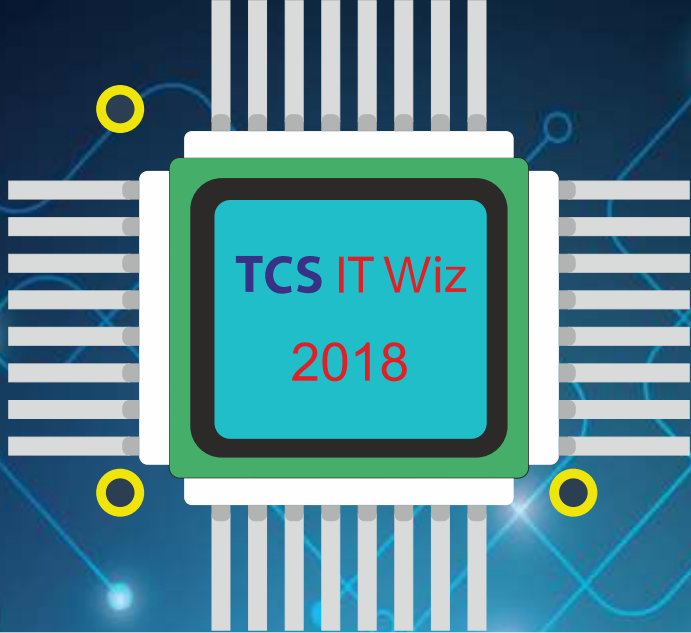
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TATA CONSULTANCY SERVICES

TCS IT Wiz 2018

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About Greycaps

The TCS IT Wiz quiz book is researched by team Greycaps.

Greycaps India Private Limited is the largest onstage quizzing and knowledge services company with prominent presence across India, the Middle East, Singapore, United Kingdom, Sri Lanka, Japan and USA. Greycaps is known for creating knowledge solutions for corporate houses such as Tata Sons, Infosys, Aditya Birla Group, ITC and Economic Times, to name a few. From creating quiz based alternative tools for educational institutions to powerful and engaging awareness enhancement programs, Greycaps has always been at the forefront of innovation. Greycaps is headed by noted quizmaster Giri **Pickbrain** Balasubramaniam.

Greycaps is also the creator of the popular Global Awareness Program, popularly known as GAP, in schools across India. This is a unique GK program built into the school timetable.

Greycaps has been associated with Tata Consultancy Services since 1999, when the IT Quiz was launched.

From the CEO's DESK

Tata Consultancy Services (TCS) completes 50 years which is a matter a great pride for all of us. TCS is counted among the top three IT services brands globally and is a trusted partner to many Fortune 500 corporations in their digital transformation.

TCS actively works with client organisations in their growth and transformation journey to leverage Agile, Automation, Analytics and Cloud.

As technology is central to every Industry, our TCS IT Wiz, a "Smart Classroom", builds resilience, broadens global view of the IT industry and helps you build a holistic perspective. TCS IT Wiz acts as an agile learning platform incorporating the virtues of teamwork, collaboration, interactively with the creative presentation of the quiz in a gamified manner.

Integrating scale and speed are two key learnings from TCS IT Wiz which will remain with you in the pursuit of your dreams.

Rajesh Gopinathan,
CEO and MD,
Tata Consultancy Services

CONTENTS

Crack these...

1. Which famous programming language started as Project Green at Sun Microsystems?

Python	Java	Lisp

2. Darrius, Mokap and Reiko are well known characters from which game series?

Mortal Kombat	Raiden	Scorpion

3. If 'Only the Paranoid Survive' is a book written by Andy Grove, who wrote 'High Output Management'?

Andrew Grove	Vinod Dham	Fred Terman

4. Which famous social networking giant now owns Oculus Virtual Reality?

Twitter	Facebook	MySpace

5. What is the name of the Microsoft technology which enables us to get the help of multimedia without any delay?

Active X	Direct X	Flash

6. The creator of this famous operating system wanted to name his invention 'Freax'. How do we know it today?

Minix	Unix	Linix

7. According to the Nintendo Style Guide, the name "is simply_____, not Nintendo _____." Fill in the blank?

Wii	Xii	Yii

8. Which famous communications protocol was designed in April 2001, implemented and first released on 2 July, 2001 by programmer Bram Cohen?

Bit Torrent	Mega Upload	mTorrent

9. 'Fusion' was the codename for a next-generation microprocessor design and a product of the merger between ATI and which company?

AMD	Intel	Cirus

10. Which game, developed by Jordan Mechner in 1989, found itself being first launched on the Apple II computer before it went on to other gaming platforms?

Prince of Persia	Age of Empires	Mario

11. Connect Weread, Mime360, Chapak.com, to a famous e-commerce website?

| Flipkart | Snapdeal | Amazon |

12. What was started under the name 'Presenter' by Forethought Communications?

| Powerpoint | Photoshop | Corel |

13. What is the name given to the main circuit board on which chips are mounted on a personal computer?

| Motherboard | Sisterboard | Daughterboard |

14. Jimmy Wales, also known as Jimbo, is an American Internet entrepreneur best known for being the founder of what?

| Myspace | Wikipedia | Blogger |

15, Which one word defines 'collection of data duplicating original values stored elsewhere or computed earlier, where the original data is expensive to fetch'?

| System Memory | Cache Memory | Random Memory |

16. What is the last node of a tree in a network called?

| Leaf | Steam | Root |

17. Optimus series of smart phones are from which company?

| LG | Samsung | Sony |

18. Which computer language was developed by John Backus for IBM which was said to be the first high level language?

| Pascal | Cobol | Fortron |

19. Which telecom company is headquartered in a place called ESPOO?

| Motorola | Nokia | Siemens |

20. How do we know the wide area network created in 1969 funded by Advanced Research Projects Agency?

| ARPANET | CDAC | CIA |

21. Who founded the Free Software Foundation, a nonprofit organisation famous for its copyleft initiative?

Richard Stallman   Alan Kay   John Warnock

22. This was started as Software Development Laboratories, later changing to Relational Software Inc and finally, the present name. Which famous company is this?

Sybase   SAP   Oracle

23. Which product was developed at Stanford Research Institute and later incorporated into iPhone 4s?

Siri   Passbook   Tomtom

24. Who has launched the Shield tablet specifically meant for gaming?

Nvidia   Alienware   Asus

25. What was started by Sabeer Bhatia and Jack Smith?

Flickr   Hotmail   Yahoomail

26. Which company is the creator of the iPad Mini?

Apple   Microsoft   Google

27. Which country, for the first time, allowed its citizens to vote over the Internet in their national election?

Vatican   Estonia   Canada

28. What is a non-volatile computer memory that can be electrically erased and reprogrammed, and is primarily used in memory cards and USB drives?

Flash Memory   Cache Memory   Random Memory

29. What is the process of locating the noncontiguous parts of data into which a computer file may be divided, rearranging these parts and restoring them into fewer or into the whole file?

Defrag   Rearrange   Decode

30. What name did Sega give to its video game console that was the successor to the Sega Saturn?

Dreamcast   WII   Play Station

31. This entity has developed the Falcon 1 and Falcon 9. These are launch vehicles designed to be reusable and will supply the International Space Station (ISS) with cargo. Name the entity.

32. Which company founded by Reed Hastings, has launched Fast.com -- a tool to help customers monitor their download speeds anywhere in the world?

33. Which company is creating 'Everykey', a thumbnail-sized gadget that can replace a password, logging you into websites, unlocking your phone, and even opening your digital door locks?

34. In the early 1980s in Japan, these were referred to as 'Baka-chon'. Today, it has been replaced by smartphones and the use has come down drastically. What are we talking about?

35. It is the central part of an operating system. It manages the tasks of the computer and the hardware - most notably memory and CPU time. What are we talking about?

36. This company has a service called NOW. NOW can be accessed via the free Shield Hub app on any shield device. Which company?

37. Which payment solution provider was founded by Pramod Saxena in 2004?

38. This innovation was conceived by Bronte EcKermann, an Australian mechanical industrial designer, and created by South Australian manufacturer Zing International. What are we talking about?

39. Founded as Woodman Labs, Inc., the company eventually focussed on the connected sport genre, also developing a quadcopter drone, Karma, released in October 2016. Which company?

40. MMID is a seven-digit random number issued by the bank upon registration. The Remitter (customer who wants to send money) and Beneficiary (customer who wants to receive the money) should have a MMID for doing this interbank fund transfer. What is MMID?

41. What term was coined by Ben Hammersley in an article titled 'Audible Revolution' that is also known as 'Net Cast', which is a vendor-neutral term?

42. On 15 September 2016, who announced that they had purchased the Saitek brand and assets from Mad Catz for $13 million in cash?

43. Which term refers to extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behaviour and interactions?

44. What was introduced by CompuServe in 1987 as '87a' and has since come into widespread usage on the World Wide Web due to its wide support and portability?

45. Which type of a card can store data by modifying tiny, iron-based particles on a band of material on the card?

46. This is a motion picture film format and a set of cinema projection standards developed in Canada by Graeme Ferguson, Roman Kroitor, Robert Kerr and William C. Shaw. How do we know it?

47. Which non-metallic element's name was coined in 1817 by British chemist Thomas Thomson, for something that was obtained from a hard-grey rock called 'Flint'?

48. Which web browser was developed by National Center for Supercomputing Applications in 1993 in USA, and is credited for popularising World Wide Web?

49. Which Indian sportsperson has invested in London based startup Sport Convo, a social media hub for discussing anything related to sports and for sharing sporting news and features online?

50. SafeZone is a purportedly safe web browser, based on Chromium. Which antivirus software and internet security services company created it?

51. DSL, originally Digital Subscriber Loop, is a family of technologies that are used to transmit digital data over telephone lines. How do we know DSL today?

52. Which semiconductor technology corporation based in Canada, was founded in 1985 as Array Technology Inc., and acquired by Advanced Micro Devices (AMD) in 2006?

53. This was founded by Ben Silbermann, Paul Sciarra and Evan Sharp. Their CEO summarized the company as a 'catalog of ideas', rather than as a social network, that inspires users to 'go out and do that thing'. Which website is this?

54. This service debuted on 7 Sept, 2006 as Unbox in the United States. It is extremely popular today. Which service is this?

55. It gets its name from the terms 'Research and Development'. This is an American nonprofit global policy think tank originally formed by Douglas Aircraft Company to offer research and analysis to the United States Armed Forces. How do we know them better?

56. Which Google offering has come up with the 'Music Foundry' program to assist music artists produce content and guide them to grow successfully on its platform?

57. What is the term used for a clause associated with software products that states, "The vendor is not responsible for any loss due to use of this product"?

58. It is a set of related programs located at a network gateway server that protects the resources of a private network from users of other networks. What are we describing?

59. Back in October 2014, this great physics professor made his first Facebook post that read - "I have always wondered what makes the universe exist. Time and space may forever be a mystery, but that has not stopped my pursuit." Who is this professor who asked people to be curious through his first post?

60. In the 1980s, Hiroshi Ueda, an engineer at Minolta was holidaying in Paris. He asked someone to take a photo of him with his wife, at the Louvre Museum in Paris. The person ran away with his camera. What did he create after coming back?

61. Which first in the world of technology was IBM Simon?

62. What are the codenames for - Precise Pangolin, Quantal Quetzal, Raring Ringtail, and Trusty Tahr?

63. Hidden Reflex is a software and web application product startup based in Bengaluru. They created India's first what?

64. V.S.S. Mani was working with a yellow pages company called United Database India (UDI) in 1987 and thought of a business plan which could make the database more accessible. In 1994, at Mumbai, he started a company which put his plan into practice. Which company?

65. Which was the first ever dot com in the world, in terms of a domain name registered?

66. The name of this language originated during an online chat session between Matsumoto and Keiju Ishitsuka on 24 February, 1993, before any code had been written for the language. Initially two names were proposed: 'Coral' and 'X'. What is this now popular programming language?

67. It is often called a notebook or 'notebook computer'. It is a small, portable personal computer with a 'clamshell' form factor, an alphanumeric keyboard on the lower part of the 'clamshell' and a thin LCD or LED computer screen on the upper portion, which is opened up to use the computer. What it is called?

68. Named as the 'Word of the Year 2009', it means 'to remove someone from a list of designated friends on a person's social networking website'. Which word?

69. Who has started its India operations in February 2012 with the launch of portal, Junglee.com, which was acquired by it in early 2000 from Indian entrepreneurs Rakesh Mathur and Ashish Gupta?

70. AMOLED is a display technology used in smartwatches, mobile devices, laptops, and televisions. What is AM if OLED stands for organic light-emitting diode?

71. Which word coming from Sanskrit means 'an icon or figure representing a particular person in a computer game, Internet forum'?

72. This system was invented in 1994 by Denso Wave, a Toyota subsidiary. Its purpose was to track vehicles during manufacture; it was designed to allow high-speed component scanning. It consists of black modules (square dots) arranged in a square grid on a white background, which can be read by an imaging device. What is this system?

73. It was originally released as a power toy for the Tablet PC launch in 2002. The program is a screen-capture tool that comes with Windows. How do we know it?

74. In the world of telecommunications network or computer network, if WAN = Wide Area Network and LAN = Local Area Network, what is CAN?

75. What was founded by Sanjeev Bhikachandani and established in 1997 by Info Edge (India) Ltd.? Its parent company was the first dot com conglomerate to be listed on the Bombay Stock Exchange Ltd.

The
Identity

1   Identify the company he founded.

a. INTEL

b. AMD

c. Microsoft

2   Identify the company she led as CEO.

a. XEROX

b. HP

c. Ebay

3   Identify the company.

a. Sega

b. UBI Soft

c. Zynga

4 > Identify the company.

a. Compaq

b. Lenovo

c. Qsoft

5 > Identify the audio player.

a. Winamp

b. HMV

c. VLC

6 > Identify the logo.

a. Skype

b. UBI Soft

c. Zynga

7 Identify the company he founded.

a. Google

b. Oracle

c. Blackberry

8 Identify the company. She was its CEO

a. Yahoo

b. Google

c. HP

9 Identify the company.

a. Flickr

b. Foursquare

c. Flixter

10 Identify the company.

a. MTNL
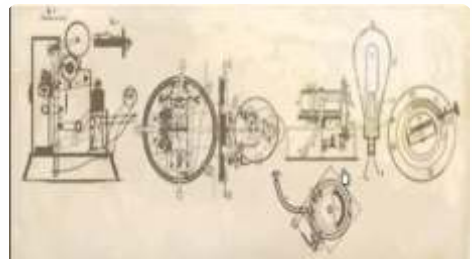
b. VSNL

c. BSNL

11 Identify the product.

a. Google Wallet

b. Google Maps

c. Google Photos

12 Identify the person.

a. Thomas Edison

b. Charles Babbage

c. Alan Turing

13 > Identify the company.

a. Starlite

b. Philips

c. LG

14 > Identify the company.

a. SpadeX

b. Cap Gemini

c. Adidas

15 > Identify the company.

a. Google

b. Firefox

c. Snapdragon

16 Identify the person.

17 Identify the company

18 Identify this search engine.

19 Identify the company.

20 Identify this software.

21 Identify the company.

22 Identify the company.

23 Identify this game.

24 Identify this person.

25 Name the inventor.

26 Whose insignia is this?

27 Identify this company from its old logo.

28 Identify the programming language.

29 Identify this OS.

30 Identify this micro blogging website.

31 Identify this logo.

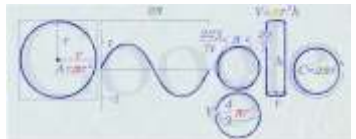**32** Identify this person.

33 Identify the programming language.

34 Identify this special day.

35 Identify this person.

36 Identify this logo.

37 Identify this logo.

38 Identify the product.
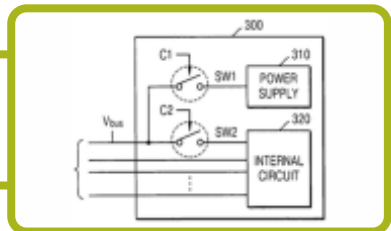

39 Identify the logo.
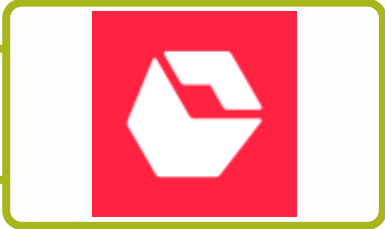

40 Identify the patent.

41 Identify this person.

42 Identify this logo.

43 Identify the app.

44 Identify the logo.

45 Identify the game.
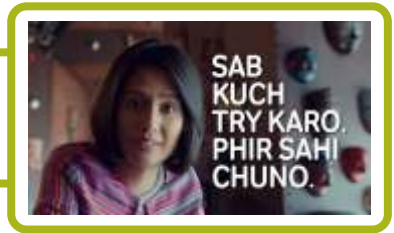
46 Identify this offering from Google.

47 Identify this logo.

48 Identify the technology.

49 Identify the advertiser.

SAB KUCH TRY KARO. PHIR SAHI CHUNO.

50 Whose offering is this?

EATS

#TCSITWiz Best Tweets (2017)

#TCSITWiz - Mumbai - Tcsitwiz without @Pickbrain is like pizza without cheese, a geek without braces and a sentence without spaces!

#TCSITWiz - Delhi - With every breath I'm inhaling a few particles of knowledge here. Thank you TCS for providing us with such awesome air! @TCSITWiz

#TCSITWiz - Kochi - If these tweets could make music like a musical typewriter, then we would hear a symphony , here at Kochi and with #TCSITWiz as the maestro

#TCSITWiz - Pune - At the end of #TCSITWiz one team will be the winner, one team will be the runner-up. But all of us will be Learners. Thank you.

#TCSITWiz - Bhubaneswar - @TCSITWiz if Shakespeare would have known about TCSITWiz - What's in D name? Dat which we call #TCSITWiz by any other name would be as innovative.

#TCSITWiz - Nagpur - If twitter were to plant one tree for every ten tweets with #TCSITWiz @TCSITWiz, we'd be living in a jungle by now.

#TCSITWiz - Indore - TCS IT Wiz is the best way in which one can make his brain a treasure of knowledge and inspiration to stand at stage of triumph.

#TCSITWiz - Kolkata - Want to see some quality quizzing? Come to Kalamandir and witness the best quiz show ever! @TCSITWiz -

#TCSITWiz - Hyderabad - @TCSITWiz If there was any machine for sensing the amount of the knowledge in a room..... It would get damaged in this auditorium - Hyderabad

#TCSITWiz - Chennai - @tcsitwiz #USAINBOLT lost his record in Olympics But TCSITWiz never lost the title of the best quiz in India since 1999 !!

#TCSITWiz - Bangalore - @TCSITWiz If there were tickets for TCS, the box office would be a stamped and the auditorium would be a battleground

#TCSITWiz - Ahmedabad - @TCSITWiz Here is the place where you experience and make yourself greater!

Word Search

1. Accessories

Find 10 words related to accessories in the grid below.

```
B E D K B H R R R G X W
L W F W F S E V B D A P
U H E C S N I B G Y R V
E R L B N M O D E M E S
T U G A C O B B H V P P
O C C U E A I Z I K R E
O S V S K W M R E N I A
T Q U P B U D E N F N K
H O H C A N G R R N T E
M J Q Q E D G C H A E R
U E C P K E Y B O A R D
M Z C J O Y S T I C K E
```

Hints

MOUSE | PRINTER | KEYBOARD | MODEM | SPEAKER | SCANNER | WEBCAMERA | PENDRIVE | BLUETOOTH | JOYSTICK

2. Companies

Find 10 company names in the grid below.

```
M  Z  K  R  O  N  H  C  I  S  C  O
I  Y  B  F  J  X  H  A  L  O  Q  L
N  G  I  A  G  N  L  Z  I  Y  A  B
D  X  E  M  S  O  O  N  E  G  B  P
T  G  F  I  R  A  A  K  B  S  Y  O
R  L  G  O  D  G  M  Q  I  O  Z  L
E  A  T  N  R  B  D  S  B  A  D  A
E  O  Q  O  T  R  H  M  U  L  J  R
M  C  M  I  S  I  E  M  E  N  S  I
P  P  S  B  O  R  A  C  L  E  G  S
J  N  L  M  W  B  O  Q  O  M  B  X
B  K  M  U  R  A  R  E  R  D  L  I
```

Hints

CISCO | MINDTREE | POLARIS | IBM | JP MORGAN | ORACLE | MOTOROLA | NOKIA | SAMSUNG | SIEMENS

3. People

Find 10 names of people in the grid below.

```
K N T W I M V V V H J C
V D V X O G G O D L A A
S I E S Q Z R O H I C R
C W N L T E N N L N K O
L Q O T M E D I Z D S L
N O Y L O H V Z A A M B
D Y L B T N A E T C I A
H A B Q X E C D J O T R
B I L L G A T E S O H T
N X K Z A M E A R K B Z
J A C K W E L C H F N S
S J E R R Y Y A N G S H
```

Hints

WOZNIAC | JACK SMITH | STEVE JOBS | JERRY YANG | BALLMER | BILL GATES | VINTON CERF | LINDA COOK | JACK WELCH | CAROLBARTZ

4. File Formats

Find 10 words related to different file formats in the grid below.

```
T  L  I  W  Q  V  G  D
G  I  F  P  A  K  V  L
P  L  F  D  A  V  M  L
V  P  Z  F  A  B  M  P
A  H  T  O  P  V  T  D
D  H  G  J  N  K  I  R
D  R  F  X  G  Z  V  F
M  P  G  A  N  Z  X  Y
```

Hints

TIF | DLL | BMP | PDF | PNG | WAV | GIF | MPG | AVI | PPT

5. Terminology

Find 10 terms related to technology from the grid below.

B	O	O	T	I	N	G	T	D	M	C	H
M	Z	R	B	Y	P	E	X	O	A	L	V
F	N	Q	U	W	N	I	M	W	G	I	H
P	S	N	A	R	K	G	B	N	G	P	D
Y	E	P	E	D	Y	Z	A	T	C	B	E
W	M	H	C	V	O	T	C	I	L	O	F
C	T	Z	F	O	I	C	K	M	V	A	Y
E	Q	D	S	P	O	S	U	E	R	R	T
U	P	L	O	A	D	K	P	M	O	D	O
A	C	C	E	S	S	T	I	M	E	Q	Q
S	G	R	Y	C	D	Q	E	E	A	N	Z
A	O	Q	T	K	U	M	A	H	S	I	T

Hints

BOOTING | ETHERNET | UPLOAD | ACCESS TIME | DOWNTIME | CLIPBOARD | BACKUP | MEMORY | COOKIES | DOCUMENT

6. Languages

Find 10 languages in the grid below.

```
P C A W A K R Z C K B I
K Y O W E Q Q I Y Q E H
J K T B T S G S P E R L
P E V H O D J B Q D S N
Z U F D O L W Q E D A S
A C C M U N V O L R C G
B O Y E U R M T T P L D
G B R U B Y B R W A K E
U R P W I W O A C M U L
B A E K F F O S S A H P
R G A L L W A M C I D H
P C L I P P E R E F C I
```

Hints

COBOL | FORTRAN | DELPHI | PYTHON | CLIPPER | BASIC | PASCAL | RUBY | COBRA | PERL

7. Operating Systems

Find 10 operating systems in the grid below.

```
E G W H C P I A U D J S
H V F E D O R A E S X C
S O L A R I S S Q I A V
Y I F V Z E W O N S N A
M Z D L Z O D U Y M D D
B C Q S D W P S Y I R U
I Q J N D A I X P S O B
A L I F Q N J Y A Z I U
N W I S U X I K L H D N
U J A N F H P C M W W T
O F I J U F D O S O X U
U C F F R X X U B J B B
```
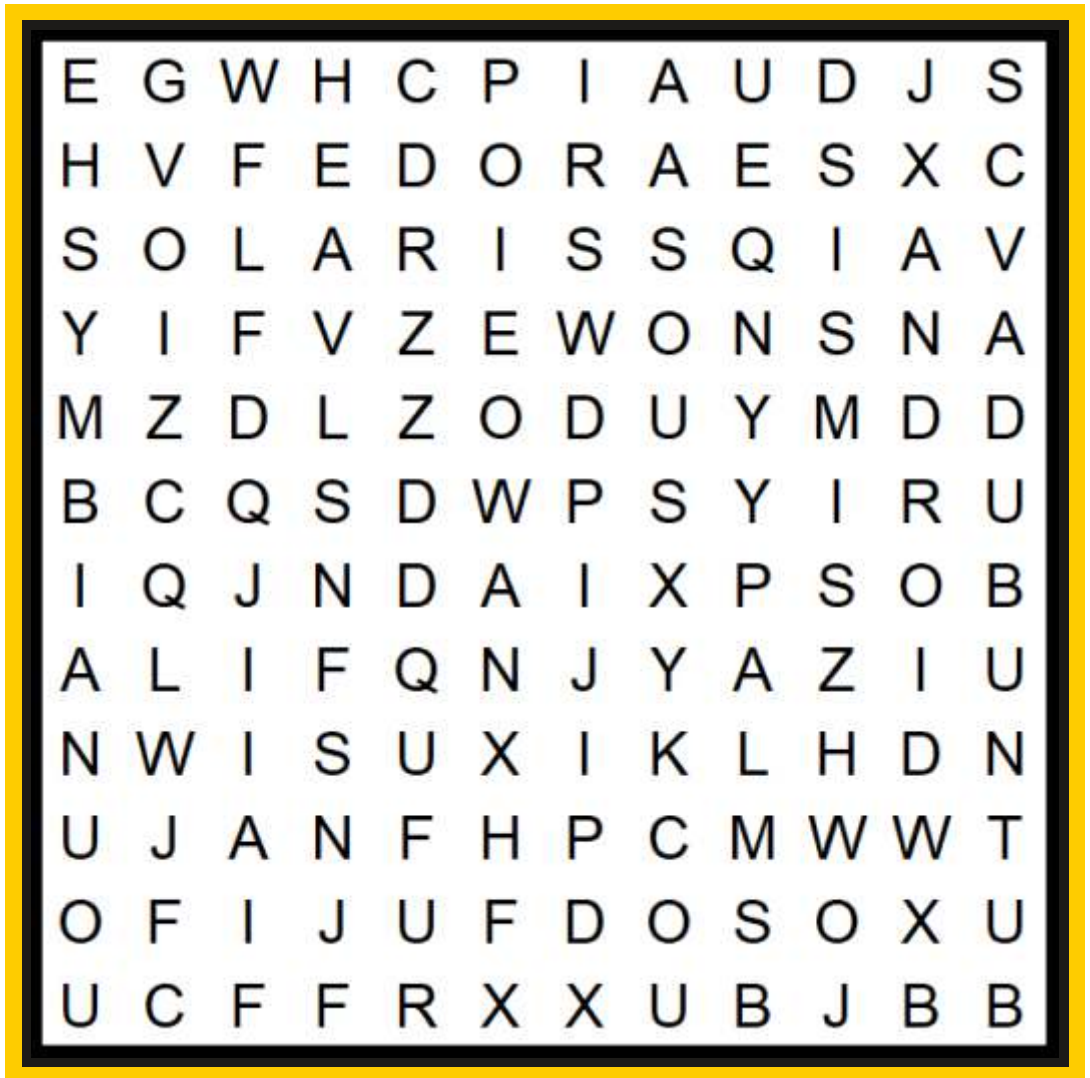
Hints

SYMBIAN | ANDROID | DOS | UBUNTU | SOLARIS | LINUX | UNIX | FEDORA | WINDOWS | UNISYS

8. Social Networking

Find 10 words related to social networking in the grid below.

```
T K D P I N T E R E S T
W F Q M G Z R U K K P D
M G Q R F E D E M S N M
F O O L T A W E N B W C
H L E T A X C H M E L U
O G I T A G G E D J O R
W W E C H A T W B B H H
T Q P M K T X B S O E V
O Z A W R R B Y M W O F
K O S N A P C H A T Q K
X N Z T G T E Z R R L F
I E I F L I N K E D I N
```

Hints

PINTEREST | TUMBLR | LINKEDIN | FACEBOOK | TAGGED | TWITTER | SNAPCHAT | QZONE | WECHAT | FLICKR

9. Brands

Find 10 words related to brands in the grid below.

```
B E L A P Z G Y X R I N
L V N K C N J A O E P J
A B U O A I M R S X Q E
C T T J U O F A C E R S
K M I C R O S O F T Y A
B P W C P F X Y I E Y M
E G I B A O N O K I A S
R M Q D B Q U U S C S U
R I F X E N R T W J F N
Y B A W Y L X U R A C G
Q E O W J P L B L V I R
T O S H I B A E F J J L
```

Hints

MICROMAX | SAMSUNG | MICROSOFT | ACER | YOUTUBE | XBOX | BLACKBERRY | DELL | NOKIA | TOSHIBA

10. I/O Devices

Find 10 words related to Input / Output devices in the grid below.

```
K E Y B O A R D T C I H
S H E J U Z A X T Z W Z
M P D F O P S T Y L U S
Z O E G C Y R D A Q M C
M P N A K F S I Z N X A
T M P I K Z V T N W Y N
C P H Z T E R G I T K N
P A Y Q S O R U K C E E
B Y M V O W R C Z Z K R
T H K E K K V M O U S E
Z M I C R O P H O N E C
U Y M C C A R Q L Z G P
```

Hints

PRINTER | MONITOR | SCANNER | SPEAKER | MICROPHONE | CAMERA | JOYSTICK | MOUSE | KEYBOARD | STYLUS

#TCSITWiz Best Tweets (2016)

If TCS IT Wiz were a person, it would definitely be on the Time's magazine front page.

Any combination of the 26 alphabets cannot describe the quality of #TCSITWiz its just beyond ones thinking.

Twitter asked me,"what's happening?", I said "you would have known if you were @TCSITWiz "

You know that feeling when there are so many people who look like they might crush you with their knowledge? No? Well, I do now #TCSITWiz

"Knowledge is if no value unless we put it in practice"and that practice is provided by @TCSITWiz

India is the land of festivals… and TCSITWiz is the most awaited one.

The biggest classroom in the whole of kerala or perhaps India, imparting knowledge to hundreds of students for generation TCSITWiz

TCSITWiz is continuing the legacy which started by Dr. A.P.J Abdul Kalam "Inspiring Young Minds"

Steve Jobs once said " We don't stop Innovating" I Wish I Witnessed it. TCS makes my wish come true. Every Year.

If Forbes made a list of 'Most Influential Quizzes'. We all know that @TCSITWiz will be on top.

If facebook is essential for social networking then TCS is important for India's Youth and tech.

What if you today were stranded on a island and you found a PC with google fiber? Contact home or TCSITWiz

If the world of Harry Potter was filled with technology, the Triwizard Tournament will be TCSITWiz!

If there was a competition for QUIZZING in the Olympics, then India will surely win gold. Following Olympics at Rio? The real Olympaid is here!

Everything seems to scream #TCSITWiz today. Just saw a bus going to 'Giri Nagar'.

You know it's TCS IT quiz when people tweet instead of finding pokemon!

Cross roads

Across

1. This company is best known for its flagship computer-aided design software AutoCAD.

2. Since its creation in 2006 by Jack Dorsey, it is described as the 'SMS of the Internet'.

7. Masaru Ibuka and Akio Morita are associated with this famous electronics company.

8. This company's mission is "to organize the world's information and make it universally accessible and useful".

9. This is the term for a search engine that searches for other search engines.
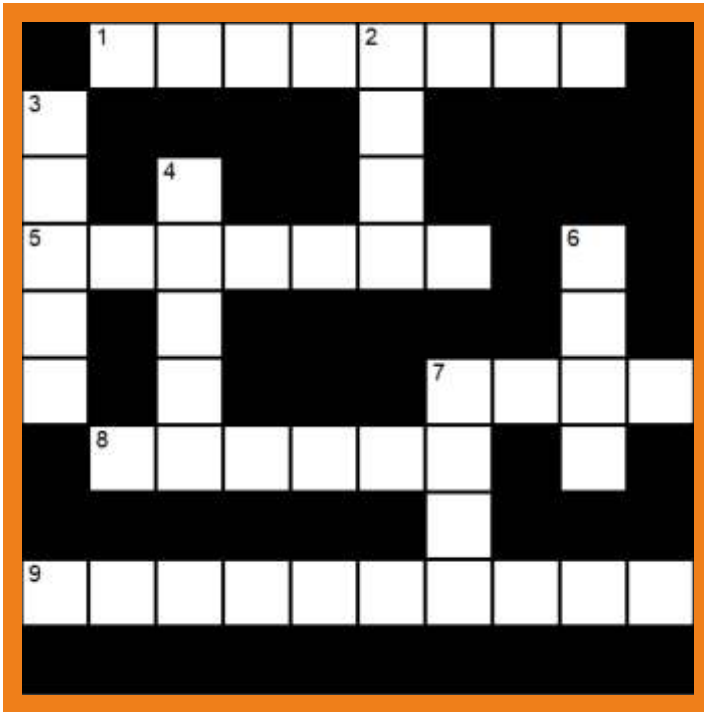
Down

2. This is the name of Java's mascot.

3. This semiconductor company was founded by Gordon E. Moore and Robert Noyce.

4. This company brought out the e.Go range of computers in India.

6. This telephone operator was the first to launch 3G services.

7. Sonic the Hedgehog represents this gaming company.

Across

1. Jonathan Ivy's creation.

5. The name is a mixture of a mathematical variable and video.

6. This web browser by Marc Andreessen is the first ever graphical browser.

7. PC's Limited was the original name of this company.

8. You would associate the HUMAN NETWORK with this company.

9. Kindle, a digital book reader is from this company.
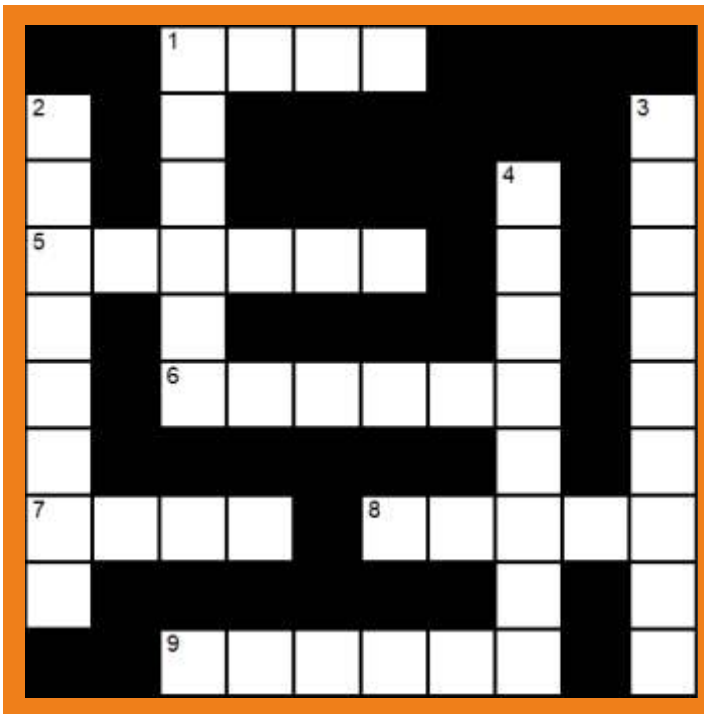
Down

1. This company derived its name from the mathematician Rene Descartes's famous statement.

2. The Wii is a home video game console released by this company.

3. Bing is a search engine from this company.

4. Bluetooth was created by this telecom vendor in 1994 .

Across

1. Soundlink is a wireless mobile speaker from this giant.

4. Compatibility and Quality was their tagline.

7. This creator of TCP/IP is now with Google.

9. Integrated Electronics Corporation.

10. Mark Pincus with his dog, is the founder of this company.

3
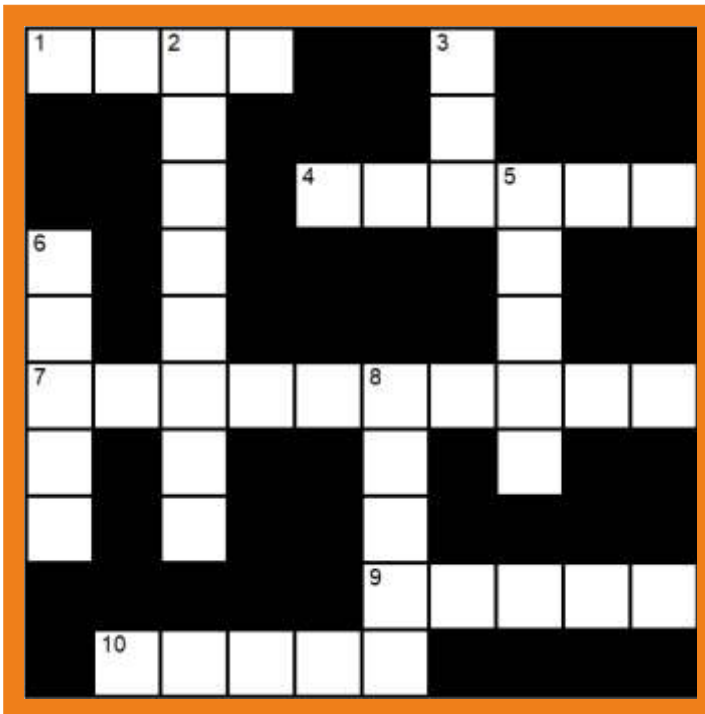
Down

2. In a Binary Tree this is the name given to nodes that share the same parent node.

3. This company is known as the Big Blue and is now a 100 years old.

5. This is the smallest piece of information in an image.

6. The creators of the Angry Birds.

8. Lumia is the series of Windows phone by them.

Across

2. This is popularly know as 'Bringing Enjoyment N Quality to life'.

5. Linksys, WebEx, Iron Port and Scientific Atlanta are its networking brands.

6. In the world of communications, this was created by Janus Friis and Niklas Zennstrom and acquired by Microsoft in 2011.

8. Google's discontinued social networking site .

10. This started as CTR and Co.
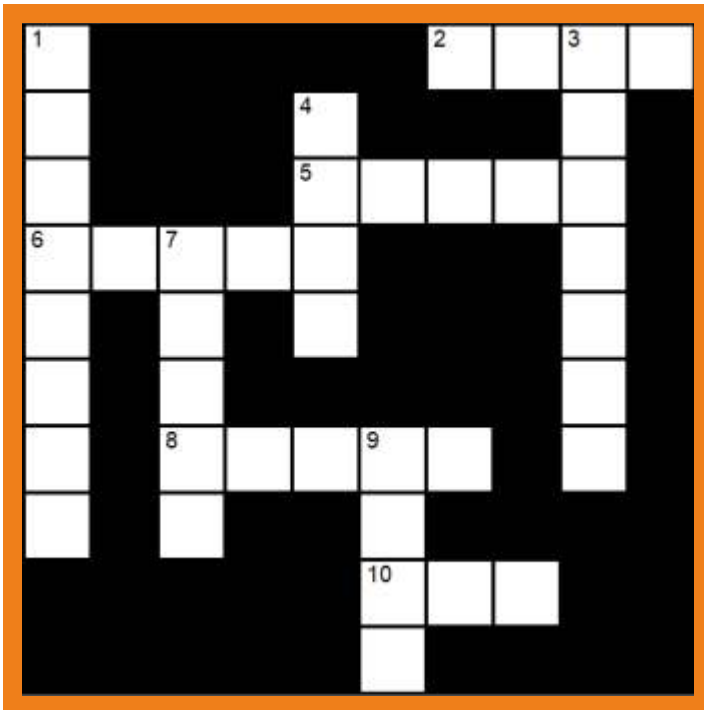
Down

1. An attempt to acquire information such as usernames, passwords and credit card details, by masquerading as a trustworthy entity in an electronic communication.

3. Google uses this name for its new employees.

4. This company's tagline says 'Explore beyond limits'.

7. 'Akebono' & 'Konishiki' were their first servers.

10. Ken Thompson and Dennis Ritchie are credited with the development of this OS at Bell Laboratories.

Across

1. It is used to convert digital data from computers to analog data for phone line transmission.

2. Lucky Goldstar is the old name of this electronics company.

4. First computer worm that could infect mobile phones.

6. 'Flyte' was the online music store set up by this company.

8. A data packet is typically forwarded from one _____ to another _____ through the networks that constitute an internetwork, until it reaches its destination node.

5
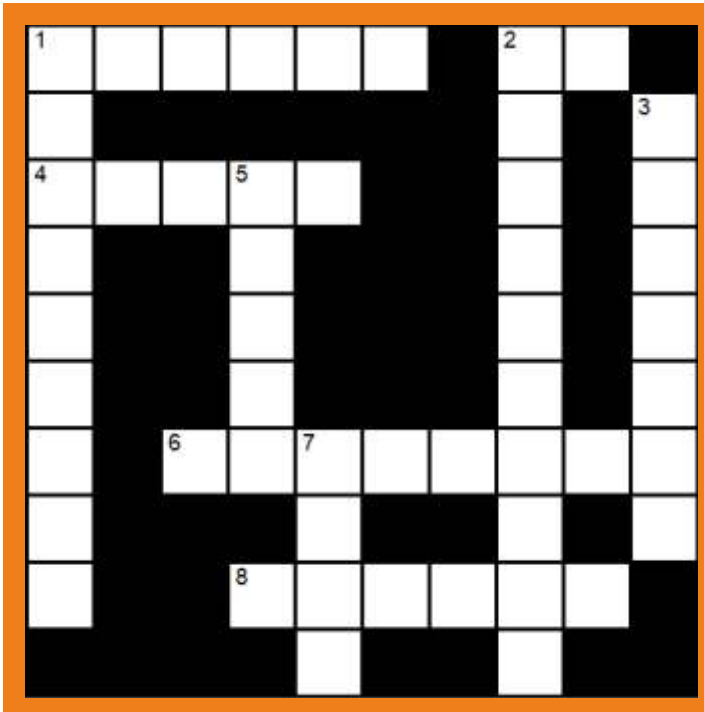
Down

1. OneNote is a tool for note taking and information gathering from them.

2. AND, NOT, OR and XOR are collectively called as this.

3. World's most popular cat, the Talking Tom, was created by them.

5. Atom is a microprocessor platform from this company.

7. Autobiography of Steve Wozniak.

Across

5. Donut, Éclair, Froyo, Gingerbread, Honeycomb and Ice Cream Sandwich are all versions of this Operating System.

6. This is popularly known as International Business Machines Corporation.

9. In this famous game you find the name such as 'Shadow', 'Speedy', 'Bashful' and 'Pokey'.

10. 'Present yourself' is the tagline of this company.

6
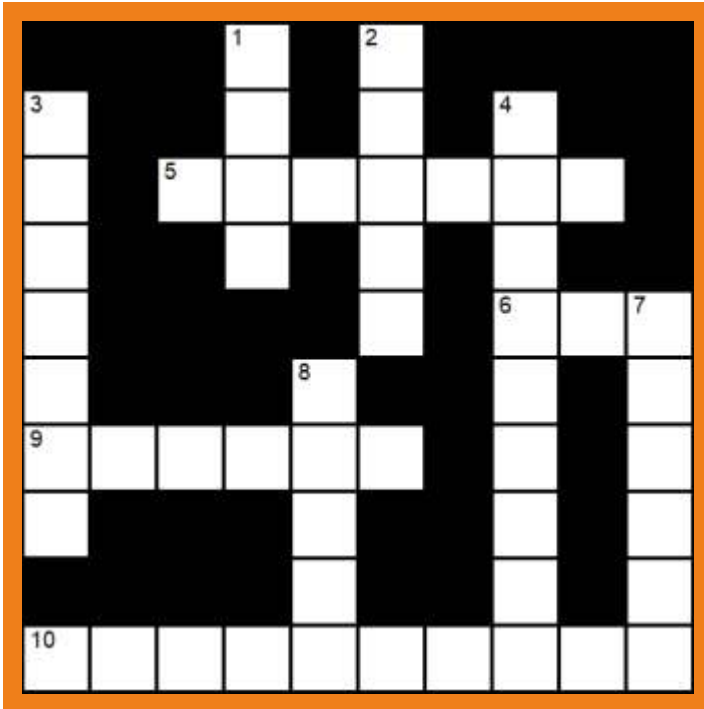
Down

1. AIBO is a robot dog created by this company.

2. We popularly know Vital Information Resource under Seige as this.

3. Founded by two brothers - Anton and Gerard, a maternal cousin of Karl Marx, in Eindhoven, Netherlands, this company's first products were carbon-filament lamps.

4. It is a free online encyclopedia, created and edited by volunteers around the world.

7. In the term mVoIP, if VoIP stands for 'voice over internet protocol' then 'm' stands for this.

8. A small fast memory holding recently accessed data, designed to speed up subsequent access to the same data.

Across

2. Software that appears to perform a desirable function for the user prior to run or install, but steals information or harms the system.

4. The name of Yahoo! Mail's mascot.

6. Use of electronic messaging systems to send unsolicited bulk messages indiscriminately.

7. A graphical web browser developed by Apple and included as part of the Mac OS X operating system. First released in 2003.

8. Reid Hoffman is one of the key founders of this social networking site.
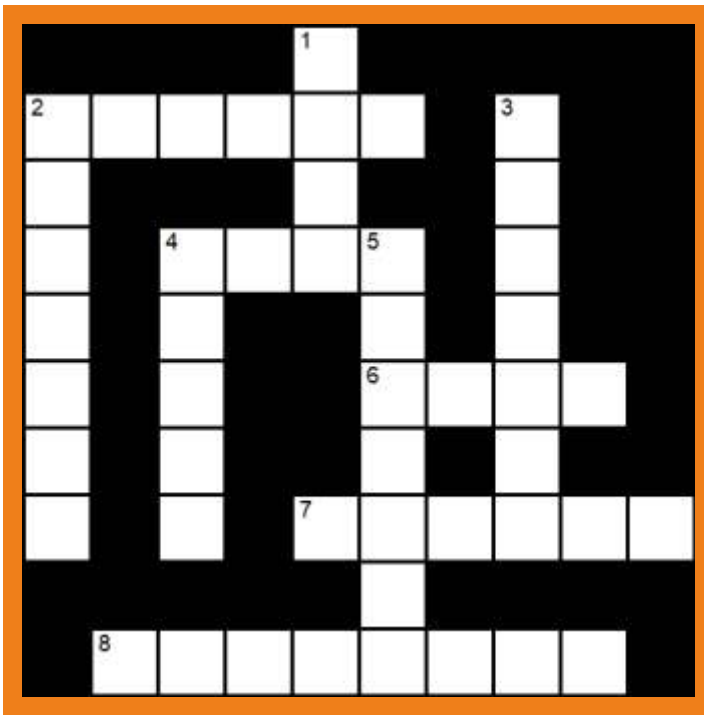
Down

1. Originally developed by James Gosling at Sun Microsystems and released in 1995.

2. This company's logo is called 'Larry the Bird'

3. If Apple: Siri then Microsoft : _____

4. TUX is the mascot for this entity.

5. This social networking website was re-launched with Justin Timberlake's new single 'Suit & Tie'.

Across

1. One word for seamless image transition.

5. This began in 1979 as the Graphics Group, acquired by Apple co-founder Steve Jobs in 1986 and was finally bought by The Walt Disney Company.

6. A small application that performs one specific task, sometimes running within the context of a larger program. The word was first used in 1993.

8. Mitchell Baker the Chief Lizard Wrangler at Mozilla, created this browser.

9. Eduardo Saverin, Dustin Moskovitz and Chris Hughes were the three of the four founders of this in 2004.
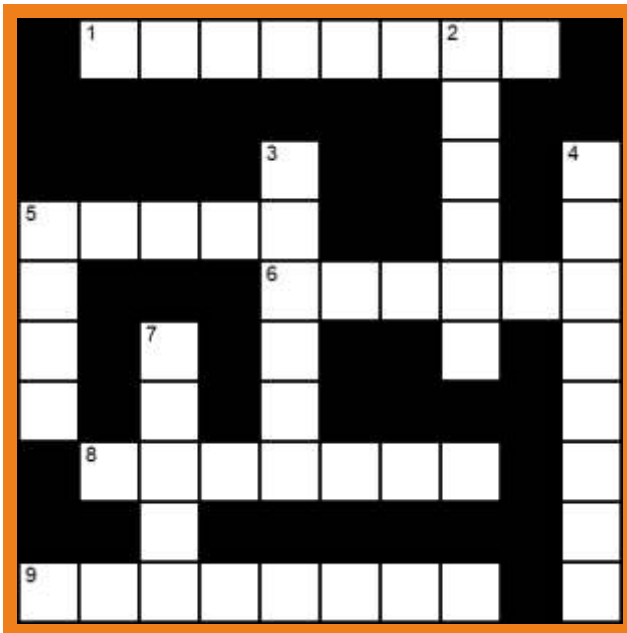
Down

2. 8 bits constitute a byte. So, half a byte i.e. 4 bits referred to as this.

3. This is a hardware device that is used to connect a portable device to a desktop computer.

4. This began as Galvin Manufacturing Corporation in 1928, with its first product being a battery eliminator. Today it is popularly called as this.

5. A Network administration utility used to test the reachability of a host on an network, and to measure the round-trip time for messages sent from the originating host to a destination computer.

7. This was the first general-purpose electronic computer. When this was announced in 1946, it was heralded in the press as a 'Giant Brain'.

Across

1. The designs of this are governed by the ISO/IEC 9995 international standard.

4. This is a motion sensing input device by Microsoft for the Xbox 360 video game console and Windows PCs, which enables users to control and interact without the need to touch a game controller.

6. Niklaus Emil Wirth is known as father of which programming language named after a French mathematician, physicist, religious philosopher and master of prose?

9. This was Macromedia's first and most successful multimedia player prior to the introduction of Macromedia Flash.

10. This was initially called Oak, then Green. Later this was renamed to its current name, since it was consumed in large quantities by the creators.
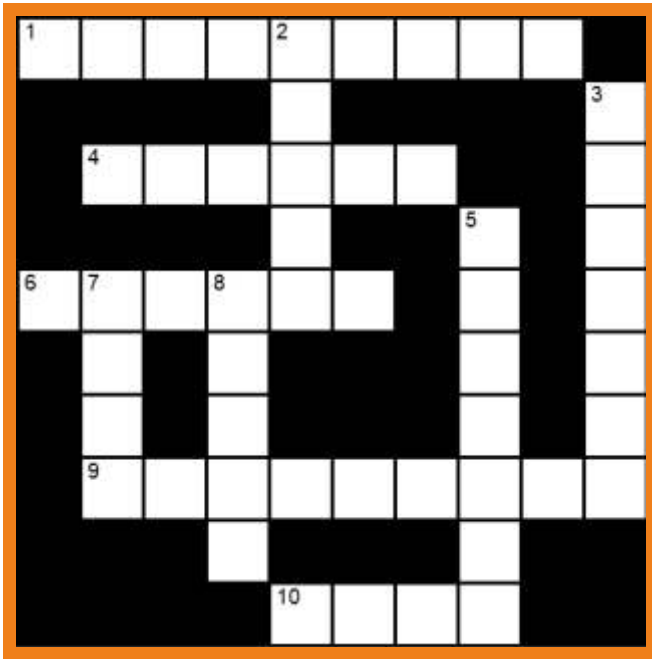
Down

2. This web browser began in 1994 as a research project at Telenor, the largest Norwegian telecommunications company.

3. Chad hurley, Steve Chen and Jawed Karim founded this company.

5. Jack Ma named this company after a character from a famous story as he believed that by doing so, the brand would be easily recognised.

7. This Taiwan based computer hardware and technology company has a name inspired from the winged horse of Greek mythology.

8. EOS is a technology from this camera company.

Across

1. This was originally released as a powertoy for the Tablet PC launch in 2002. The program is a screen-capture tool that comes with Windows.

4. This company has recently launched the 'Cup of Coffee' campaign to demonstrate to small business owners how easy it is to build websites.

5. Norton is one of the flagship products of this company.

5. George Lucas sold this independent company, which was named for the Spanish verb meaning 'to make pictures'.

9. A 2006 film starring Harrison Ford as Jack Stanfield, a security expert at a bank faced with a corporate merger and the offer of a new job.

10
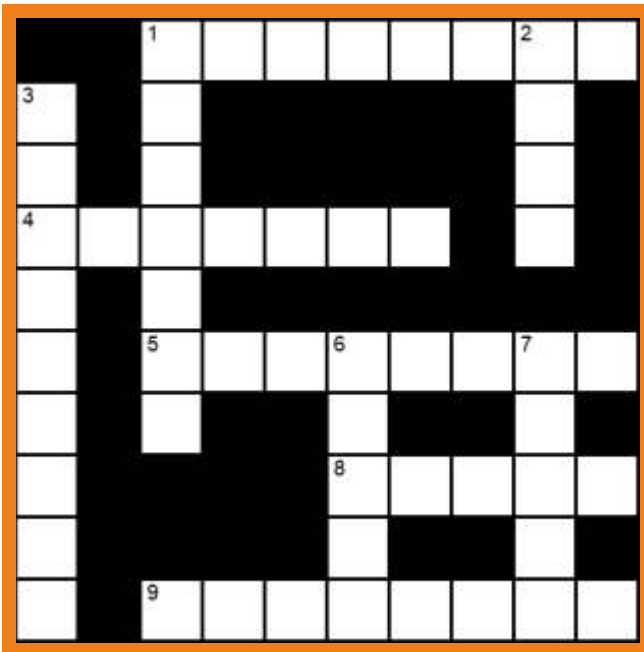
Down

1. Co-founded by Sanjay Mehrotra, the firm manufactures flash memory storage solutions and is headquartered in Milpitas, California.

2. The e-reader developed by American books retailer Barnes & Noble.

3. It is defined as a finite list of well-defined instructions for calculating a function. It is applicable in both computer science and mathematics.

6. Newton was an operating system for PDA from this company?

7. The French call is 'courriel'. This is what the rest of the world knows it as.

DID YOU KNOW?

The Briefcase was first introduced in Windows 95 and was only removed in Windows 10, running for a good 20 years.

It was the first folder that supported a simple two-way file synchronization between itself and another folder.

#TechTrivia

Before CGI there was 'Matte Painting', a technique where artists would paint backgrounds on glass sheets. These painted sheets would then be placed as backgrounds at actual filming locations.

The massive warehouse in 'Indiana Jones: Raiders of The Lost Ark' was painted on matte glass.

#TechTrivia

Block
&
Tackle

1 It was setup by its parent company Geophysical Service Incorporated (GSI) to manufacture the newly invented transistor in 1947. Which Company?

● ● X ● ●   ● ● S ● ● ● ● ● E ● ● ●

2 Name the term which is derived from Hawaiian for `quick' and describes websites that can be edited by any reader, including anonymous visitors?

● ● I ● ● ● ● ● I ●

3 It is a piece of stiff paper that contains digital information represented by the presence or absence of holes in predefined positions. Now an obsolete recording medium, these were used through the 20th century in unit record machines for input, processing and data storage.

● ● U ● ● ● ● D   ● ● A ● ● S

4 What is the process of locating the noncontiguous parts of data into which a computer file may be divided, and rearranging these parts and restoring them into fewer or into the whole file?

● ● E ● ● ● ● ● M ● ● ● ● ● G

5 Mozilla X is a free, open source, cross-platform e-mail and news client developed by the Mozilla Foundation. The project strategy is modelled after Mozilla Firefox, a project aimed at creating a web browser. What?

● ● U ● ● ● R ● ● ● D

6 The use of X can be traced back to the 19th century and they were used in casual or humourous writing. The digital forms of X on the internet were included in a proposal by Scott Fahlman in 1982 to Carnegie Mellon University. What is X?

● M ● ● ● I ● ● ● ● S

7 Jordan Mechner created something in 1989 and based the thematic elements on one of his favorite books 'One Thousand and One Arabian Nights'. What did he create?

● ● I ● ● ● E ● ● f ● ● E ● ● ● ● A

8 Which company was founded in 1906 in Rochester, New York as 'The Haloid Photographic Company', which originally manufactured photographic paper and equipment?

● E ● ● ● X ● C ● ● ● P ● ● ● A ● ● ● ● N

9 An easy-to-use internet service that organizes information on the internet into a series of structured hierarchical menus. Its search engine, Veronica, lets you search global indices of resources stored in such systems. What is this called?

● ● O ● ● ● ● R

10 This is an extensible proprietary multimedia framework developed by Apple, capable of handling various formats of digital video, picture, sound, panoramic images and interactivity.

● U ● ● ● ● T ● ● E

11 What is this digital media player developed by Google, a HDMI dongle that plays audio/video content on a high-definition television by directly streaming it via Wi-Fi.

⚫⚫⚫⚫O⚫⚫C⚫⚫⚫

12 Which term first used by Kevin Ashton in 1999, refers to uniquely identifiable objects and their virtual representations in an internet-like structure?

⚫⚫T⚫⚫⚫E⚫ O⚫ ⚫⚫I⚫⚫⚫

13 Which company started as a part of Anderson Consulting in the 1950s and then went on to become one of the biggest consulting firms in the world?

A⚫⚫⚫N⚫⚫⚫E

14 It is a series of digital media files (either audio or video) that are released episodically and often downloaded through web syndication. The term was first mentioned by Ben Hammersley in 'The Guardian' newspaper in a February 2004 article. Which term?

⚫O⚫⚫⚫⚫T⚫⚫G

15 This was named after IBM's first CEO and industrialist. The computer system was specifically developed to answer questions on the quiz show Jeopardy. This is an AI computer system capable of answering questions posed in natural language. What is being described here?

⚫⚫M⚫ ⚫⚫T⚫⚫N

16 Where would you find LindeX, an internal currency exchange that can be used to buy, sell, rent or trade land or goods and services with other users?

● ● C ● ● ●   L ● ● ●

17 First established as a shipping firm by Yatarō Iwasaki in 1870, aircrafts manufactured by them were used to attack Pearl Harbor in World War II. Its name in Japanese means 'Three Diamonds'.

● ● I ● ● U ● ● S ● ●

18 It developed EMIEW 2, a small and lightweight interactive robot. Its first product was this five-horsepower induction motor in 1910. Its name means 'Sunrise' in Japanese language.

● ● I ● ● ● H ●

19 Named after a creek, this giant's corporate logo was designed by Marva, wife of one of the co-founders of the company, a graphic designer.

● ● D ● ● E ●

20 The software is an input method for touchscreens where the user enters words by sliding a finger or stylus from letter to letter, lifting only between words. It was first commercially available on the Samsung Omnia II running Windows Mobile. What is it?

S ● ● ● ● E ●

21 In video games, what is the process by which a player's character obtains items such as in-game currency, spells, equipment, or weapons, often from the corpse of a creature or possibly the corpse of another player?

●●●O●●●●G

22 The term was inspired from a story in Greek mythology because the thing being talked about appears to perform a desirable function but instead facilitates unauthorised access to the user's computer system.

●R●●A●● ●●R●●

23 Entities in the collection are kept in order and the principal operations on the collection are the addition of entities to the rear position and removal of entities from the front position. This makes it a First-In-First-Out (FIFO) data structure. What?

●●U●U●

24 It was set up in 1988 at Mumbai to facilitate business and trade in software and services and to encourage advancement of research in software technology as a not-for-profit organisation, registered under the Indian Societies Act, 1860. Now it is head quartered is in New Delhi.

●A●●●C●●

25 Its codename was inspired by Flickr and the fact that American _____ short codes are five characters. The developers initially experimented with '10958' as a short code, though later changed it to '40404' for 'ease of use and memorability'. What?

T●●●●T●●

26

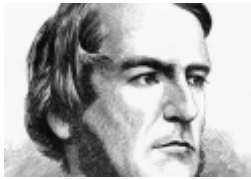This is the logo of which Microsoft application?

● ● L ● ● ● L ● ● E

27

He is an American electrical engineer and supercomputer architect. Who?

● E ● ● O ● ●   ● R ● ●

28

A largely self-taught English mathematician, philosopher and logician. Who?

● ● E ● ● G ● ●   B ● ● L ●

29

His name is Ken Kutaragi. He is known as the 'Father of _____'. What?

● L ● ● ● S ● ● ● ● ● O ●

30

An American engineer and inventor, and an early computer and Internet pioneer. Who?

● ● O ● ● ● ● S ●
● N ● ● E ● ● ● T

31 This German civil engineer was an inventor and a computer pioneer. His achievement was the world's first programmable computer. Who?

⬤⬤N⬤⬤D ⬤⬤S⬤

32 Who is this genius, known as father of Language 'C'?

⬤⬤E⬤⬤I⬤
R⬤⬤⬤⬤I⬤

33 He was the brains behind this gaming giant and was once the richest person of Japan. Name the gaming company.

⬤⬤N⬤E⬤⬤O

34 An English engineer and computer scientist, best known as the inventor of the World Wide Web. Who?

⬤⬤I⬤B⬤⬤⬤⬤⬤R⬤⬤E⬤

35 What, known as stereolithography, was invented by this gentleman Charles Hull?

⬤⬤D ⬤⬤⬤N⬤⬤⬤G

36

Identify this famous torrent service.

●●R●●●E   ●●●Y

37

Identify this French multinational video game developer and publisher.

●●B●●●O●●●

38

Who owns this social network service that was launched in 2008?

●●●C●●●●O●●

39

Which online streaming company has launched these socks that can sense when you fall sleep and pause your show.

N●●●●●●I●

40

This Indian with the 'midas touch' served as the first chairman of SUN Microsystems in 1982. Who?

●●N●●   ●●●O●●

41

What started thus?

●●A●●●A●●

42

Identify this movie, that has used extensive CGI.

●●V●●●A●

43

Identify the Logo.

●●●A●●　●C●●●E●●

44

This is now a defunct operating system from which electronics gaint.

bada

S●●●●●N●

45

Whose headquarters is this?

●●U　●●●●E

46 With which company would you associate this logo.

●●A●●● ●●●A●●

47 Identify this OS.

F●●●●R●

48 Identify the gaming company.

●●●A● ●T●●●I●●

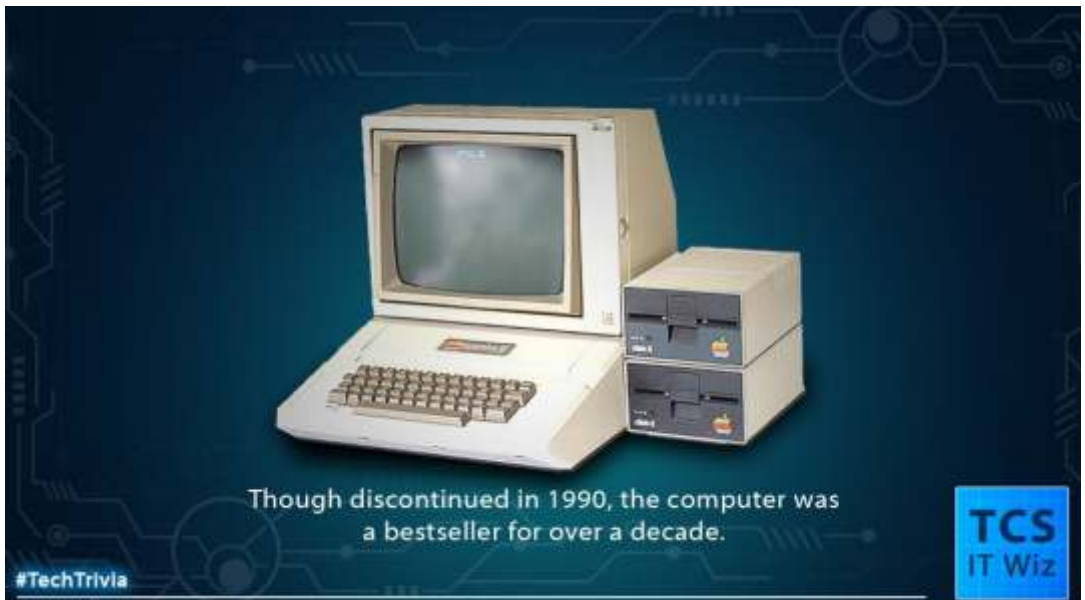**49** Identify this logo.

●●I●A ●●●T●

50 Identify this logo.

●●●L●●

DID YOU KNOW?

Shigeru Miyamoto originally wanted to incorporate the characters, Popeye, Bluto and Olive Oyl in his game. After failing to obtain the licensing rights, he decided to use the same scenario but with different characters.
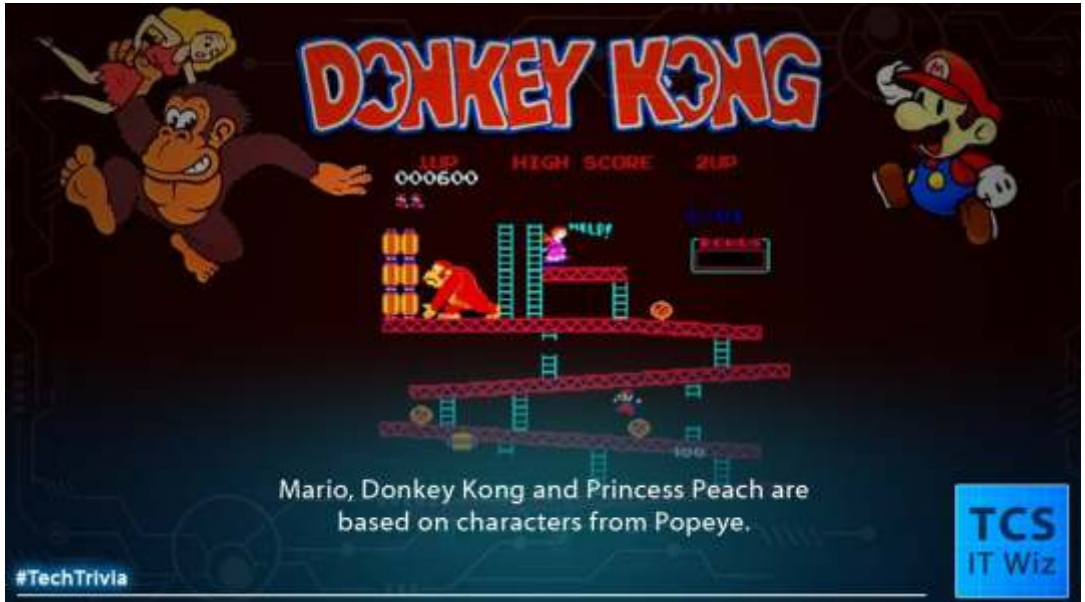
Jun 10, marks the 40th anniversary of the release of the Apple II computers.
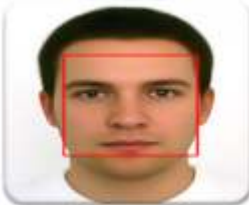
Cyrpto combos

1

The name of this **+** The term for this

2

The selection **+** The type

3

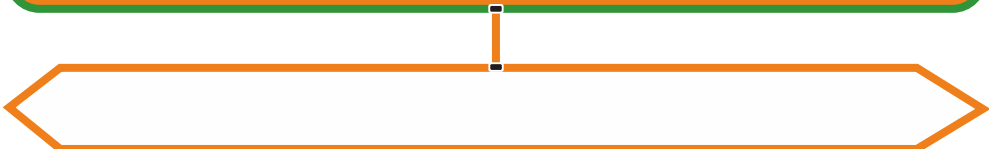The maker **+** The tour type

4

The element **+** The animal

5

set of rules for computers to communicate with each other across a network
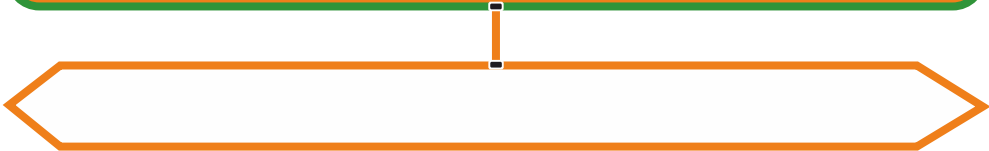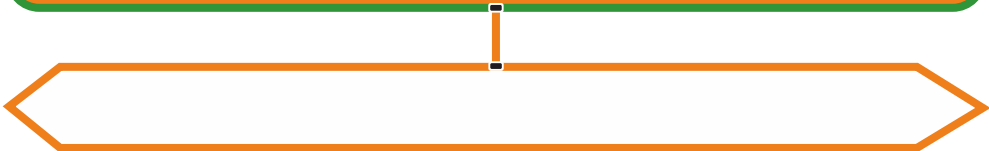
The instrument	**+**	The process	**+**	The term defined

6

A part of this	**+**	The process

7

| A part of its name | **+** | A part of its name | **+** | A part of its name |
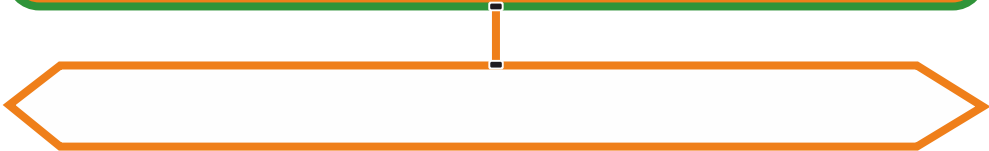
8
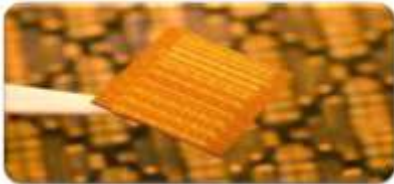
| Most common metalloid | **+** | The term for this depression |
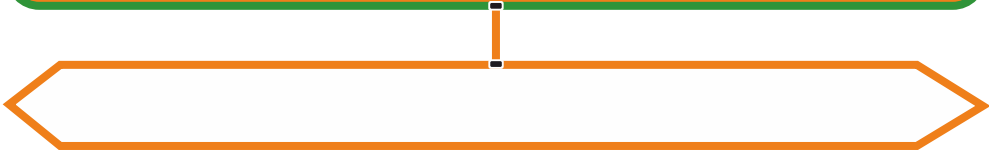
9

| The state | **+** | The collection |

10

Quick ⌐Snip

| A part of the name | **+** | Common name |
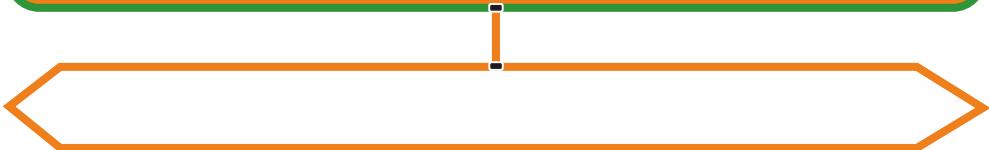
11

A part of his name **+** The location

12

His name **+** The citizen

13

The movie	**+**	The kind of fruit

14

The slang	**+**	The type
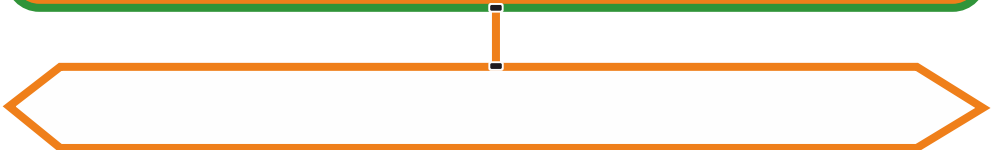
15

| Part of his name | ➕ | The segment |

16

| The action | ➕ | The type |
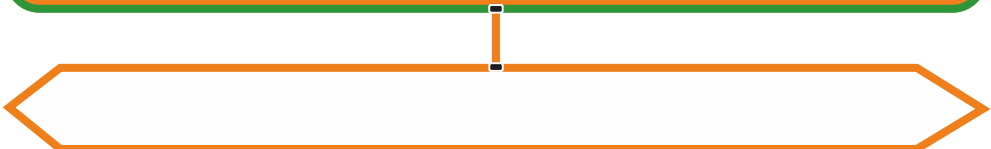
17

| The effect | ➕ | The type |
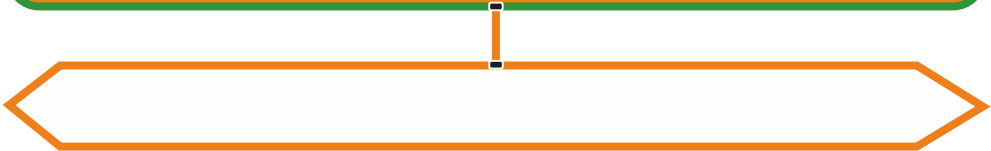
18

| The action | ➕ | The type |
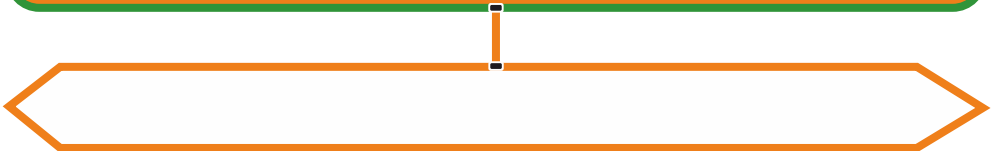
19

Action button	**+**	Reference to P, E & F

20

Part of his name	**+**	The type

DID YOU KNOW?

To give the audience an impression that previous glitches had already been worked out, Oracle's founders came up with a brilliant marketing strategy.

The founders named the first version of Oracle as Oracle v2.

#TechTrivia

Seagate changed their company's name in 1979 to avoid a lawsuit from a similarly named Xerox subsidiary, Shugart Associates.

Seagate Technology was originally incorporated as Shugart Technology.

#TechTrivia

Connect them

1

2

TEMASEK HOLDINGS

HAR SCENE KA MAZAA LO

इसरो isro

3

Swades

TATA

4

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6

7

8

9

10

Duron™ PROCESSOR

11

spice
T E L E C O M

Walk, when you tal

12

!dea

Life hamesha ON
with fastest growing network

13

14

15

16

17
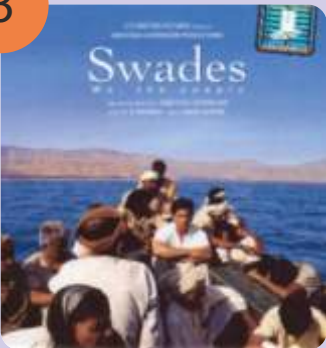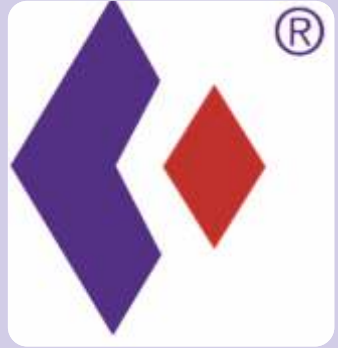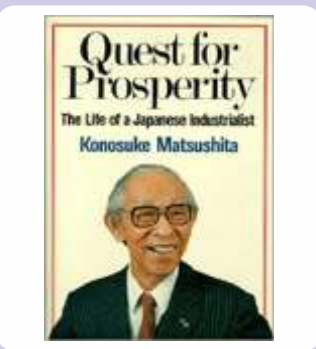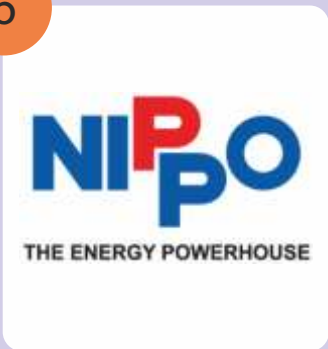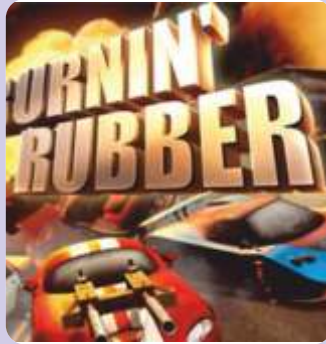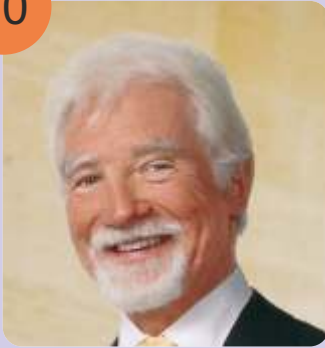
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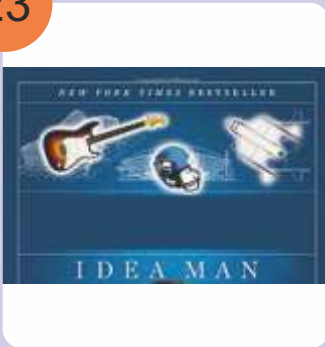
24
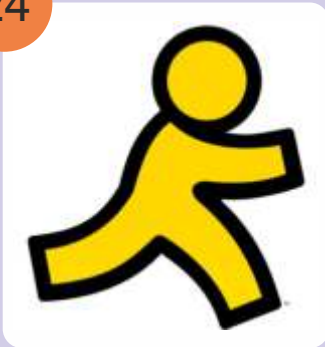
25

26

27

Add them up

EXAMPLE

A program that permits review and editing of file	R-2	EDI**T**OR
The name is an abbreviation of San Francisco.	C+3	CIS**C**O
Web browser from Apple for Mac OS X	F-2	**S**AFARI

TCS

Spread Sheet from Dan Bricklin	C-2	
Jeffrey Henry, Chairman	A-1	
NM Electronics	E-2	
Filo's friend and Yahoo founder	N-2	

1.

Created TCP/IP with Kahn	F-3	
Cowpland Research Laboratory	C+2	
Gordon Gould coined this light amplification term	R-3	
Inventor of the IC with Kilby	N+2	

2.

The term is derived from a story in Greek mythology	A-1	
Spanish for Tall Tree	O+1	
Augusta Ada King	L-2	
Jerry and Davids guide to the web	O-2	

3.

Designed by John Mauchly and J. Presper Eckert	E+2	
One common word for piece of software designed to fix problems	T-2	
Advanced Research Projects Agency Network	R+2	
Original was C. Wayne Ratliff	A-2	

4.

Published in 1970 by Niklaus Wirth	P+3	
Greek for five and the declension 'ium'	P+1	
Base 2 number system	A+1	
Nippon Denki Kabushiki Gaisha	E-1	

5.

Founded as the Graphics Group	X-1
Coined by Ralph Vaerst, first published by Don Hoefler	C-1
Device that interconnects two or more computer networks	U-2
Netscape was based on this web browser	A-2

6.

Project Longhorn was from them	R+2
Largest software enterprise in Europe	A+1
Data Conversion Inc in 1972, Narayana Murthy once worked here	T-1
Chairman of Google	C+3

7.

Organic material shaped into bricks using frames and dried in the sun.	B-2
Western India Vegetable Products Limited in 1945	I+2
Countess of Lovelace	D-1
Animation technique to transform one image into another gradually	R-2

8.

Regular vertical alignment of the right and left margin in a Word file	S-2	
Business problem oriented, machine independent and capable of continuous development.	O+2	
Method of transferring data to multiple recipients simultaneously	A-3	
Unit of computing speed	P+1	

9.

Shiv Nadar, Founder, Chairman & CEO	H+1	
Acrobat reader is one of their famous products	B-2	
Think	I+2	
iPod's parent company	L-3	

10.

Operating systems by Microsoft.	D-3	
Sense and Simplicity	H+3	
Rajesh Hakku	L-1	
Len Bosack and Sandy Lerner started this	C+1	

11.

We help you buy	O-2	
Hot Spots are from them	E-2	
Three Stars in Korean	A+2	
Established in 1996 as an IT training institute by Atul and Rajesh Nissar	T+2	

12.

Founded by Pierre Omidyar	Y-2	
This computer term was coined by William Gibson	R+3	
The Legend of Micro-Kid	S+3	
Old name was Legend	V-3	

13.

Hrithik Roshan's Laptop	A+3	
Christopher Young is the president and CEO of this company	C+1	
Movememt of the mouse	K-2	
Hewlett Packard's first order for eight oscillators	N-3	

14.

Apple Inc.'s Mac OS X operating system	A+3	
Write Once, Run Anywhere	A-3	
Apple's "A Magical & Revoluntiary Product"	I+2	
This company has a registered trademark of the term Ethernet	X+4	

15.

"Only the Paranoid Survive" is a book written by him	W-4	
Darrius, Mokap and Reiko are characters from this game series	M+3	
The value of a network is squared each time another peer joins the network	L-2	
Windows operating system code-named Longhorn	A-2	

16.

Jobs and Wozniak creation	L-1	
Integrated Electronics	T-2	
1855 named Telegrafverket as a provider of telegraph services	O-1	
New Google employee	L-1	

17.

Differential Engine	B+3	
Operating systems for mobiles	B-3	
Tux is its logo	X-2	
Device was first introduced as a two-way pager called 850 in 1999?	K-3	

18.

The speed at which data is transferred to the computer through telephone lines	A+2	
A displayed list of options	U-2	
To be connected to a network or via a network	N-2	
The smallest element of a display space that can be independently assigned color	X+2	

19.

The Document Company	E-1	
Bringing Equality and Quality to life	E-1	
Larry Page created	G-1	
Asynchronous JavaScript and XML	A+3	

20.

iWOZ	O-1	
Sense and Simplicity	L+1	
Founder Reid Hoffman	D-2	
This is the process of creating integrated circuits by combining thousands of transistors into a single chip	L+2	

21.

Search option from Microsoft	N-2	
Free content source, Hawaiian word for fast	D-1	
Shawn Fawning creation	P-2	
Kailash Katkar's anti virus	U-1	

22.

Tanaka the founder	B-1	
One word for mud brick	B-2	
Sergey Brin creation	L+1	
Asynchronous JavaScript and XML	A+2	

23.

Ashok Soota and Subroto Bagchi	N-2	
Unsolicited email	M-2	
Larry Ellison empire	C+2	
creator of the Android OS	G+3	

24.

Canonical OS	B-1	
Local Area Network	L+2	
Fail Whale appears when it falls	P-1	
Picture Element	L-2	

25.

It is a bridge between applications and the actual data processing done at the hardware level	N+2	
Has a symbol Si and atomic number 14	S+3	
Shawn Fawning creation	P-1	
First mobile creators	O-1	

26.

Answers

Round 1 - Crack These... (Multiple Choice)

1. JAVA
2. MORTAL KOMBAT
3. ANDREW GROVE
4. FACEBOOK
5. ACTIVE X
6. LINUX
7. WII
8. BIT TORRENT
9. AMD
10. PRINCE OF PERSIA
11. FLIPKART
12. POWERPOINT
13. DAUGHTERBOARD
14. WIKIPEDIA
15. CACHE MEMORY
16. LEAF
17. LG
18. FORTRAN
19. NOKIA
20. ARPANET
21. STALLMAN
22. ORACLE
23. SIRI
24. NVIDIA
25. HOTMAIL
26. APPLE
27. ESTONIA
28. FLASH MEMORY
29. DEFRAG
30. DREAMCAST

Round 1 - Crack These... (Direct)

31. SPACE X
32. NETFLIX
33. MCAFEE
34. DISPOSABLE CAMERAS
35. KERNEL
36. NVIDIA
37. OXIGEN WALLET
38. LED STUMPS
39. GOPRO
40. MOBILE MONEY IDENTIFIER
41. PODCAST
42. LOGITECH
43. BIG DATA
44. GIF
45. MAGNETIC STRIPE CARD
46. IMAX
47. SILICON
48. MOZILLA
49. VIRAT KOHLI
50. AVASTA
51. DIGITAL SUBSCRIBER LINE
52. ATI
53. PINTEREST
54. AMAZON PRIME
55. RAND CORPORATION
56. YOUTUBE
57. DISCLAIMER
58. FIREWALL
59. STEPHEN HAWKING
60. SELFIE STICK
61. FIRST SMARTPHONE
62. UBUNTU OS
63. FIRST WEB BROWSER
64. JUST DIAL
65. SYMBOLICS.COM
66. RUBY
67. LAPTOP
68. UNFRIEND
69. TCS
70. ACTIVE-MATRIX
71. AVATAR
72. QR CODE
73. SNIPPING
74. CAMPUS AREA NETWORK
75. NAUKRI.COM

Round 2 - The Identity (Multiple Choice)

1. INTEL
2. XEROX
3. ZYNGA
4. COMPAQ
5. WINAMP
6. SKYPE
7. ORACLE
8. YAHOO
9. FOURSQUARE
10. VSNL
11. GOOGLE WALLET
12. EDISION
13. PHILIPS
14. CAP GEMINI
15. SNAPDRAGON

Round 2 - The Identity (Direct)

16. SHANTANU NARAYEN
17. AIR BNB
18. BAIDU
19. IGATE
20. MYSQL
21. YOUTUBE
22. WIMAX FORUM
23. NEED FOR SPEED
24. VINOD DHAM
25. AUGUST DVORAK
26. FACEBOOK
27. MACROMEDIA
28. PYTHON
29. DEBIAN
30. WEIBO
31. MICROSOFT SURFACE
32. SOM MITTAL
33. BELL LABORATORIES
34. PI DAY (MARCH 14 & JULY 22)
35. ANKIT FADIA
36. NVIDIA
37. MICROSOFT GENUINE SOFTWARE
38. MS SILVERLITE
39. BLUERAY DISK
40. USB DEVICE
41. ORKUT BÜYÜKKÖKTEN
42. SNAPDEAL
43. TUMBLR
44. GROUPON
45. SNAKE
46. GOOGLE PHOTOS
47. ROVIO
48. NFC
49. AIRTEL
50. UBER

Round 3 - Word Search

1

2

Round 4 - Cross Roads

1

```
  A U T O D E S K
I         U
N   W     K
T W I T T E R     M
E   P             T
L   R         S O N Y
  G O O G L E     L
            G
M E T A S E A R C H
```

2

```
      I P O D
N   T               M
I   T           E   I
N V I D I A     R   C
T   A           I   R
E   M O S A I C     O
N               S   S
D E L L   C I S C O
O               O   F
    A M A Z O N     T
```

3

```
B O S E     I
    I       B
    B   C O M P A Q
R   L       I
O   I       X
V I N T O N C E R F
I   G     O   L
O   S     K
          I N T E L
  Z Y N G A
```
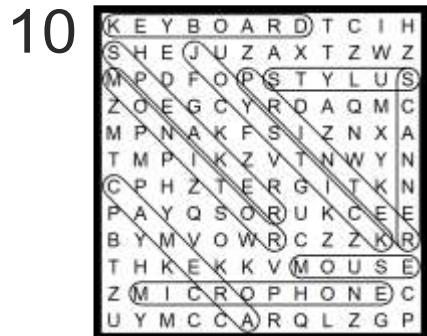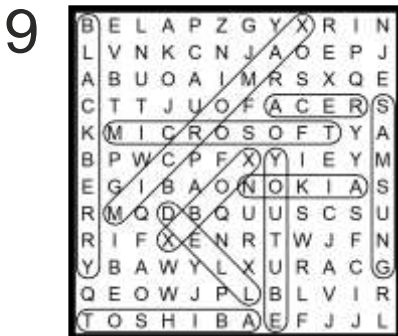
4

```
P         B E N Q
H       A     O
I       C I S C O
S K Y P E     G
H   A   R     L
I   H         E
N   O R K U T R
G   O     N
          I B M
          X
```

5

```
M O D E M S   L G
I           O   O
C A B I R   G   U
R     N     I   T
O     T     C   F
S     E     G   I
O   F L I P K A R T
F     W     T   7
T   R O U T E R
      Z     S
```

6

```
      S V
P     O I   W
H   A N D R O I D
I     Y U   K
L     S   I B M
I     C   P   O
P A C M A N E   B
S     C   D   I
      H   I   L
S L I D E S H A R E
```

7

```
      J
T R O J A N   C
W     V       O
I   L I A M   R
T   I   Y     T
T   N   S P A M
E   U   P   N
R   X   S A F A R I
        C
  L I N K E D I N
```

8

```
  M O R P H I N G
            I
        C   B   M
P I X A R   B   O
I       A P P L E T
N   E   D   E   O
G   N   L       R
  F I R E F O X O
    A           L
F A C E B O O K A
```

9

```
K E Y B O A R D S
      P           Y
  K I N E C T     O
      R       A   U
P A S C A L   L   T
  S   A       I   U
  U   N       B   B
  S H O C K W A V E
      N       B
    J A V A
```

10

```
        S N I P P I N G
A       A           O
L       N           O
G O D A D D Y       K
O       I
R       S Y M A N T E C
I       K       P   M
T               P I X A R
H               L   I
M     F I R E W A L L
```

Round 5 - Block & Tackle

1. TEXAS INSTRUMENTS
2. WIKIPEDIA
3. PUNCHED CARD
4. DEFRAGMENTING
5. THUNDERBIRD
6. EMOTICONS
7. PRINCE OF PERSIA
8. XEROX CORPORATION
9. GOPHER
10. QUICKTIME
11. CHROMECAST
12. INTERNET OF THINGS (IOT)
13. ACCENTURE
14. PODCASTING
15. IBM WATSON
16. SECOND LIFE
17. MITSUBISHI
18. HITACHI
19. ADOBE
20. SWYPE
21. LOOTING
22. TROJAN HORSE
23. QUEUE
24. NASSCOM
25. TWITTER
26. SILVERLIGHT
27. SEYMOUR CRAY
28. GEORGE BOOLE
29. PLAYSTATION
30. DOUGLAS ENGLEBART
31. KONRAD ZUSE
32. DENNIS RITCHIE
33. NINTENDO
34. TIM BERNERS LEE
35. 3D PRINTING
36. PIRATE BAY
37. UBISOFT
38. YAMMER
39. NETFLIX
40. VINOD KHOSLA
41. WHATSAPP
42. AVATAR
43. KHAN ACADEMY
44. SAMSUNG
45. YOUTUBE
46. RADIO SHACK
47. FEDORA
48. PLAY STATION
49. GIGA BYTE
50. DOLBY

Round 5 - Crypto Combos

1. KEYBOARD
2. FACEBOOK
3. APPLE SAFARI
4. FIREFOX
5. FILE TRANSFER PROTOCOL
6. SOCIAL NETWORKING
7. SUN MICRO SYSTEMS
8. SILICON VALLEY
9. TEXAS INSTRUMENTS
10. QUICK HEAL
11. JOHN CHAMBERS
12. JACK WELCH
13. BLACKBERRY
14. BILL GATES
15. STEVE JOBS
16. SNAPCHAT
17. SOUND CLOUD
18. MAGIC BRICKS
19. POWERPOINT
20. LARRY PAGE

Round 6 - Connect Them

1. APPLE
2. TATA SKY
3. TATA ELXSI
4. ACER
5. IBM
6. PANASONIC
7. ZAPAK
8. IAIRTEL
9. MICROMAX
10. AMD
11. IDEA
12. SPICE
13. TWITTER
14. MICROSOFT
15. AMD
16. FLIPKART
17. DELL
18. GOOGLE
19. ZYNGA
20. AMAZON
21. LG
22. ASUS
23. PAUL ALLEN
24. AOL
25. SATYA NADELA
26. FLIPBOARD
27. XIAOMI

Round 6 - Connect Them

1. VI**S**ICALC | **O**RACLE | I**N**TEL | JERRY**Y**ANG **- SONY**

2. VINTON **C**ERF | CO**R**EL | L**A**SER | NO**Y**CE **- CRAY**

3. TRO**J**AN | PALO **A**LTO | LO**V**ELACE | Y**A**HOO **- JAVA**

4. EN**I**AC | **P**ATCH | ARP**A**NET | **D**BASE **- IPAD**

5. **P**ASCAL | P**E**NTIUM | BINA**R**Y | **N**EC **- CERN**

6. P**I**XAR | **S**ILICON VALLEY | **R**OUTER | M**O**SAIC **- ISRO**

7. MICRO**S**OFT | SA**P** | P**A**TNI | ERIC SCHI**M**DT **- SPAM**

8. A**D**OBE | WIP**R**O | **A**DA | **M**ORPHING **- DRAM**

9. **J**USTIFY | COB**O**L | **B**ROADCAST | FLOP**S** **- JOBS**

10. H**C**L | A**D**OBE | IB**M** | **A**PPLE **- CDMA**

11. **W**INDOWS | PHIL**I**PS | I**F**LEX | C**I**SCO **- WIFI**

12. C**R**OMA | SP**I**CE | SAM**S**UNG | APTE**C**H **- RISC**

13. E**B**AY | C**Y**BERSPACE | MICROSOF**T** | L**E**NOVO **- BYTE**

14. ACE**R** | MAC**F**EE | M**I**CKEY | WALT **D**ISNEY **- RFID**

15. AQU**A** | **J**AVA | IP**A**D | XERO**X** **- AJAX**

16. A**N**DREW GROVE | MOR**T**AL KOMBAT | METCAL**F**E LAW | WINDOW**S** VISTA **- NTFS**

17. AP**P**LE | **I**NTEL | TELE**N**OR | NOO**G**LE **- PING**

18. BAB**B**AGE | **S**YMBIAN | LI**N**UX | B**L**ACKBERRY **- BSNL**

19. BAU**D** | M**E**NU | ON**L**INE | PIXE**L** **- DELL**

20. **X**EROX | **B**ENQ | GO**O**GLE | AJA**X** **- XBOX**

21. **W**OZNIAK | PHIL**I**PS | LIN**K**EDIN | VLS**I** **- WIKI**

22. **B**ING | WIKIP**E**DIA | **N**APSTER | **Q**UICKHEAL **- BENQ**

23. TOSH**I**BA | A**D**OBE | GOOGL**E** | **A**JAX **- IDEA**

24. **M**INDTREE | S**P**AM | ORACL**E** | GOO**G**LE **- MPEG**

25. UB**U**NTO | LA**N** | TW**I**TTER | PI**X**EL **- UNIX**

26. KERNA**L** | SIL**I**CON | N**A**PSTAR | **M**OTOROLA **- LIAM**

The Journey of TCS

50 Years of TCS
The Start-Up Years

TCS' first decade is the story of a struggling start-up, scrambling for business to cover costs while looking for a sustainable business model. Conceptualized as a bureau service, it pivoted into a consulting-led model after a near-death experience and might have continued pursuing domestic business, but for a quirk of government policy which thrust an outward gaze on the fledgling company. A timely partnership with Burroughs Corporation served both parties very well. TCS got crucial financial viability, a nascent offshore delivery model and a glimpse of the potential for its services outside India. By the late 70's, the start-up had won export awards and found its feet, and the confidence to go out into the global market on its own.

- **Birth of TCS:** The House of Tatas had long established a track record of absorbing the latest global trends in management and technology. The Chairman, JRD Tata, was known to have a tremendous intellectual curiosity around technology, and thanks to his close association with Homi Bhabha and the Tata Institute of Fundamental Research (TIFR), closely following the rapidly increasing adoption of data processing and management information systems. The Bhabha Committee report of 1966 which forecast strong demand for computers in India in the coming decade served as an important catalyst. Tata Sons set up the Tata Computer Center with an IBM 1401 at Nirmal Building in 1966 as a shared utility to meet the computing needs of the Tata group companies. However in an era when Indian corporates were still unfamiliar with computers, the center went largely unutilized. For financial viability, the leadership team at Bombay House decided to recast it a year later, as a management and technology consultancy that would create demand for downstream computer services, and serve non-group companies as well. Tata Consultancy Services became operational as a Division of Tata Sons with effect from April 1, 1968.

- **The early years:** The focus on management consultancy yielded rich dividends, assignments came in thick and fast from domestic customers like the Bombay Municipal Corporation, the Delhi Transport Authority, the Planning Commission, Hindustan Aeronautics (HAL), Delhi Development Authority (DDA), and the Government of India's Department of Atomic Energy.

F C Kohli - Came on board in 1969 and went on to lead for the next three decades

- **Bureau work:** In a market where even large enterprises did not yet own computers, TCS started building software for common processes like financial accounting, share registry work, Sales Analysis, Inter-bank reconciliation, provident fund accounting et al, and operating that software on behalf of customers on TCS-owned computers and getting paid for the process outputs in the form of forms and reports.

- **Turning the gaze outwards:** As business expanded, TCS acquired a second IBM 1401, and then an ICL 1903 in 1970. The latter was originally imported by the Calcutta Electric Supply Company (CESC) but the unions wouldn't stand for the introduction of computers, and so ICL offered it to TCS. However, as per the rules of the Government of India's newly set up Department of Electronics, TCS had to commit to export twice the CIF value of the imported computer over the next five years. Thanks to this quirk of policy, TCS' worldview got permanently oriented towards outside markets.

- **First overseas assignment:** TAVANIR, a middle-eastern Government-owned power generation and distribution company, hired TCS in 1971 to provide management consultancy services to organize their stores and build a comprehensive computerized inventory control system. Over the next five years, from 1971 to 1975, the TAVANIR engagement earned the company Rs. 1.7 million in export revenues.

- **The Burroughs Partnership:** In an era where all software was bundled with the hardware, partnering a hardware vendor was the only way to grow and. TCS reached out to Burroughs Corporation in 1972. The intent was to eventually manufacture Burroughs computers in India, but to begin with, TCS was to distribute and support Burroughs products in India, funding the imports by building software that would be exported to various Burroughs units and clients across the world. In the first four years of this partnership, TCS experienced significant growth and built a business model that got refined over the years.

- **Pioneering Automation:** The very first assignment from Burroughs was a modest $30,000 contract in July 1973, to convert a hospital accounting system written in Burroughs Medium Systems COBOL to Burroughs Small Systems COBOL. At this point, TCS did not yet have a Burroughs computer on which to carry out the conversion. The team improvised. The team in Detroit sent across the manuals and the original source code to India. The team in Bombay wrote a 'filter' in assembly language on the ICL 1903 to parse the source code and convert it to the Small Systems version. So the very first recorded instance of an offshore software delivery done out of India, 45 years ago, was accomplished using automation!

- **First onsite-offshore project:** The very first project involving the full software development lifecycle was in 1974. Burroughs had sold computers to two building societies in the UK with the promise of a financial accounting software package. However, the local consultancy hired to build the system turned out to be too expensive, so Burroughs replaced them with TCS. A two-member team gathered the requirements onsite, while a 6-member team wrote the code in Bombay. The young chartered accountant who wrote the specifications, S Mahalingam, went on to accomplish many more firsts at TCS over the next 38 years, and was CFO from 2004 to 2013.

- **First independent contract:** TCS' first independent software assignment, in 1974, was from the Police Department of the City of Detroit. The onsite project began in April 1974 and had two parts: conversion of a set of existing police and administrative batch programs from IBM to Burroughs, and the design and development of a real time application to meet the police department's criminal investigation requirements.

- **Corporate Structure:** F C Kohli, who had directed much of the pioneering work of the past eight years, assumed responsibilities as the Director in Charge. He reported to a Tata Sons board committee chaired by Nani Palkhivala and consisting of two other members, AB Billimoria and Freddie Mehta

- **Export award:** The export focus resulted in a large inflow of overseas work for TCS, resulting in export revenues growing over five-fold between 1975 and 1977, crossing the $1 Million mark in 1976, and winning the company the top exporter award in the category of engineering consultancy, technical knowhow and other engineering services from the Engineering Export Promotion Council in 1976-77.

- **Software Quality Standards:** During this period TCS also looked at the various standards and methodologies available for software design and development. IEEE standards and guidelines for Software programming, design and systems analysis were taken on a board to lay the foundation for the quality culture within TCS. TCS went on to pioneer the quality movement for the IT industry in the subsequent decades adopting and defining the standards through ISO, CMM, CMMi, PCMMi et al.

- **Charting its own course:** The industrial license for the manufacture of peripherals and components came through in May 1977. The initial success and potential of partnership with Burroughs resulted in Tata's and Burroughs creating a joint-venture, called Tata Burroughs Ltd (TBL), which was to inherit all of the business built up by TCS around Burroughs computers. This resulted in a situation where TCS had to move away from Burroughs and work towards exploiting the opportunities afforded by bigger hardware behemoths like IBM, DEC, HP and others, TCS . And thus it came to be, that towards the end of its first decade in existence, TCS had to completely reinvent itself again and take the big leap in the global market entirely on its own, fully understanding the need to be agnostic to any of the large technology players of the time.

Spreading Wings

TCS' second decade was marked by the emergence of several new technologies that made computing more accessible to smaller enterprises and even individuals – era of mini-, micro- and personal computers. As customers adopted newer technologies, very large migration opportunities opened for independent systems integrators. Visionary investments made in R&D resulted in tools and automation products that helped TCS win and successfully execute large migration programs and would go on to define the company's delivery model in subsequent decades. The company showed tremendous entrepreneurial energy during this period, building its own sales and marketing capability and successfully navigating these changes, building skills on newer platforms and languages as they evolved, opportunistically pursuing business where it could, and getting into software products – even shrink-wrapped software targeting an entirely new market of PC-users.

- **First sales office outside India:** TCS set up a one-man office in New York in 1979, headed by S Ramadorai, to find new customers. One of the first major orders came from the Institutional Group Information Corporation (IGIC), a pioneer in the provision of online banking services. A large credit card company was another big win that year – what began as a small trial project to develop an accounts receivable system evolved into a multi-country engagement and became a key reference customer for TCS' onsite-offshore delivery model.

- **WTSL Project:** In 1981, TCS won a retail banking project for Western Trust and Savings Limited (WTSL), a fifty-year-old bank in Plymouth, UK. WTSL was a complex turnkey project that involved building an end-to-end advanced system integrating multiple technologies. The integrated system was designed to manage customer relationships in personal financial services. The scale and complexity of this 135 person-years project helped TCS gain experience in executing large projects, deep knowledge in retail banking sector and related technologies such as ATMs and POS terminals, and expertise in IBM Mainframe technology.

- **First IBM Mainframe:** The acquisition of a second-hand IBM S/370 mainframe in 1981 to support the offshore development for the WTSL project marked the successful pivot of TCS from its Burroughs roots, towards the more prevalent IBM technology, which subsequently opened up huge new markets.

- **The Tata Research and Development and Design Centre:** FC Kohli's farsighted vision for the company is most evident in the creation of TRDDC in Pune, India, in 1981, marking the formal beginning of the company's signature focus on computer-aided software engineering ie a structured, tool-driven approach to software development using process automation. The focus was to track changes in the frontier areas of technology and build expertise in upcoming methods like object orientation, expert systems, CASEas well as 3GL/4GL programming languages. Efforts involved deep understanding of file systems and databases too.

- **Systems Engineering and Cybernetics Center (SECC):** In 1981, TCS set up the SECC in Hyderabad, which carried out pioneering research in the area of applying systems thinking on complex systems, and came up with original models for resolving complex business and socio-economic problems faced by the public sector, government and

industry. Research by SECC was central to much of the management consultancy work done by TCS in areas like urban renewal, public transportation in developing countries etc.

- **Advanced Data Dictionary (ADDICT) on Burroughs:** ADDICT, envisioned in 1982, was a global repository of information for a project, with a vast and advanced nomenclature that gave users, for the first time, a holistic view of the entire project and processes. As an approach and a tool, it was ahead of its time, this concept not having been envisioned anywhere else in the world. The same concept applied to IBM resulted in a repository called CasePac which was central to the SEGA project implemented a decade later. ADDICT and CasePac in many ways laid the foundation for eventually evolving Model and Component based Software development techniques and developing software that generates software at TCS.

- **Challenge Computer Systems Bureau:** In 1982, TCS won a contract with the Challenge Computer Systems Bureau, New Zealand to migrate all their software to the new Facom (Fujitsu Automatic Computers) equipment that they were replacing their Burroughs computers with. The Challenge Bureau was the biggest computer network outside of the New Zealand government, and the software conversion project was described by local media as the single largest project in the private sector and the most complex undertaken in New Zealand. Interestingly, TCS had handled the original conversion work when the Challenge Bureau replaced their ICL mainframes with Burroughs systems in 1976.

- **Swiss National Bank:** The first and largest offshore project in 1983, was done out of TCS' Delhi center, for the Swiss National Bank (SNB). Until then, Bombay had been TCS' only offshoring destination. The crucial learnings from the engagement included the importance of the end user, emphasis on quality, the importance of planning and adhering to deadlines, and the criticality of estimation. TCS estimates had been 95% accurate, a fact that was recognised and appreciated by the client.

- **Launch of 4G Tools:** TRDDC's research also resulted in the launch of several platform-neutral Fourth Generation code generation tools in 1985 – SYSGEN, PRODGEN and INTERGEN – with which applications could be described using a TCS-proprietary language, and the compiler to compiler technology would generate code for the desired platform. These tools – precursors to the later day MasterCraft suite – helped reduce development time, delivered higher quality code, and established TCS's reputation as an execution powerhouse.

- **Unix SVR2:** TCS also acquired the source code license of Unix operating system from the Bell labs around this time to better understand the open systems concepts. Expertise was built on Unix internals, developing and enhancing device drivers and more importantly C as a programming language, ASCII based Unix file systems and develop expertise in open relational databases.

- **Launch of Falcon:** The Falcon (Fast Access Local Computer Network), launched in 1984, was the result of TCS' research in 80heterogeneous computer networks. With

Falcon, TCS was ahead of Microsoft in creating the first multi-user, multitasking Windows-type capability and ahead of Novell in coming up with the concept of a fault tolerant network. The first email sent across this network, on December 31, 1984, read "Happy New Year". Falcon found several local customers thereafter – Hindustan Lever, KSRTC, etc and was also sold bundled with the Ethernet cards sold by Nelco.

- **Tandem Center of Excellence:** TCS set up the Tandem Computing Center of Excellence in 1986 in Bombay, acquiring a TANDEM Non-stop TXP System - the first of its kind to be installed in India, allowing it to service customers who needed high volume, mission critical, real-time, fault tolerant transaction processing systems out of India. Incidentally, this center had terminals which were connected to the Tandem mainframes in Cupertino, making this the first offshore center with remote connectivity.

- **Launch of Engineering Services:** The advent of CAD/CAM/CAE created an opportunity for the engineering and manufacturing industry to achieve time and cost efficiency, and TCS, seeing the opportunity, set up a CAD/CAM group in the early-80s that marks the beginning of the engineering services business. TCS tied up with McDonnel Douglas Information Systems International in 1987 and was a reseller of their Unigraphics CAD/CAM software in India.

- **IBM Mainframe Center of Excellence:** TCS set up the IBM mainframe CoE in Madras in 1987. The next year, it imported and installed an IBM 3090 mainframe in Madras, the largest mainframe site in India for several years. The machine came in 75 boxes, weighed 17 tons, and had to be flown in on a chartered flight. This investment allowed TCS to execute many IBM mainframe projects from offshore, and resulted in a lot of work coming to TCS from IBM Labs, and opened up the large IBM mainframe opportunity to TCS.

- **Launch of Casepac:** One monetized outcome of the pioneering work done by the TRDDC in the area of software engineering automation tools was Casepac, a computer aided software engineering tool that TCS launched in 1987. This tool helped save significant effort, time and resulted in higher quality outcomes in many large mainframe projects in subsequent years, helping build TCS' reputation for delivery excellence.

- **Foray into software products:** TCS made a foray into the packaged software market in India in 1988 with its Masterkey suite consisting of Business Manager System (BMS) multi-user software, designed for the new Unix-based minicomputers, a project management tool (PRISM), and a package for structuring oral and written communication (ThoughtPrompter). Sold through a national network of distributors, BMS did well, fulfilling the need for small businesses to automate their accounting and other functions, supported by TCS with several new releases over the next three years.

- **Launch of ISBS:** TCS entered the retail banking software space by launching the Integrated Standard Banking System (ISBS) in 1988. This software automated most of the branch banking functions, such as advances, liabilities, transaction processing, general

ledger accounting, MIS and customer services like issue of cheque books, stop payments, standing instructions and remittances, and over the next couple of years, was being used by many banks in India under the initiative of Automatic Ledger Posting Machines (ALPM), a name coined to appease the unions which were doubtful about advent of computerization in banks.

Making a Mark

The third decade was the one in which TCS consolidated its reputation for flawless execution of large programs involving the building and integration of mission-critical systems. The company started building deep expertise in financial services vertical, particularly in the market infrastructure space, executing marquee projects and building systems which endure to this day. Even as the experiments with mass-market software products continued, a more focused strategy resulted in software products in the financial services domain, which went on to become market leaders in their respective niche areas. The company's engineering mindset came to the fore when the Year 2000 remediation opportunity arose, leveraging a highly automated and tools-based approach that allowed TCS to participate in a very big way in the opportunity, without necessarily adding very large number of employees. This automation-led factory approach was to be the foundation of the industrialized software services delivery model that differentiated TCS and turned it into a value-creation engine in the years to come.

The signing of the SEGA deal marked TCS' entry on the global stage, competing with a select set of large consulting firms for executing large, complex programs involving very deep domain expertise

- **Mega Project for SEGA:** TCS signed a $10 million deal with The Swiss Securities Clearing Corporation (SEGA) in 1989, the largest it had signed till then, to design, build, and implement the world's first real time domestic and cross border securities clearing & settlement system. Going head to head against the world's foremost consulting firms, TCS won the deal on account of its detailed proposal with the solution described in granular detail, faster time to market and a turnkey approach to the overall deal. The project involved many firsts, such as the use of automation tools built by TRDDC and was termed a grand success. The new Settlement Communication System (SECOM) was launched in 1993 and processed 4.6 million transactions in real time in its first year of operation. This project firmly established TCS as a credible partner for designing and deploying large, complex and mission critical systems. It also established a solid reference in the capital markets and market infrastructure domain and resulted in a spate of large projects in the years to come and virtual domination of that space. Two decades since, TCS was responsible for building mission critical market infrastructure systems – central bank systems, securities depositories, custody and settlement systems and the like – in over 35 countries.

- **Large migration for Sun Life Assurance in UK:** In 1990, when Sun Life Assurance decided to migrate its core life and pensions systems from a CDC Cyber mainframe to an IBM 3090 mainframe, with underlying data pertaining to 3 million policies, they picked TCS for its expertise on the IBM 3090 platform and track record for large scale automated conversions. TCS lived up to its reputation when it completed the entire migration, generating over 10 million lines of code and a million lines of JCL, a few months before the deadline, and within the budgeted cost of £30 Mn. The project bagged a medal from the British Computer Society for an outstanding project done in the area of computers.

- **Launch of E.X.:** Based on the experience and customer feedback on BMS, TCS launched a new, much more user friendly accounting software package called E.X. in India in September 1991. Billed the 'world's friendliest business accounting software' E.X. sold 8,000 copies in the very first year and went on to become a market leader in India in subsequent years.

- **JV with Swissair:** TCS and Swissair entered into a joint venture in 1991 to set up the Airline Financial Support Services, to handle Swissair's revenue accounting operations which were being carried out of the airline's headquarters in Zurich. Over the next few years, AFS went on to expand its capabilities, won new customers – mainly other European airlines – and was finally acquired by TCS in 2003.

- **Major Systems Integration program at NSE:** Fresh from its success with SEGA, TCS won the systems integration program for setting up the core trading platform for the newly created National Stock Exchange (NSE) in 1992. This was TCS' first end-to-end systems integration project at scale, and with the solution put together by TCS, incorporating global best practices, NSE changed the way capital markets worked in India. When the company went public in 2004, the NSE openly acknowledged TCS' contribution to its success.

- **First ISO 9000 compliant centers:** In TCS' quality journey, 1994 is an important year when the first two centers were certified as ISO 9000 compliant. This was after strengthening key processes, establishing a full-fledged quality audit function and extensive training. Other centers got certified soon after, and set the stage for a greater focus on processes and controls.

- **Launch of NCS:** Using the knowledge acquired under Project B (which eventually led to the launch of Quartz), TCS launched a new product called NCS (Network Custody System) in 1995 for meeting regional clearing and custody functions, in partnership with Standard Chartered Bank in Singapore. The product went on to become a runaway hit, adopted by leading custodians and other market participants across the world.

- **Building the NSDL platform:** Another historic project for TCS was with the National Securities Depository Limited (NSDL) completed in 1996. This was significant for two reasons. One it was the first electronic depository in India, and second, completed in less than five months, it was the fastest implementation of a depository system anywhere in the word.

- **Leadership Change:** After 22 years at the helm during which he built and shaped the company, F C Kohli stepped down from his executive role in 1996 and was named Vice Chairman. Subramanian Ramadorai, who had set up TCS' operations in the US in 1979 and had subsequently become a Senior Vice President and Deputy COO, was formally named the CEO. Over the next 13 years, he went on to transform TCS culturally, fire up its ambitions and make the investments needed to become a global leader in its field.

- **First ODC with videoconferencing:** The NORTEL ODC in Borivali, Mumbai, from where TCS Supported Bell North Research was connected by a dedicated high-speed data link to BNR's development labs in Ottawa and offered the first video conferencing facility in India. As part of the project, TCS and BNR set up a joint research lab at the Borivali export zone in Mumbai. With improving connectivity to the US and other geographies, more and more activities – particularly those that required access to systems at client locations, such as maintenance and production support – could now be done out of the offshore centers, significantly expanding the business opportunities for TCS.

Nortel ODC in Borivali - the only one with a customer logo on the outside

- **The Y2K Software Factory:** The Year 2000 (Y2K) issue offered a huge opportunity for TCS to significantly scale up its operations. The strong engineering tradition of using automation tools for conversions and migrations of systems distinguished TCS' approach. It pioneered the concept of a software factory in 1997, using a highly automated approach leveraging special tools developed for Y2K conversion, and minimizing human intervention to the extent that the work could be accomplished by sub-contractors. Companies from around the world sought TCS' remediation services, sending revenues rocketing from less than $125 million to $419 million during that period. In all, TCS is estimated to have remediated about 700 million lines of code. Y2K remediation engagements became the beachheads for building up larger customer relationships and accelerated market penetration in the US, Europe and elsewhere in subsequent years.

- **Launch of Quartz:** TCS' first world-class banking software, Quartz, targeted wholesale banking and was launched in 1997 in collaboration with three Swiss banks. Internally called Project B, the software was built ground up, after identifying the challenges and needs of global banks. Quartz was conceptualized to be a modern Universal Banking platform and catered to front, middle, and back office banking functions covering retail and private banking needs.

Scaling New Heights

The fourth decade saw a spectacular growth in TCS' revenues, capabilities and market reach, propelled by strong participation in customers' rapidly expanding spend on e-business and web technologies, an industrialized delivery model, acquisitions, a new, full services strategy and entry into new geographies – all driven by an overarching vision of wanting to be among the Top 10 IT services providers globally by 2010. As the company breezed past one milestone after another in scale, it also streamlined internal processes and operations. The hugely successful initial public offering, and a concerted branding effort, resulted in much higher brand recognition, especially in the company's major markets. This transformational decade was also marked by bold, farsighted investments in new geographies, new products and business models that laid the foundations for strong sustainable growth in the years ahead.

1998-2008

- **CMM Level 5:** TCS had been looking for external benchmarks and validation of the industrialized model of software delivery that it had pioneered. In 1996, it decided to adopt the Software Engineering Institute's Software Capability Maturity Model (CMM). At the time, TCS' processes were already thought to be at CMM Level 3. After a lot of concerted effort, in 1999, TCS received Level 5 assessments for its first two offshore development centers at Chennai, India, paving the way for an enterprise wide CMM Level assessment some years later.

- **E-Business:** TCS unveiled its new $2 Mn global e-business development facility at the Santacruz Electronics Export Processing Zone (SEEPZ) in September 2000. The center would house over 500 consultants to advise customers on their e-business strategy, as well as design, deploy and maintain e-commerce and CRM solutions for them. TCS planned to aggressively pursue the e-business opportunity and grow it to 25% of revenue in FY 2001 compared to 10% in FY 2000.

- **European Delivery Center:** TCS set up its first European nearshore development center in Hungary in 2001 to address regional demand from within the same time zone. This and the 10 centers in the US, along with the large center opened in 2008 formed the core of what would eventually grow into the Global Network Delivery Model (GNDM™) consisting of over 140 centers across 19 countries.

The signing of the contract with State Bank of India for what was to be the largest banking software project in India

- **The largest core banking implementation:** In 2001, TCS won the largest banking software project in India, to implement a core banking software at State Bank of India (SBI) across at more than 13,000 branches, including seven associate banks. TCS managed the entire project – from rollout to training and support. Fifteen years later, when SBI wanted to merge its associate banks into itself, it was once again TCS they turned to pull off the massive, business transformational exercise.

- **First $100Mn deal:** TCS set signed its first $100 Mn deal in 2002 with GE Medical Systems, the largest single contract ever won by an Indian software services company till then. The massive e-business engagement covered advisory and implementation services across enterprise application integration, SCM and CRM, in 30 countries over 2 years.

Former Vice Chairman, F C Kohli, cuts a cake to mark the occasion of TCS crossing the $1 Bn revenue milestone, as then-CEO S Ramadorai and others cheer

- **Top 10 by 2010:** By the late 90s itself, then-CEO S Ramadorai had spoken of wanting to be among the top 10 consulting organizations in the world. This vision was formalized in 2003, after the company crossed the $1 Bn mark, with the catchy line: 'Top 10 by 2010' that became a rallying cry for the organization. The vision was eventually achieved in 2009, when TCS finally broke into the ranks of the top 10 global IT service-providers in terms of revenue, profitability, number of people and market capitalization.

- **Acquisition of CMC:** Looking to build scale for TCS in the Indian market, Tata Sons acquired a 51 per cent stake in the government owned CMC Ltd for Rs 152 crore in 2001 and made an open offer to acquire an additional 16.69 per cent stake. With 3100 employees, a revenue of Rs 657 crore and a 3-year CAGR of 27%, CMC was known for its experience in managing large turnkey projects, a nationwide sales and support network, strong R&D focus and track record with government, PSU and corporate clients.

The acquisition of the state-owned CMC Ltd was one of many actions that built scale and deepened capability

- **Entry into China:** TCS was the first Indian company to begin operations in China, starting with an office in Shanghai in 2002, and subsequently building a delivery footprint across Beijing, Shanghai, Hangzhou and Tianjin. The strategy was three-fold: support multinational clients' operations in China, develop China as a global outsourcing base and cater to the domestic demand for IT Services. TCS BaNCS Core Banking was ranked the leading core banking solution in China several years running. By 2008, TCS was servicing 30 large customers from the financial services, manufacturing, telecommunications, and government sectors, winning large marquee deals, including a large core banking implementation contract from Bank of China.

- **Entry into Latin America:** The inauguration of the global development center (GDC) in Uruguay in 2002, the first such foray in the country by an Indian company, marked TCS' entry into Latin America. The center started off with 17 local employees and handled systems development, maintenance and outsourcing, besides testing and certification of third parties software. This GDC, along with the Comicrom acquisition a couple of years later, became the beachheads of a large business that TCS eventually built up in the region subsequently.

Chairman Ratan Tata, flanked by CEO S Ramadorai and EVP Phiroz Vandrevala, taps a key to list TCS on the NSE after a blocbuster IPO

- **TCS IPO:** Timed with the birth centenary of JRD Tata, the TCS IPO in July 2004 was the largest IPO in India ever by a private sector company and was described by one of the bankers as a "one in a hundred" year event. Priced at Rs 850 per share of Rs. 1 at par, the IPO was oversubscribed 7.7 times, and debuted on the NSE at Rs 1199, making it the third most valuable company in India then.

2005-08

- **Experience Certainty:** In keeping with the ambitious vision for 2010, TCS decided to create a new brand identity for itself in 2005. After interviewing many internal and external stakeholders on how they perceive TCS, it became clear that customers valued TCS for being result-oriented and committed to delivery excellence, and for giving the experience of certainty right through the engagement lifecycle. This eventually evolved into the tagline Experience Certainty.

- **Merger with Tata Infotech:** The wheel turned a full circle when Tata Infotech Limited, the erstwhile Tata Burroughs Ltd that had been carved out of TCS in 1977, eventually merged with TCS in April 2005. The merger provided TCS with an expanded customer base and deeper presence in key geographies. TIL had a significant presence in systems integration, particularly in telecommunications and defence, which neatly supplemented TCS' capabilities.

- **Entering the UK Life and Pensions market:** TCS made a spectacular entry into the UK life and pensions market in 2005 by winning a deal valued at $847 million (£486 Mn) over a 12-year period for providing insurance back office transaction processing services to the UK-based Pearl Group. This was the start of a new, disruptive, technology-led model: consolidating Pearl's 3.6 million policies from disparate legacy systems onto one single instance, multi-tenant, cloud-based platform based on TCS BaNCS Insurance, which would be used to service other insurance customers in the UK as well.

- **The FNS acquisition:** In 2005, TCS acquired Sydney-based Financial Network Services (FNS), a leading Australian core banking solutions vendor for approximately US$ 26 million. At that point, FNS' Core Banking software had been installed in over 115 banks spread over 35 countries across Europe, Asia, Australia and Africa. Having successfully customised and implemented the software at the State Bank of India in the world's largest core banking implementation, TCS expected this deal to significantly enhance TCS' ability to participate in core banking transformation opportunities globally. Integration of FNS led to consolidation of all TCS products in the financial services space under a common brand TCS BaNCS, resulting in an integrated product suite across banking, capital markets and insurance domains

- **The Comicrom acquisition:** TCS acquired a Chilean BPO company specialized in banking and pensions processing in November 2005 for $23 million to enhance TCS' BPO competencies in those two areas. With the inclusion of over 2,000 Comicrom employees across 12 countries, this acquisition strengthened TCS' operations in Latin America, and also beefed up TCS' full services capabilities.

- **Full Services Strategy:** The launch of two new service lines, Remote Infrastructure Management and Business Process Outsourcing in 2005 marked the formal launch of the full services strategy, entailing using these services to gain new customers as well as cross sell to existing customers, all aimed towards expanding the addressable market and deepening customer relationships.

The Quest for Leadership

The fifth decade began on a tumultuous note, with the great financial crisis of 2008-09 upending the global economy and leaving it fragile the next several years. TCS' verticalized, modular organization structure helped it weather the storm by reacting very quickly to events on the ground. Through the slow recovery phase, TCS helped companies simplify their operations, reduce costs and comply with onerous regulations. The domain expertise and contextual knowledge engendered by the new structure helped the company sell business-centric solutions to other stakeholders in the organization. The full services strategy resulted in larger deal wins. Early recognition of the emergence of a new technology wave, collectively called digital technologies, and investments made in building capabilities and IP in those emerging technologies paid off handsomely. Past investments in products and platforms scaled up very nicely in this decade, and augmented by newer IP built in this decade, helped differentiate the company from larger global peers. As customers' investments in digital technologies progressed, TCS was their preferred partner in their transformational initiatives, resulting in large, industry-defining deals. At the close of the decade, even as TCS continued to launch new offerings and build IP in newer areas, it was named one of the Top 3 brands in IT Services globally, and with the fastest growing brand value – a fitting recognition on the occasion of this forever start-up organization's fiftieth year anniversary.

2008-2011

- **Verticalization:** In April 2008, TCS reorganized itself into a predominantly verticalized, modular structure composed of about two dozen Industry Solutions Units, each with end to end responsibility for a set of customers within an industry vertical, and owning its own P&L. The new customer-centric structure enabled greater customer focus, development of deep domain expertise, agility, better cross-selling, and deepening of customer relationships, as borne out by the industry leading client metrics and revenue growth in subsequent years.

- **Weathering the Global Financial Crisis:** When the US subprime mortgages developed into a global banking crisis in September 2008, customers cut costs to conserve cash and TCS registered a fall in revenues in the second half of FY 2009. The new customer centric organization helped TCS stay close to customers and respond to events on the ground quickly. The units undertook drastic measures to shore up margins but did not lay off people or cut investments. This turned out to be fortuitous, when demand bounced back, and many others floundered. Revenue growth briefly hit 25%+ in 2010 but post-GFC, the world economy entered a new fragile era, and smaller crises in subsequent years resulted in more cautious spends.

- **Acquisition of eServe:** At the peak of the financial crisis in 2008, TCS acquired Citigroup Global Services Ltd (the erstwhile eServe Ltd), the back-office operations of Citigroup in India for $505 Mn in an all-cash deal. The 12,500 people who came on board brought in deep domain expertise and formed the core of TCS' vertical-focused approach to business process services, a vital component of the full services play strategy, which grew into a substantial business over the next decade.

- **Passport Seva Project:** In the largest ever mission-critical E-governance project at the time, TCS signed a Rs 10 Bn deal with the Government of India's Ministry of External

Affairs, for the Passport Automation Project. On implementation, TCS opened and managed 77 Passport Seva Kendras across India, completely transforming the citizen experience and setting a new benchmark in customer service, dispatching new passports in three working days, and on the same day under a special scheme for expedited issuance.

- **Change of Guard:** In October 2009, S Ramadorai, who had led TCS for the prior 13 years, and had grown its revenues from $160 mn to over $6 Bn, stepped down from his executive position, making way for N Chandrasekaran ("Chandra"), then Chief Operating Officer, to take over as the CEO & MD.

- **UK Life and Pensions Leader:** In 2010, TCS completed the build of its platform and the transformation of its first client, Pearl Assurance's operations. Shortly after, TCS won the rest of the Phoenix group's closed book that was being serviced by Unisys Insurance Services Ltd, taking the total number of policies under administration to 5 million. Later that year, the Personal Accounts Delivery Authority (PADA) in UK awarded a £600m contract to TCS for administering a pension scheme called the National Employment Savings Trust (NEST), the largest public-sector IT contract won by an Indian firm. A year later, Friends Life signed up with TCS to service their 3 million+ policies in a contract valued at £1.37 billion ($2.2 Bn) over 10 years, making TCS the second largest player in the UK Life and Pensions third party administration market. Seven years later, TCS won more megadeals, making it the #1 player in UK, and launching the same model in the US.

- **Launch of iON:** TCS launched iON, a fully integrated cloud-based, pay-per-use platform for Small and Medium Businesses in India, with an integrated suite of business solutions like HR, finance, inventory, domain-specific applications, office automation tools like email, document management and website services. Interestingly, the examinations module caught on much faster than all the other modules and very soon, iON Assessments became the fastest growing part of the business. By early 2018, TCS was responsible for administering virtually all the leading competitive examinations in India, including IIT-JEE, GATE and CAT, racking up a staggering 100 million online assessment.

TCS' Customer Collaboration Center in Santa Clara inaugurated in 2012

- **Advent of Digital:** Although TCS was leveraging the cloud for its various platforms for years and had set up the mobility solutions unit in 2011 that was using Hadoop within months of its release, it formally used the term 'Digital' for the first time in October 2011 to describe a new crop of technologies, even as peers used an acronym made up of the four main classes – social, mobile, analytics and cloud. A few months later, in January 2012, it inaugurated the Silicon Valley Customer Collaboration Center in Santa Clara, California, to serve as the worldwide headquarters of TCS' Next Gen Solutions which would apply the new digital technologies to solve real-world business problems.

2012-2016

- **Geographic expansion:** In 2013, TCS acquired French IT services firm ALTI SA, one of the top five package implementers in France and gained access to over 50 clients, many in the CAC 40, and over 1200 employees. A year later, it acquired Mitsubishi Corporation's IT arm in Japan, creating a base of over 2400 employees in Japan.

- **Launch of ignio:** Years of experience in automating IT operations and research in cognitive computing and machine learning culminated in the 2014 launch of a cognitive automation product, ignio™ that uses its large body of knowledge and contextual awareness to diagnose and autonomously fix problems that arise in complex enterprise IT environments, and constantly get better over time. Within three years of launch, ignio™ was sold to over 50 large Fortune 500 clients, hitting revenue milestones that longer established competitors had taken more than a decade to achieve.

Prof Harrick Vin at the launch of ignio

- **The Rise of Digital:** Then CEO, N Chandrasekaran coined the term `The Default is Digital' to describe the ubiquity of the new Digital technologies and came up with the Digital Reimagination framework that used the five digital forces to help enterprises to become smarter and deliver a superior customer experience. Investments made in reskilling the workforce on Digital technologies, research and innovation, and building intellectual property, positioned TCS very well to participate in the expanding opportunity around these new technologies. From June 2015 when TCS first reported that 12.5% of its revenues came from Digital revenues, the proportion had grown to over 22% by early 2018, a 40% CAGR. Individual elements of the Digital stack had achieved sufficient scale, so in 2017, TCS launched over 16 new service practices, collectively called Digital Transformation Services, within the newly formed Business & Technology Services organization.

2017-18

- **Leadership change:** Tata Sons appointed Chandra as the Chairman of the Tata Group. The TCS Board appointed then-CFO Rajesh Gopinathan as the CEO and Managing Director, N Ganapathy Subramanian as COO and Executive Director and V Ramakrishnan as CFO. The transition was seamless, and subsequent changes to the organization and launch of new Digital Transformation service practices – were incremental and evolutionary.

- **Dawn of Business 4.0:** TCS unveiled its thought leadership framework to help customers leverage digital technologies to further their growth and transformation agendas at a time of the fourth industrial revolution, characterized by the confluence of the physical, digital, and biological worlds. To succeed in the Business 4.0 world, enterprises use technology to leverage ecosystems, embrace risk and deliver mass personalization to create exponential value.

- **Industry-defining mega deals:** TCS positioned itself for leadership in the forthcoming decades by signing three large, industry defining digital transformation deals in

early 2018. In the largest ever deal signed by TCS, it partnered with Transamerica to replace their fragmented legacy core with a new, cloud-based digital core based on the TCS BaNCS Insurance platform that would significantly enhance their digital capabilities and deliver superior customer experiences. The other two deals, with M&S and M&G Prudential in the United Kingdom leverage digital technologies to transform their operating models to adapt to a Business 4.0 world.

The new leadership team meets the press at the completion of their first full fiscal year as a team

- **A Global Industry Leader:** At the close of its fifth decade, with revenues of over $19 Bn and industry leading margins, TCS was ranked among the top three most valuable brands in the global IT services sector, along with IBM and Accenture, and named the fastest growing IT services brand in an assessment done by Brand Finance, the world's leading brand valuation firm. TCS was also ranked the Top Employer globally by the Top Employer Institute, and among the Best Employers by Forbes.

TCS IT Wiz 2017 - Winners

Ansh Arora and Pranav Dhar - DPS NOIDA

TCS IT Wiz 2017 - Runners

Sujay N and Sachin A - Navrachana School, Vadodara

Promoting fitness in the Community

TCS is the title sponsor of premier marathons across the globe, including the TCS World 10K Bengaluru, the TCS New York City Marathon, the TCS Amsterdam Marathon, and the TCS Lidingöloppet (the world's largest cross-country run), and the technology partner to the Marathons held in Mumbai, London, Singapore, Chicago, and Boston -- all part of our effort to promote health and fitness in the communities we work with the world over.

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