



Digital Systems

1.1 Introduction to MIS

FOX
MIS

Welcome!

Spring 2021

FOX
MIS

Introduction to Instructor

- ❖ Marie-Christine Martin
- ❖ E-mail: mcmartin@temple.edu
- ❖ Office: Speakman 209J (zoom)
- ❖ Office Hours:
By appointment



Introduction to Instructor (cont.)

Education

- ❖ BS Industrial Engineering
- ❖ MBA, Finance

Pre-Temple

- ❖ IBM (Canada, USA & Singapore)
- ❖ HP Global
- ❖ Oracle, USA
- ❖ Self Employed Consultant

Adjunct Faculty

- ❖ Temple University, MIS

Full-Time Faculty Temple University

- ❖ Undergraduate - MIS
- ❖ Graduate - FOX Business School MBA & MiM
- ❖ Director of MIS Masters Programs





Course Support: Information Technology Assistants (ITAs)

- **Rose Listman**

rose.listman@temple.edu

**Office Hours: by appointment,
send Rose an email to schedule**



***“Tell me and I forget.
Teach me and I remember.
Involve me and I learn.”***

- Benjamin Franklin

Managing Expectations

- **This class is unique!**
- **We will work through challenges together...plan on it!**
- **You will find the class engaging and fun!**
- **You will acquire knowledge and skills that you will use in future classes and your career!!!**

Course Highlights

- **Systems Analysis**
- **Process Mapping (Modeling with swim lanes & entity relationship diagrams)**
- **Digital Product Management**
- **Information Systems CRM & ERP, Data Analytics & SCM**
- **Platforms & Digital Business models, including API's**
- **Cyber security and the Enterprise plus AI**
- **Programming including: JavaScript, HTML & CSS**

Course Objectives

- **Explore the systems which organizations use to create their digital products**
- **Explore the platforms which these digital systems are built upon**
- **Explore the API ecosystems by which systems extend their reach and capability.**
- **Discuss cyber security including risks & responses surrounding digital products**
- **Introduction to the creation of software**
- **Learning the basics of programming in JavaScript**

Graded Components

Component	Percentage
In-Class Activities & Worksheets (approximately 10)	10%
Learn IT! and Max Lab Assignments no late assignments accepted – no exceptions!	30%
Exam #1 (60 minutes)	20%
Exam #2 (60 minutes)	20%
Exam #3 (60 minutes)	20%

*In-Class activities (ICA) must be submitted while in class (you are able to miss two ICA without penalty).

Readings & Videos – Part 1

- **No required texts the first half of the semester!**



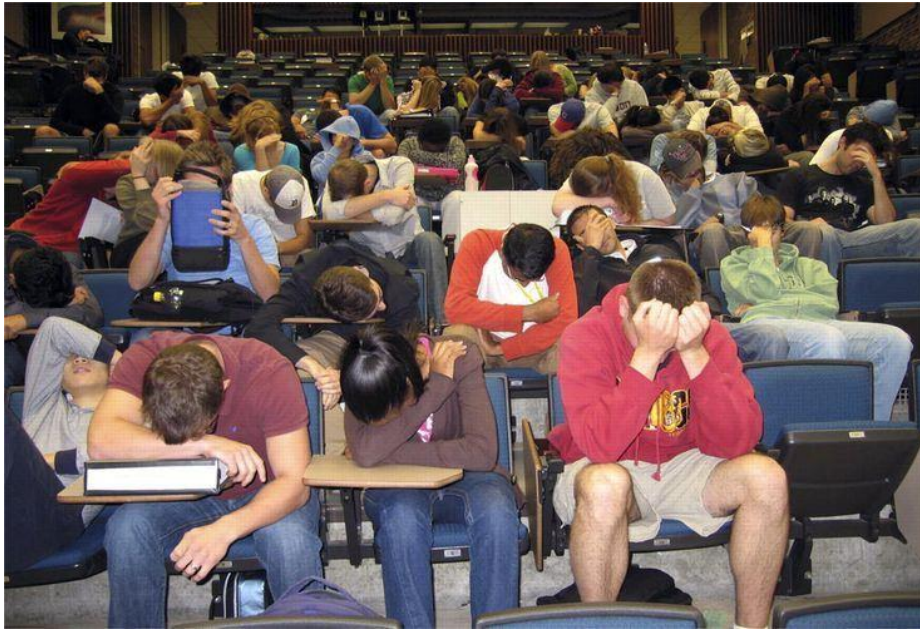
- **Engaging collection**
- **Current content**
- **Available for Free!!!**

Readings & Videos – Part 2

- **JavaScript**
 - Create simple JavaScript programs
 - Prompt users for input
 - Utilize loops
 - Process Information



Lecture vs. Activities



Source: <https://www.theodysseyonline.com/11-things-college-lecture-hall>

- **2 Hours of zzzzzzzzz's**



- **1 Hour Discussion**
- **1 Hours of Activity**

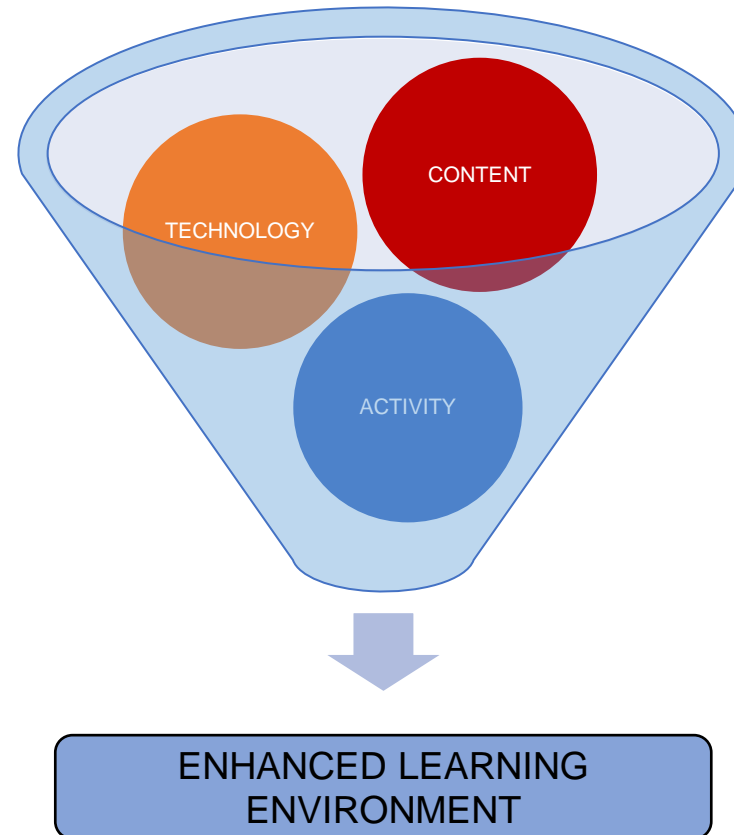
Active Learning Components

TECHNOLOGY

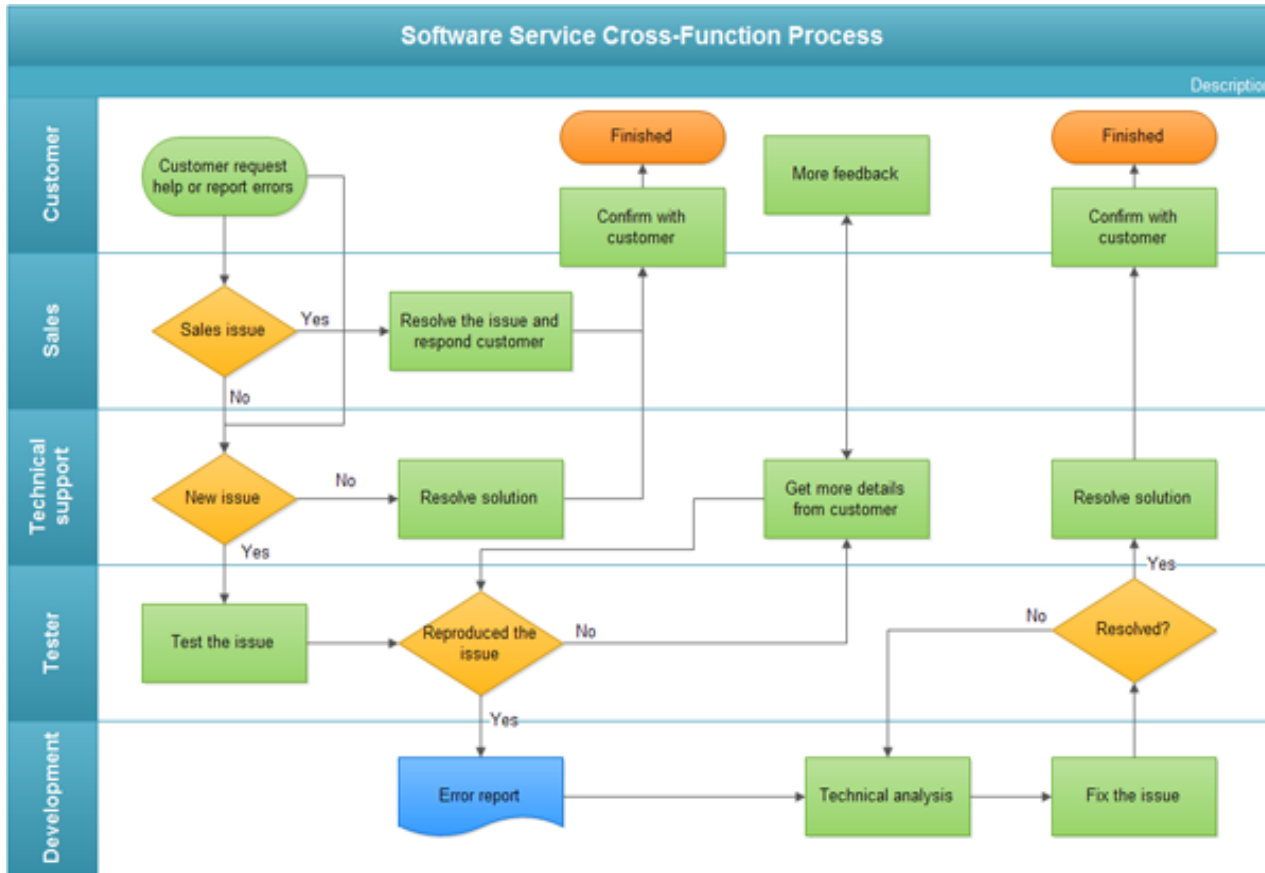
CONTENT

ACTIVITY

The Active Learning Funnel



The In-class Activity



- Process Diagrams
 - Swim lane diagram
- Real life scenarios
- Knowledge Application
- Problem Solve
- Synthesize Solutions

The In-class Activity – Canvas

Quiz Instructions

After completing this activity you will be able to:

- State a key fact about this course, its instructor, and its subject
- List basic questions that can be applied to nearly any situation

Question 1 0 pts

Step 1: Prepare three questions (individually)

1. A question about this course
2. A question about the instructor
3. A question about Information Systems (IS)

HTML Editor

B I U A A I E E E E E x x E E

12pt Paragraph

0 words

- **Reinforce assigned materials**
 - Readings
 - Videos
 - Lecture
- **Exam Preparation**

Not Just Another Intro Class!

- Accounting
- Business Management
- Entrepreneurship & Innovation Management
- Financial Planning
- International Business Administration
- Marketing
- Risk, Insurance & Healthcare Management
- Supply Chain Management
- Actuarial Science
- Economics
- Finance
- Human Resources Management
- Legal Studies in Business
- Management Information Systems
- Real Estate
- Statistical Science and Data Analytics



ASSOCIATION FOR
INFORMATION SYSTEMS

Information Systems Job Index

Careers in Information Systems



Fox School of Business
TEMPLE UNIVERSITY®



Read the full report at isjobindex.com

Based on 1420 recent graduates from 43 universities across the U.S.

The 2019 IS Job Market is Steady



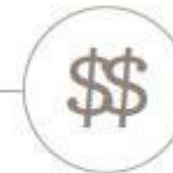
Job Placement Rate

	At Graduation	6-Months after Graduation
Bachelor's:	70%	69%
Master's:	47%	81%



Confidence in Job Market

Bachelor's:	64%
Master's:	55%



Average Salary

Bachelor's:	\$65,314
Master's:	\$84,113

IS Students are Happy About Their Future Jobs



Satisfaction & Enthusiasm about Job Offer

Bachelor's:	83%
Master's:	70%



Offer from Appealing Organization

Bachelor's:	89%
Master's:	75%

Class Sites Review

We use Canvas for our exams, assignments and in class activities.

<https://templeu.instructure.com/courses/86867>

The rest of the information is on our MIS site:

<https://community.mis.temple.edu/mis2101sec702spring2021/>

The screenshot shows a web browser displaying the MIS Digital Systems website. The page has a dark red header with the MIS logo and the text 'Digital Systems' and 'MIS 2101.701 • Fall 2020 • Marie-Christine Martin'. Below the header is a navigation menu with links for HOME, ABOUT, CANVAS / ZOOM LINK, CODING FILES, HELPDESK, VIDEO VAULT, GRADEBOOK, and DIAMOND PEER CORNER. The main content area is divided into two columns. The left column is titled 'Schedule' and contains a table with columns for WEEK, DATES, TOPIC, and DUE. The right column is titled 'ANNOUNCEMENTS' and contains a 'Welcome to MIS 2101' message, an 'INSTRUCTOR' section for Marie C Martin, and 'Virtual Office Hour Availability' information.

WEEK	DATES	TOPIC	DUE
1	10/19	Learning Outcomes Class Introduction Define MIS Describe Systems in Organizations Analyzing Organizations as Systems Modeling Processes with Swim Lanes	REQUIRED videos to watch before our first class located on the About tab of this site (here's the link).
		Topics and Required Reading Acquiring Information Systems And Services Systems Architecture Systems Analysis An Introduction to Swim Lane Diagrams	Practice Protofo Quiz (canvas) (due 10/25 by 11:59 PM) 1. Max Labs Pre-flight (due 10/25 by 11:59 PM)
		Slide Decks MIS 2101 Section 701_week1	
		Learning Outcomes Explain the Digital Product Manager's (DPM) role in solving problems for organizations Identify how the DPM utilizes technology to enable organizations Illustrate how you will begin producing your own DPM tools to analyze, synthesize and evaluate data Prepare a simple entity relationship diagram Identify basic ERD symbols and interpret an ERD Learn how to turn data into an ERD	2. Max Labs 1A/1B (due 11/1 by 11:59 PM)

ROADMAP

START

Week 1:
Introduction & Systems Analysis

- Course Description
- Systems Thinking

Week 1:
Introduction to Process Mapping

- Systems & Processes
- Swim Lane Diagrams

Assignments due::

- Course video intro
- Max Labs Pre-Flight
- Proctorio Practice Quiz

Week 2:
Data Modeling & ERD

- Max Labs 1A/1B- due
- Max Labs 2A/2B due

Week 2:
Exam #1

3/26 – 3/28: Exam Availability

Week 4 :
Exam #2

4/9-4/11 Exam Availability

Week 4:
Cybersecurity & AI

- Protection Protocols
- Artificial Intelligence

- Lean IT #2 due
- Cyber Security due

Week 4:
Platforms & Digital Business Models

- API's
- Cloud

Week 3:
Information Systems

- ERP & CRM
- Data Analytics & SCM

- Max Labs 3a/3b due
- Lean IT #1 due

Week 5:
JavaScript Unit #1 & 2

- Hello World,
- Variables
- Operator types
- Strings

SoloLearn Coding due

Week 6:
JavaScript Unit #3&4

- Logical Operators
- Conditional Types
- Intro to Loops
- While and Do
- Coding Challenges *3) due
- Proctorio Coding Practice due

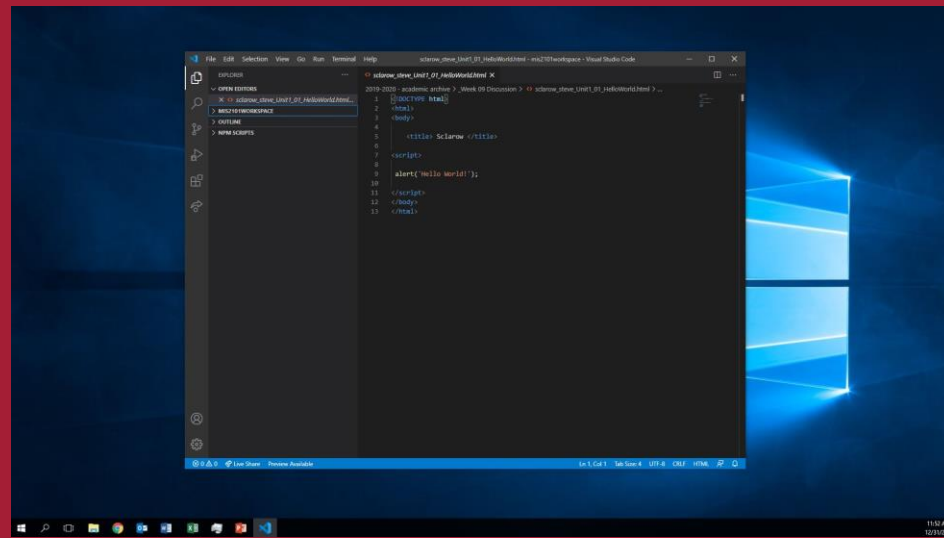
Week 7:
HTML & CSS

- Coding Assignment -due

Week 7:
Exam #3

4/27 – 4/28: Exam Availability

FINISH



Course Overview Video

Due Friday!

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Digital Systems

1.1 Intro to Information Systems in Organizations
In-Class Activity

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ICA#1: Intro to Information Systems in Organizations

- **What?**
 - **Ask your instructor questions about the course and about themselves**
 - **Learn what “In-Class Activities” are all about**
- **Why?**
 - **Regardless of your major, the more you understand about information systems, the more successful you will be**
 - **This course uses activity-based learning to help students develop a deeper, more genuine understanding of topics. This is your first taste of “In-Class Activities”**

Step #1 - Individually

- **Prepare three questions using the Canvas form**
 - **A question about the course:**
 - **A question about the instructor:**
 - **A question about Information Systems (IS)**

Quiz Instructions

After completing this activity you will be able to:

- State a key fact about this course, its instructor, and its subject
- List basic questions that can be applied to nearly any situation



Question 1

0 pts

Step 1: Prepare three questions (individually)

1. A question about this course
2. A question about the instructor
3. A question about Information Systems (IS)

HTML Editor



0 words

Step #2

- **Instructor calls on students at random to ask questions**

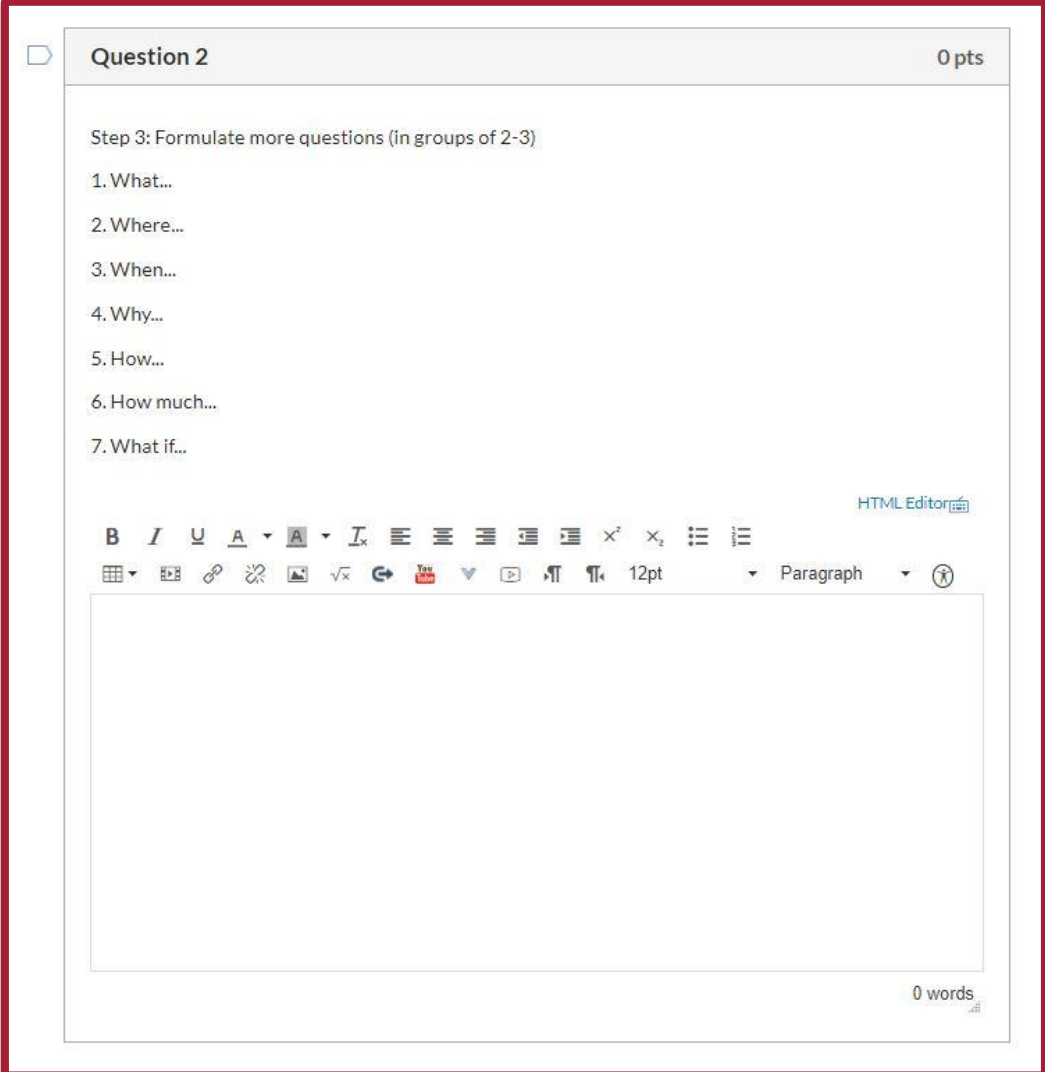


Source: <https://i1.wp.com/www.nationalreview.com/wp-content/uploads/2016/12/school-bans-students-raising-their-hands-answer-questions-2.jpg?fit=788%2C460&ssl=1>

Step #3 –

- **Formulate more questions and enter them individually into the Canvas form**

- **What** _____?
- **Where** _____?
- **When** _____?
- **Why** _____?
- **How** _____?
- **How much** _____?
- **What if** _____?



The screenshot shows the Canvas LMS question editor interface for 'Question 2'. The question text is 'Step 3: Formulate more questions (in groups of 2-3)'. Below the text is a list of seven question prompts: '1. What...', '2. Where...', '3. When...', '4. Why...', '5. How...', '6. How much...', and '7. What if...'. The editor includes a rich text toolbar with options for bold, italic, underline, text color, background color, text alignment, list creation, link, unlink, insert image, insert video, insert audio, insert link, and font size (set to 12pt). The current paragraph style is 'Paragraph'. The word count at the bottom right is '0 words'.

Step #4

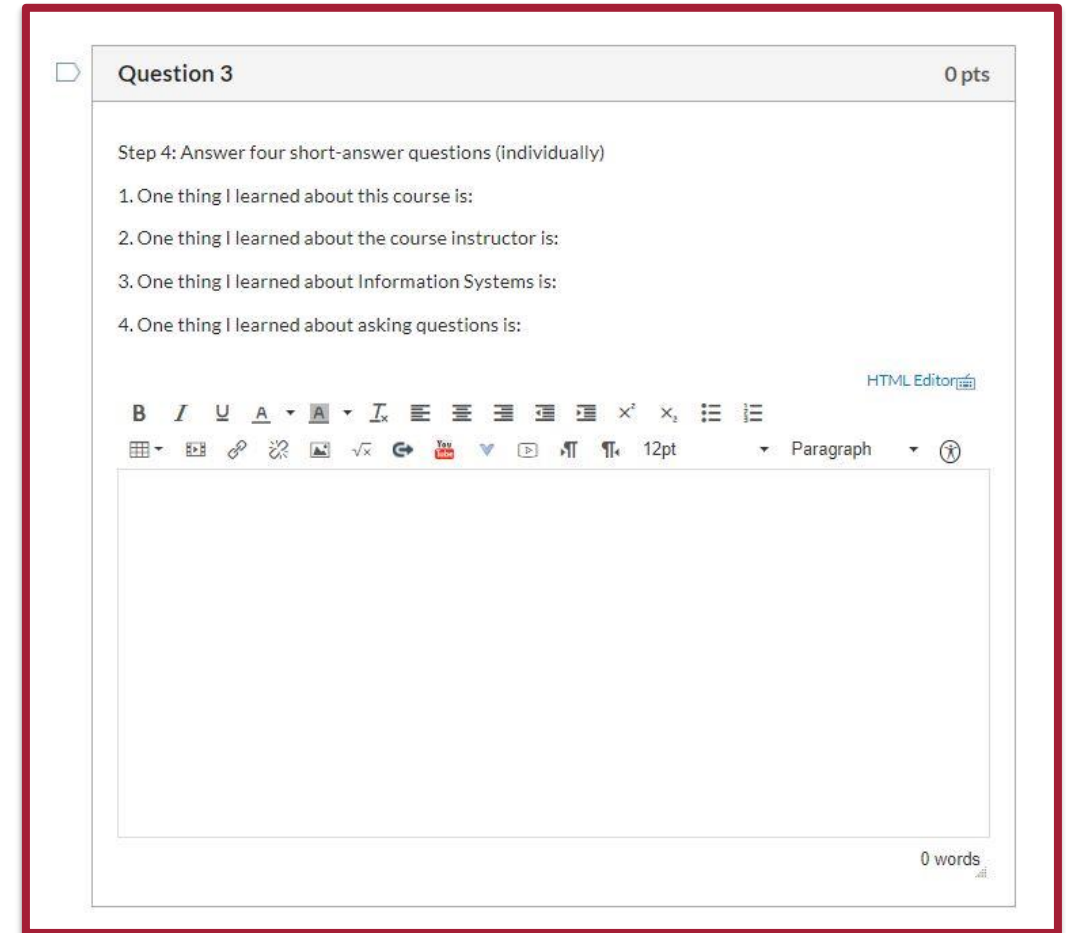
- **Instructor calls on students at random to ask questions**



Source: <https://www.google.com/url?sa=i&source=imgres&cd=&cad=rja&uact=8&ved=2ahUKEwiVibKgrvjjAhVvS98KHdl9D4sQjRx6BAGBEAQ&url=https%3A%2F%2Finsight.futurestudents.csu.edu.au%2Ftag%2Fregional-university%2F&psig=AOvVaw1vpMqBORPhyvyOouH05SF-&ust=1565528495762447>

Step #5 - Individually

- **Answer four short-answer questions and enter your answers in Canvas**
 - 1. One thing I learned about this course is:**
 - 2. One thing I learned about the instructor is:**
 - 3. One thing I learned about Information Systems (IS) is:**
 - 4. One thing I learned about asking questions is:**



The screenshot shows a Canvas question interface for 'Question 3' with a score of 0 points. The question text reads: 'Step 4: Answer four short-answer questions (individually)'. Below this, there are four numbered prompts: '1. One thing I learned about this course is:', '2. One thing I learned about the course instructor is:', '3. One thing I learned about Information Systems is:', and '4. One thing I learned about asking questions is:'. A rich text editor is provided for the answer, featuring a toolbar with options for bold, italic, underline, text color, background color, link, unlink, insert link, insert video, insert image, insert table, insert table of contents, list, and list with numbers. The editor is currently empty, showing '0 words' at the bottom right.

Step #6 - Individually

- Rate this activity using Canvas
- From 1 (completely disagree) to 5 (completely agree)...

The screenshot displays two questions from a Canvas LMS survey. Question 4 is titled "Question 4" and is worth 0 points. It asks the user to "Rate this activity from 1 (completely disagree) to 5 (completely agree)..." and contains three Likert scale items, each with a "[Select]" dropdown menu:

1. This is an engaging activity [Select]
2. I learned a lot completing this activity [Select]
3. This activity should be used again in future semesters [Select]

Question 5 is titled "Question 5" and is also worth 0 points. It asks "Anything else you want the instructor to know?" and features a rich text editor with a toolbar containing various formatting options like bold, italic, underline, text color, background color, link, unlink, insert link, unlink, insert video, insert image, insert table, and insert table of contents. The toolbar also shows "12pt" and "Paragraph" as the current settings.



Digital Systems

1.2 What are Systems?

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Business Systems Innovation Labs Pre-lab Pre-flight Checklist



“Distinctive, Impressive BizTech Student Blog” (Backstory)

SJSU Business Systems student Max sets out to blog her class, stumbles into a startup adventure, and invites you to follow along.

Prep: What do you need to start?

To get the most out of this pre-lab, you need a healthy curiosity, a sense of humor and a little imagination. Focus, read for understanding, and put yourself in Max’s shoes so you don’t just read it—you *experience it*.

Max Labs

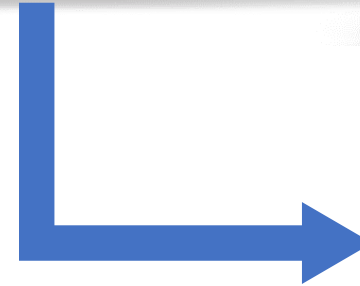
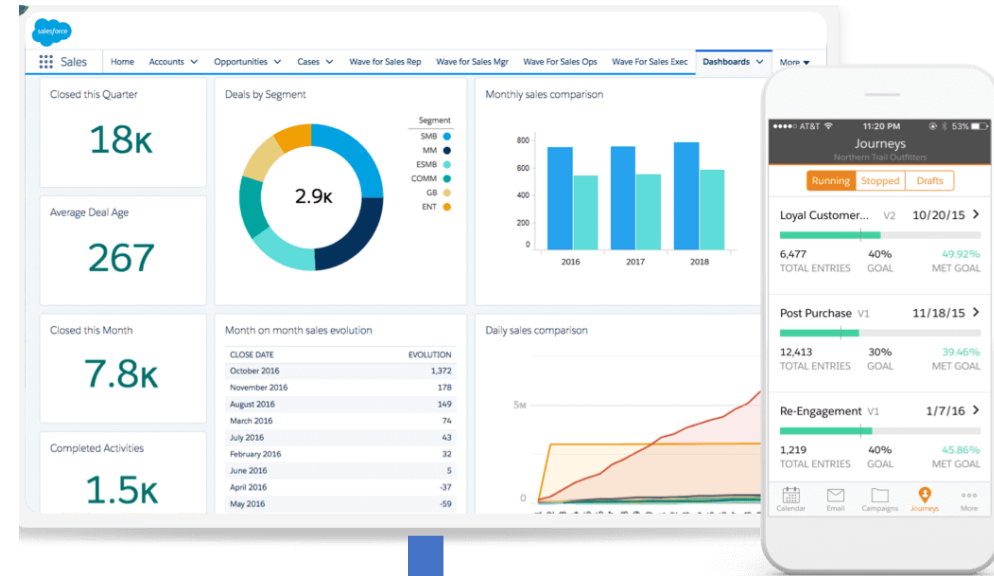
PRE-LAB DUE BY EOD SUNDAY!

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What is MIS?

Using Information Technology to solve business problems.

- MIS is not Computer Science
- It's about business where we train people to do what?
- Use technology to solve day-to-day business problems`



Sources: https://c1.sfdcstatic.com/content/dam/web/en_us/www/images/products/what-is-salesforce/whatis-jumbo-astro-product.png

https://www.kindpng.com/picc/m/568-5683178_real-cash-stack-100-dollar-bill-hd-png.png

World View – A collection of “Systems”

Systems = people + process + technology

- Manipulation of information = value
- Managed by MIS professionals
- Systems surround us 24/7
- Application Program Interface (API's)



Source: <https://www.aecom.com/ca/management-information-systems-mis/>

Understanding Systems

Buying textbooks on Amazon

- What is part of that system?
- Log-in (multiple steps)
- Search
- Shopping Cart
- Purchase (Multiple steps)
- And much more.....

The screenshot shows an Amazon search results page for the query "javascript absolute beginner's guide / kirupa chinnathambi". The page features a navigation bar at the top with the Amazon Prime logo, a search bar containing the query, and a "Stock up for college" banner. Below the navigation bar, there is a section for "1 result for 'javascript absolute beginner's guide / kirupa chinnathambi'" with a "Sort by: Price: Low to High" dropdown. The main content area is divided into a left sidebar and a main product list. The sidebar includes a "Department" section with a tree view of categories like "JavaScript Programming" and "Introductory & Beginning Programming". It also has an "Avg. Customer Review" section with star ratings and an "Accessibility Features" section with a checkbox for "Screen Reader Supported". The main product list displays three items: 1. "O'REILLY Explore further Javascript resources" with a "Shop now" link. 2. "JavaScript Absolute Beginner's Guide" by Kirupa Chinnathambi, published Jul 18, 2016, with a 4.5-star rating (29 reviews). It is available in paperback for \$19.06 (original \$29.99) and Kindle for \$14.39 (original \$23.99). 3. "JavaScript: Programming Basics for Absolute Beginners (Step-By-Step) (Volume 1)" by Nathan Clark, published Aug 16, 2017, with a 4.5-star rating (33 reviews). It is available in paperback for \$16.38 and includes Prime free delivery. A promotional note says "Want to start coding in JavaScript but have no idea where to start? This step-by-step guide will have you creating programs from scratch in no time!". 4. "Programming for Beginners: 3 Books in 1- HTML+CSS+JavaScript (Basic Fundamental Guide for Beginners)" by MG Martin, published Sep 18, 2018, with a 4.5-star rating (13 reviews). It is available in paperback for \$24.99 and includes Prime free delivery. A promotional note says "A Powerful blueprint and compilation for those who are starting their journey in Computer Programming".

Understanding Systems (cont.)

Buying lunch

- What is part of that system?
- Take the order
- Hand order to cook
- Prep to-go bag
- Order cooked (multiple steps)
- And much more.....



Understanding Systems (cont.)

Describe the Process of Ordering

- What keeps info accurate?
 - Data
- Who is involved?
 - Customer ♦ Store ♦ Warehouse Mgr. ♦ Admin ♦ UPS driver...
- How much effort?
 - None...it's automated!
 - Technology !!!

Report incorrect product information.

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Eloquent JavaScript, 3rd Edition: A Modern Introduction to

Google Apps Script for Beginners
Serge Gabet

Web Development with ReasonML: Type-Safe, Functional Programming

Building Enterprise JavaScript Applications
Learn to build and deploy

**“information system –
an integrated set of components for
collecting, storing, and processing data
and for providing information, knowledge,
and digital products.”**

- Encyclopedia Britannica

A collection of technologies

Including:

- Hardware
- Software
- Policies
- Education tools
- API's
- Etc...



Source: <https://www.kisspng.com/png-laptop-computer-hardware-computer-repair-technicia-1180595/preview.html>

API's Case Study: UBER

Requesting a ride?

- Describe what happens...
 - What are these systems?
 - How do they work?



Source: <https://www.okta.com/security-blog/2019/05/how-uber-takes-advantage-of-the-api-economy/>

Four Core Steps of Designing UX (user experience)

- Problem Definition
- Documenting Business Processes
- Process Decomposition
- Data Modeling



Source: <http://www.petraware.com/consulting/>

Software Development Lifecycle (SDLC) methodologies

- Waterfall
- Agile
- Lean
- Scrum
- DevOps



Image: <http://www.xanadutec.com/software-as-a-service.html>

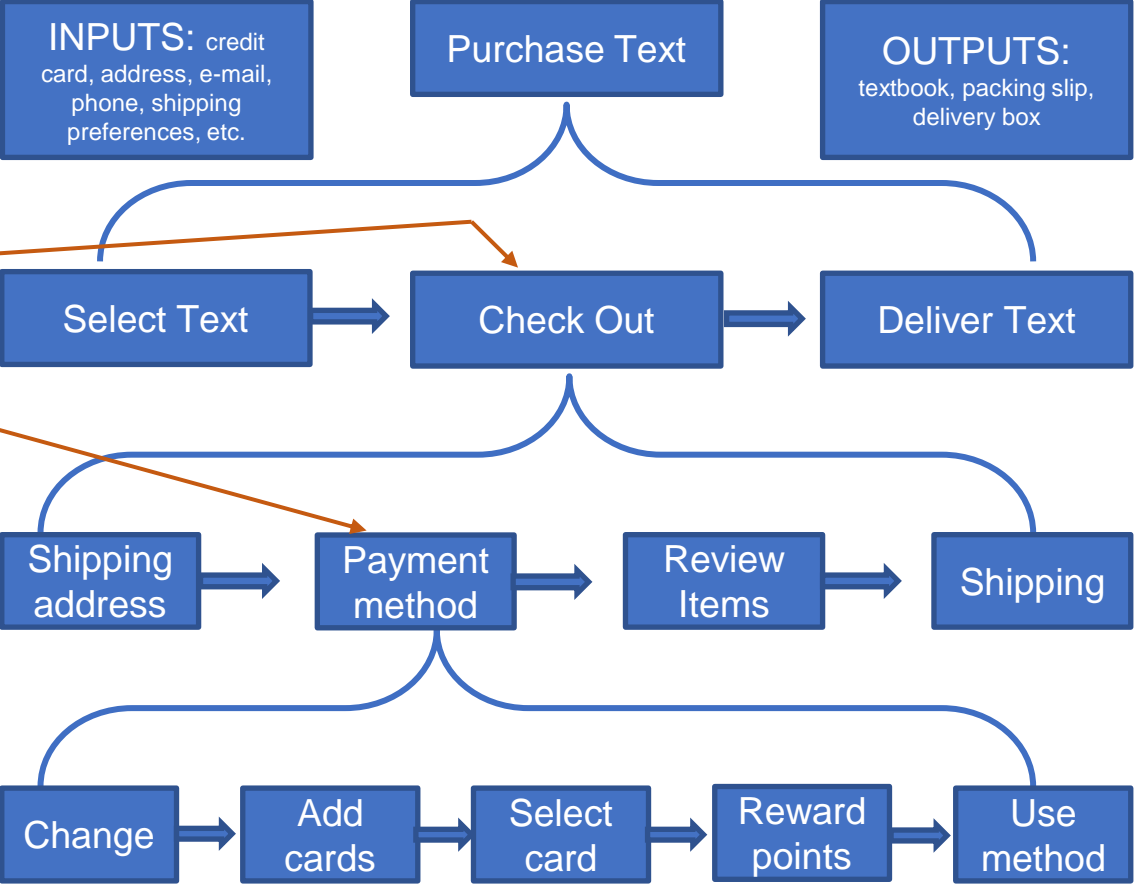
“Once a Product Manager / Technologist understands the *business problem*, they can architect a solution.”

- Mart Doyle

What is “Systems analysis?”: Problem solving technique that “decomposes” a system into its component pieces for the purpose of studying how well these parts work & interact to accomplish their purpose

Process Decomposition

- **Single entity**
- **Subsystem**



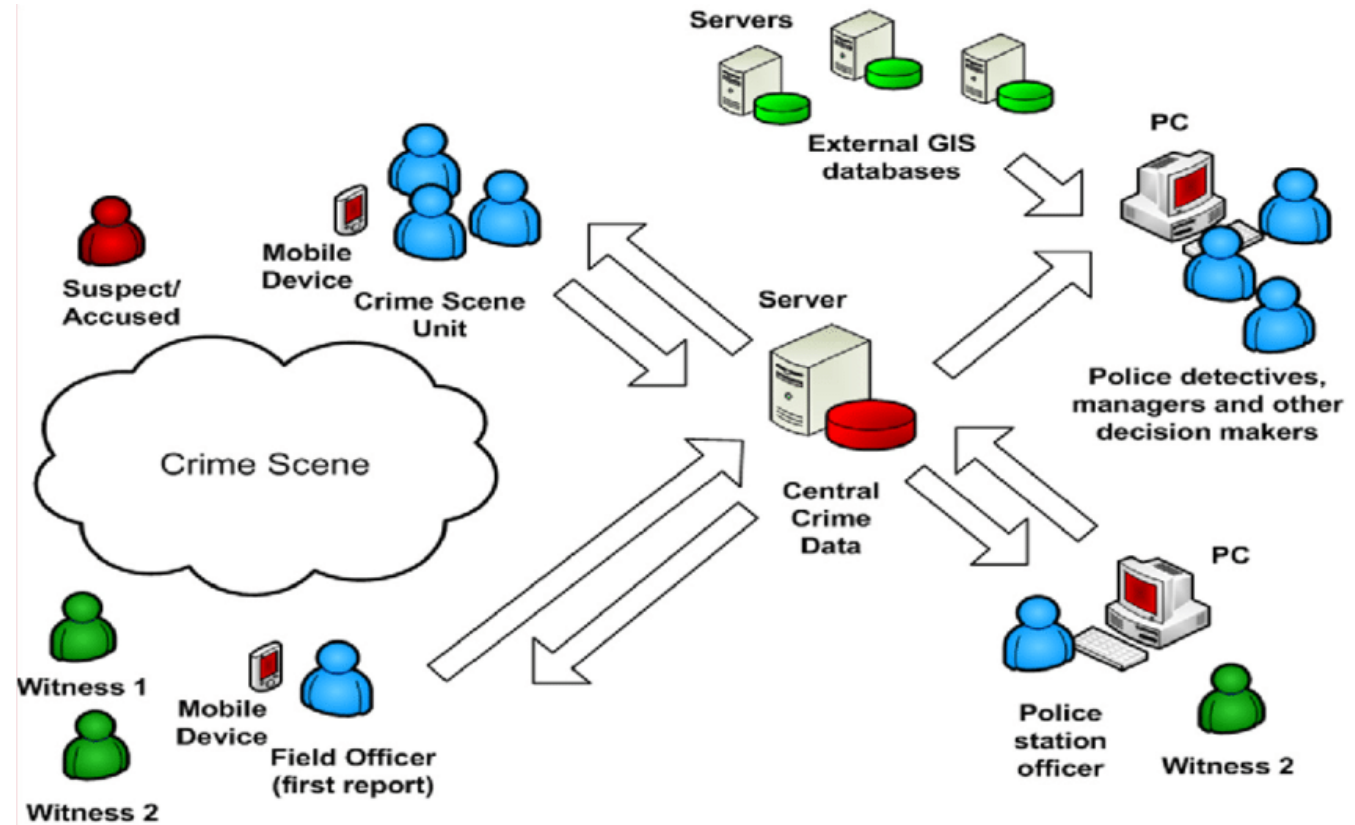
“Systems Architecture is a response to the conceptual and practical difficulties of the description and the design of complex systems.”

- Boris Golden

What is “Systems Architecture?”: Representation of the system & all of its parts/components

Systems Architecture

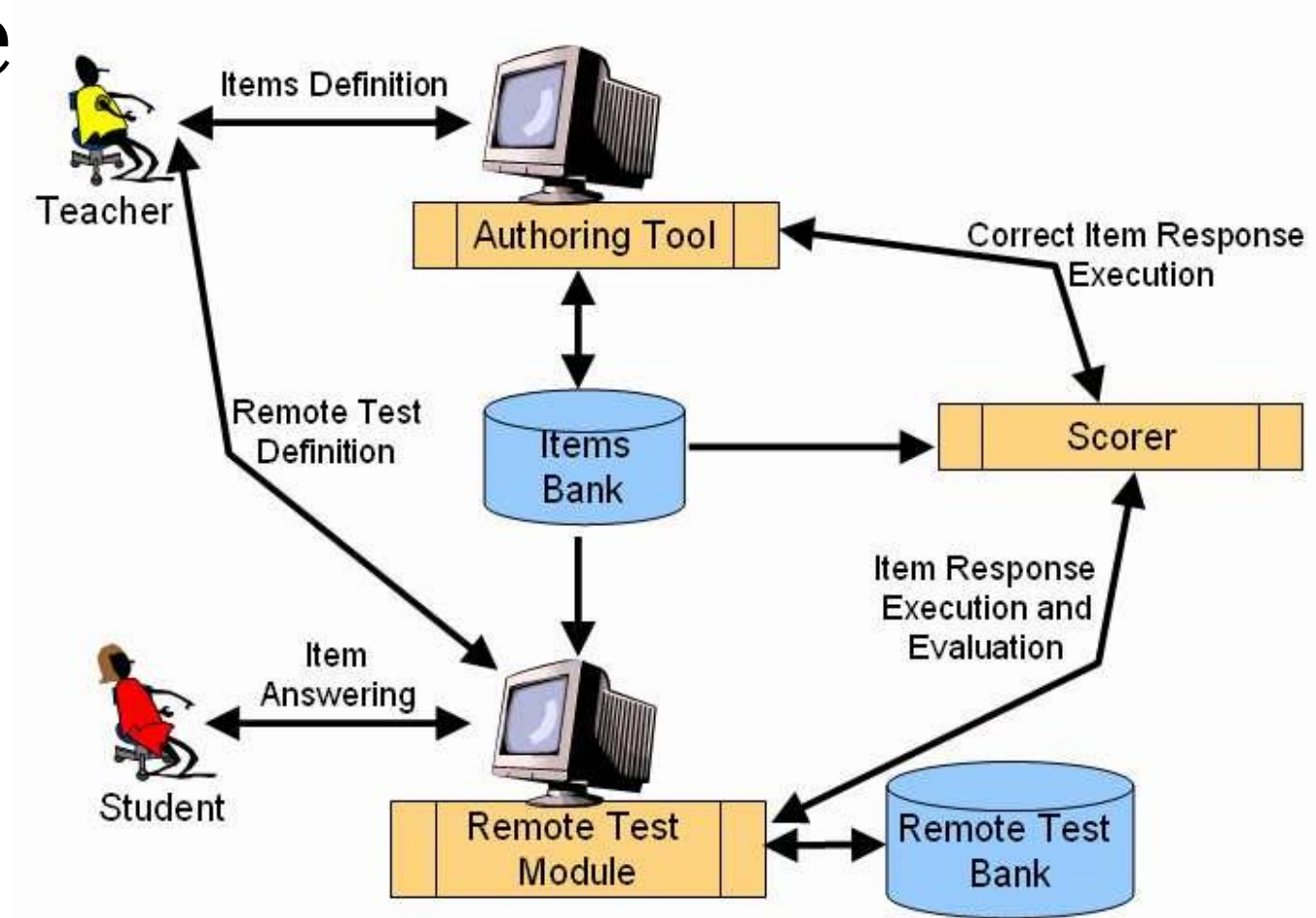
- Conceptual Diagram
- Structural components
- Identify/Solve Problems
- Existing or New
- Communication tool



Source: https://www.researchgate.net/figure/Conceptual-System-Architecture_fig2_327987580

Systems Architecture

- **Test question defined**
 - Authoring tool
- **Remote test created**
 - Test module
- **Student responses**
 - Test module
- **Execution & Evaluation**



Source: <http://spmarchitecture.com/systems-architecture/system-architecture-learning-environment-for-automatic-rating-64721-2/>

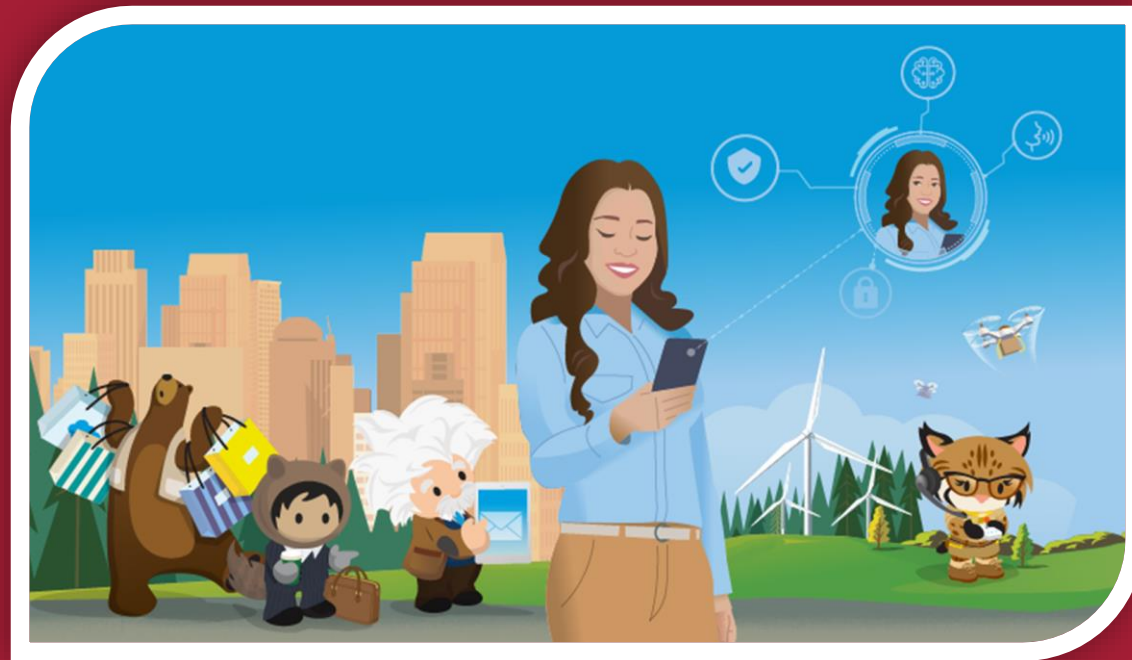


Digital Systems

2.1 Intro to Process Mapping & MaxLab

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The Max Labs Project



Overview & Startup

MaxLab Assignments

Why Salesforce?

This is not Salesforce training – it is exposure to a great platform that **delivers** cloud-based ***systems products***.

- Enables & Enhances Business
- Used By Industry Fortune 100's
 - Across All Business functional Areas
- Great Resume Builder For You!

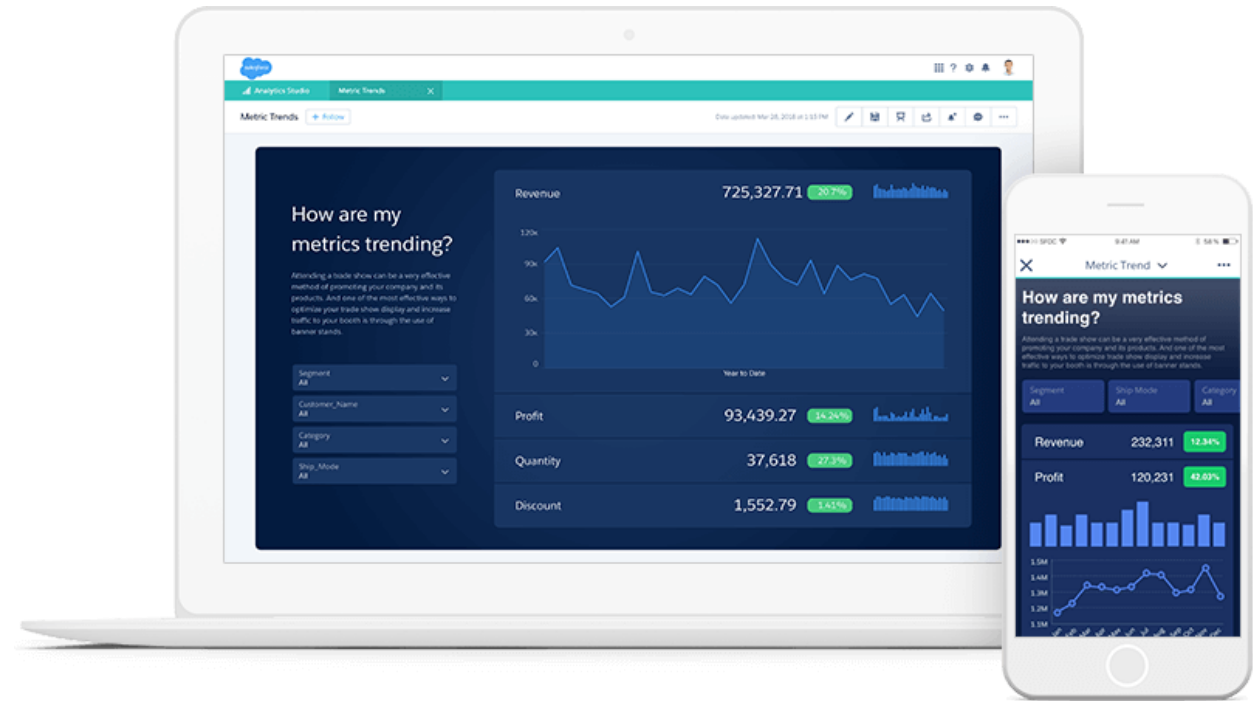


Source: <https://www.salesforce.com/>

Max Labs – Enabling Organizations

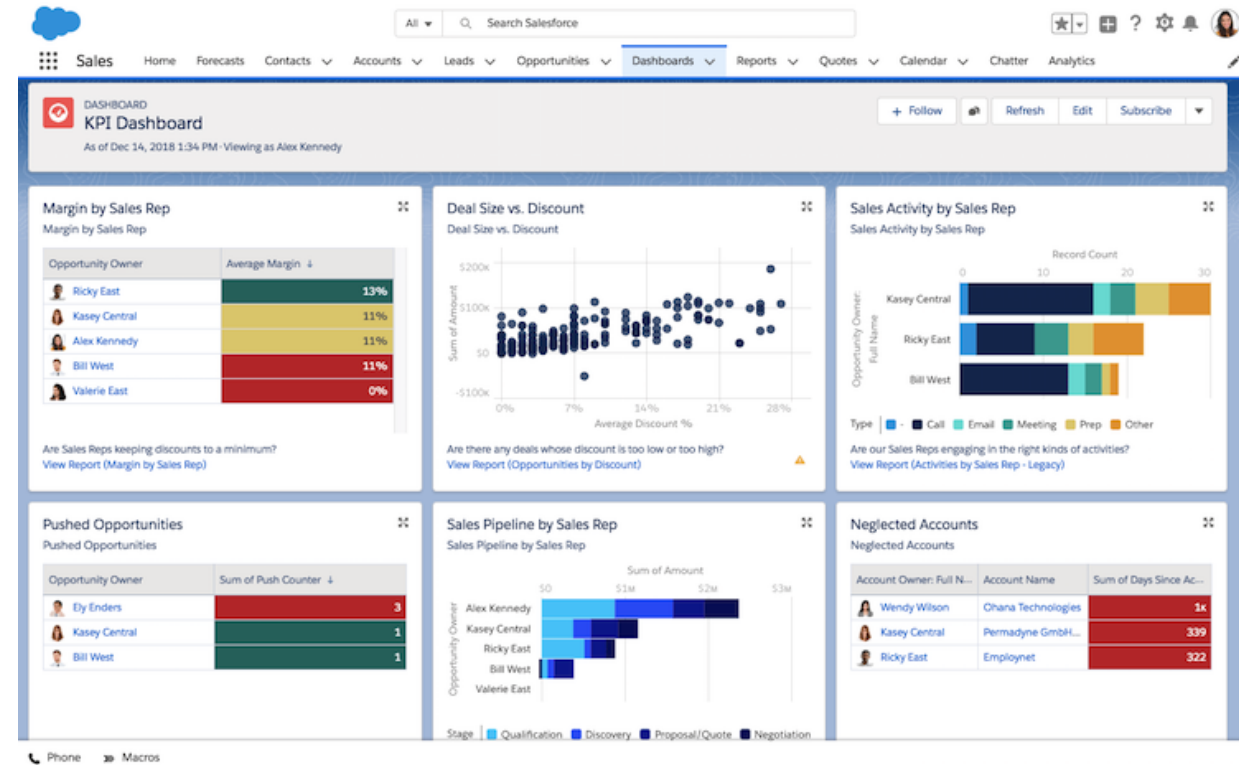
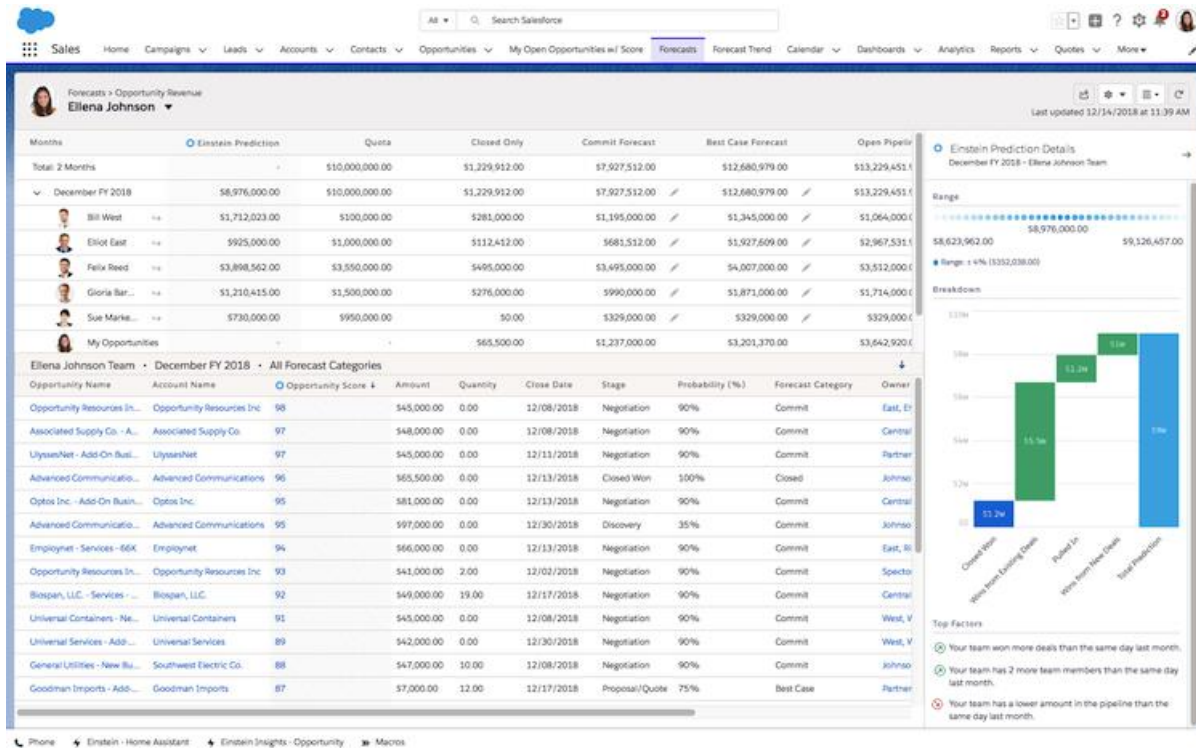
Technology Enables Organizations to work faster/smarter/more efficient

- See How It Works First-Hand
- Understand how Used by Industry Fortune 100's
 - Across all Business Functional Areas
- Great Resume Builder For You!



Source: <https://www.salesforce.com/>

Max Labs – What do they include?



Source: <https://www.salesforce.com/>

Max Labs – Tips for Your Success

- READ & FOLLOW every single instruction EXACTLY, in order. (You'll have no problems.)
- READ the cover sheet BEFORE you start every lab.
- ALWAYS read stories BETWEEN instructions. (Connections to our key Course Concepts)
- They're quick (allow about 60-90 min for each lab)
- **DO NOT** get the 30-day trial account from www.salesforce.com.
- The Lab 1b instructions tell you EXACTLY how to pay the lab fee. (Just follow them)
- If you're stuck, FIRST check the Help FAQ at MaxzPlace.com
- **BE SURE** your name appears on every screen-capture you submit to show your progress
- **DO NOT** use Yahoo! for your Salesforce account email. (Use Gmail)
- They're on the exams (w/un-guessable questions)
- They'll help you get a job (IF you can explain what you did/learned)

The screenshot shows the MaxzPlace website interface. At the top, the logo 'MaxzPlace' is displayed with the tagline 'the Max Labs place for students'. A navigation bar includes links for 'Home', 'What/Why/How?', 'Help FAQ', 'Help Forum', 'Go Beyond', and 'Comment Wall'. Below the navigation, three article cards are featured. The first card, titled 'What?', shows a woman smiling and holding a dog, with the text 'What are the Max Labs?' and a sub-headline 'Hands-on lab exercises on BizTech, told as a story by Max, a student like you, thru her blog.' The second card, titled 'Why?', shows a man working at a computer, with the text 'Why me? I'm no techie!' and a sub-headline 'To excel in ANY job today, you have to know BizTech well & this tech (Salesforce) is super-HOT!'. The third card, titled 'How?', shows a hand holding a smartphone displaying a donut chart and bar graphs, with the text 'Build apps? Me?!' and a sub-headline 'Yes you can! No coding! But get these tips for smooth sailing & maximum learning.' Each card has a 'Tell me more' link with a right-pointing arrow. At the bottom of the page, there are social media icons for Facebook, Twitter, YouTube, and LinkedIn, along with the copyright notice '© 2018 by The Max Labs Project'.

Source: <https://www.maxzplace.com/what>

Business Systems Innovation Labs Pre-lab Pre-flight Checklist



“Distinctive, Impressive BizTech Student Blog” (Backstory)

SJSU Business Systems student Max sets out to blog her class, stumbles into a startup adventure, and invites you to follow along.

Prep: What do you need to start?

To get the most out of this pre-lab, you need a healthy curiosity, a sense of humor and a little imagination. Focus, read for understanding, and put yourself in Max’s shoes so you don’t just read it—you *experience* it.

Max Labs - Pre-Flight

Due by EOD Sunday

FOX
MIS

Process Mapping

What

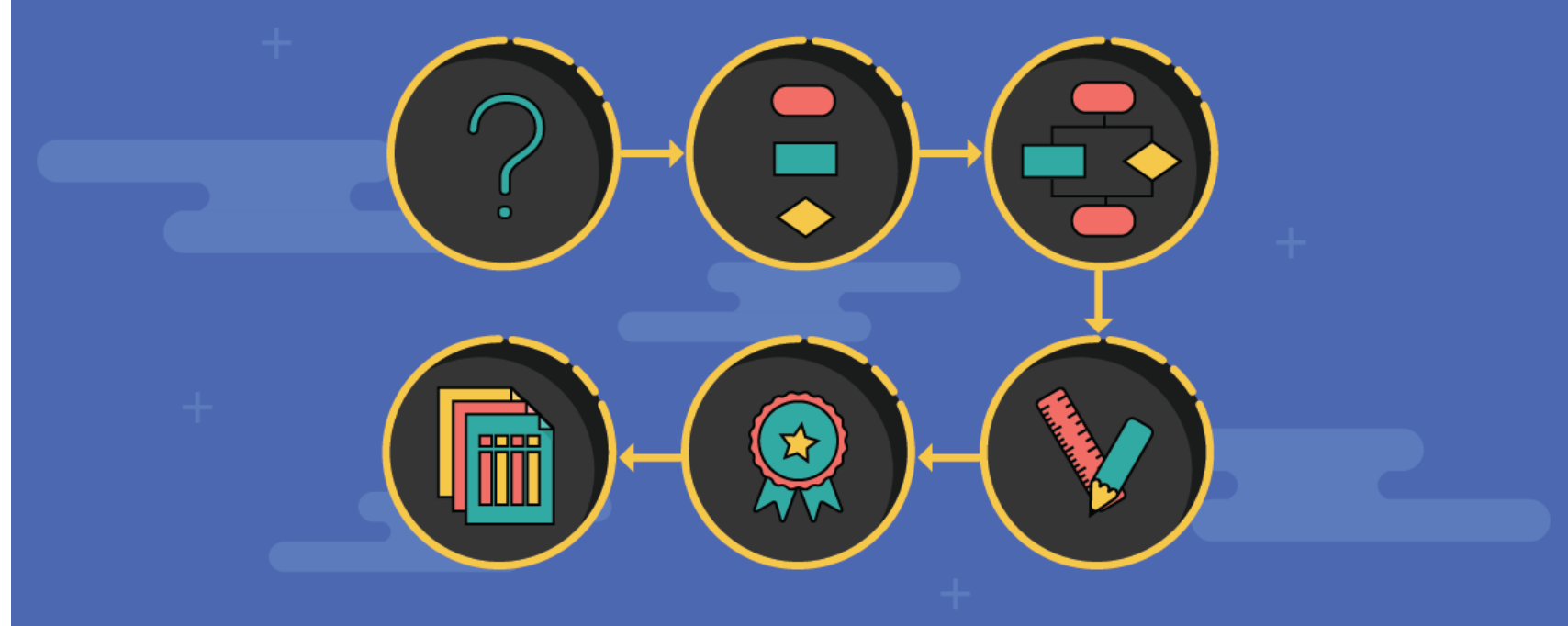
- Visual Representation

Why

- Identify Problems

How?

- Draw the “as-is”

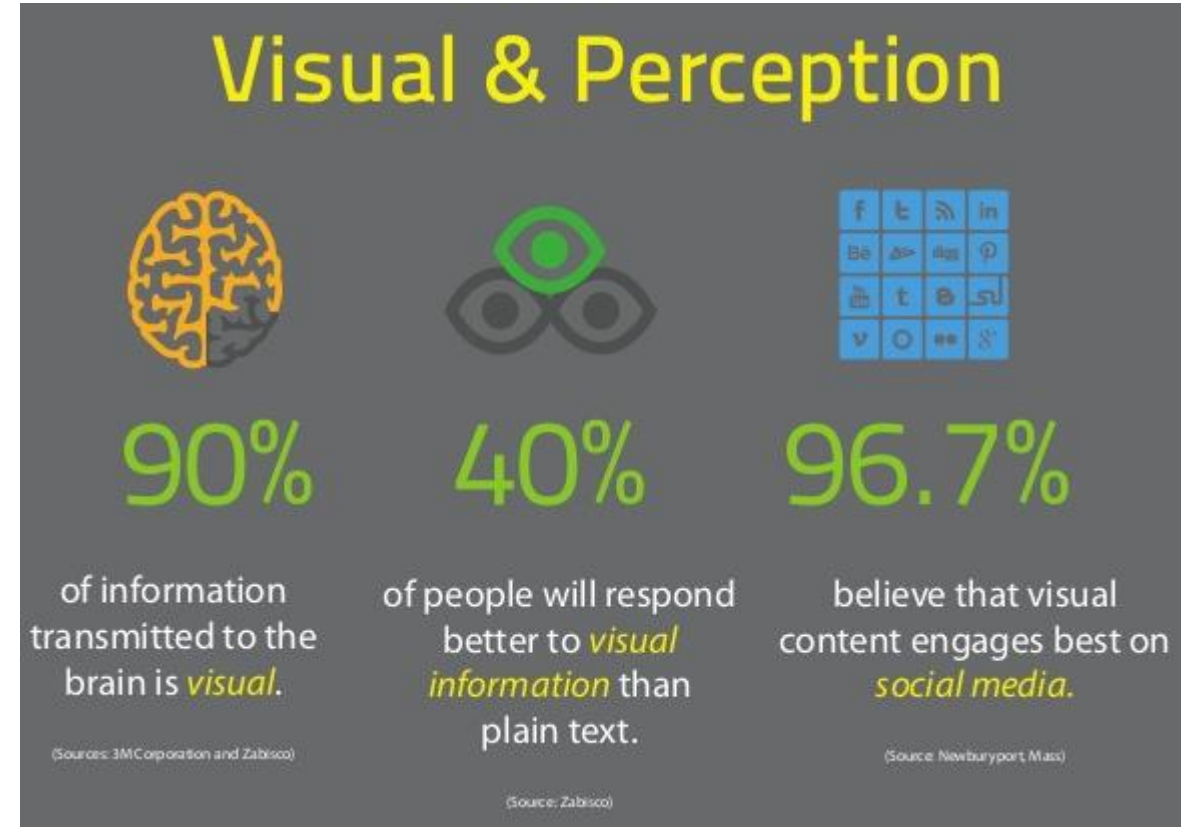


Source: <https://creately.com/blog/diagrams/process-mapping-guide/>

What's a Picture Worth?

How about a diagram???

- How fast does the brain process images?
- 70% of your sensory receptors are in your eyes
- 50% of your brain is active in visual processing



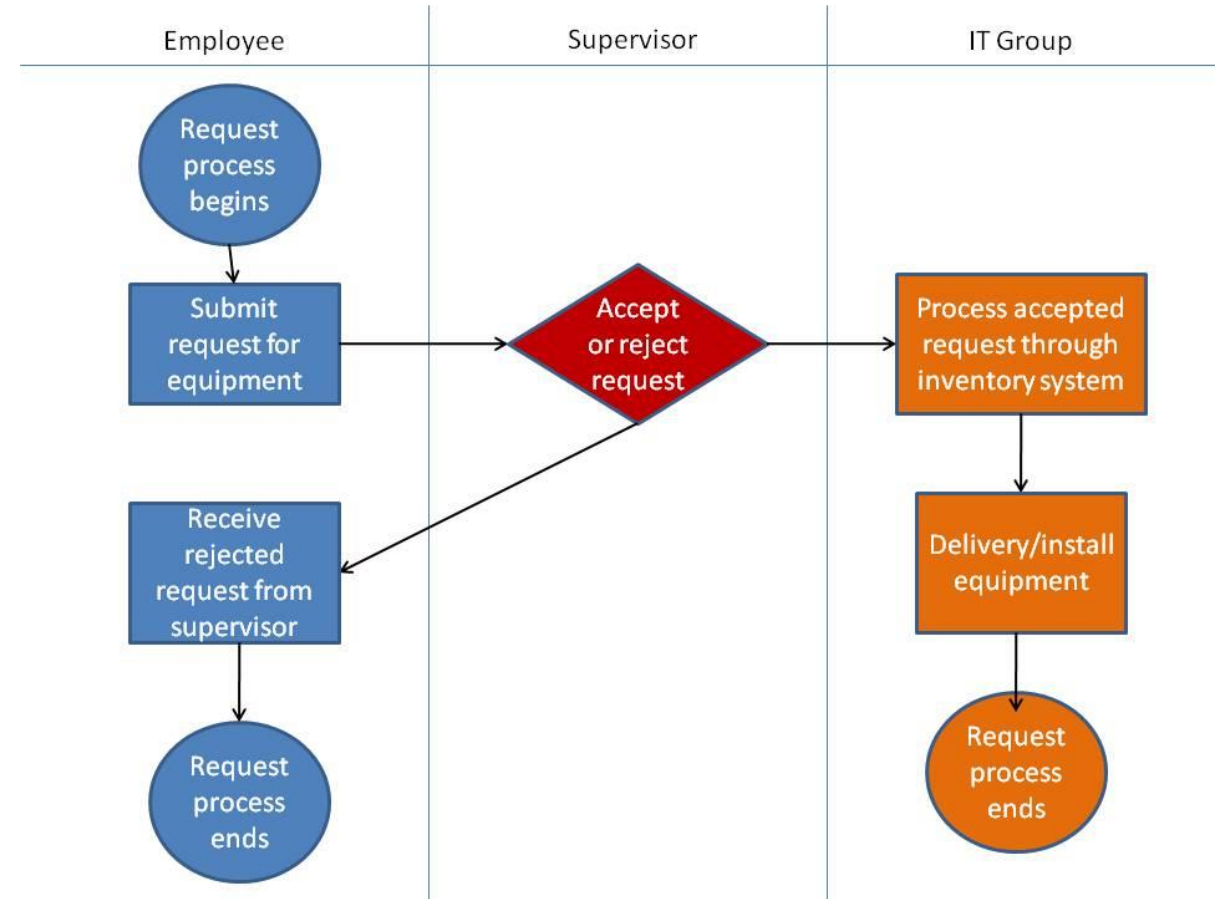
Source: <https://tax.thomsonreuters.com/blog/the-importance-of-visual-content-marketing-infographic/>

Source: <http://esheninger.blogspot.com/2018/08/a-picture-is-worth-thousand-words.html>

Swim Lane Diagrams

Advantages

- Identifies who does what & in what order
 - Logical & Chronological
 - Indicates hand-offs
- Versatile
 - Applied to other diagrams
 - Training tool



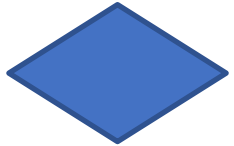
Swim Lane Diagrams - symbols



- A circle signifies the starting and ending of an event in the process



- A rectangle represents an activity in the process.



- A diamond represents a decision that must be made.



- Arrows indicate the flow of the process.



- A cylinder represents stored data.

Swim Lane Diagrams – Order to Cash (O2C)

The process starts when the customer contacts Sales to place an order. The person in Sales creates the sales order. As part of doing this, the person in sales first checks to see if the customer has enough available credit to cover the order. They do this by looking up the customer's credit on a report that is generated by Accounting and sent to Sales every Monday morning. If the customer doesn't have enough available credit then the person in sales notifies the customer who can then either update or cancel their order. Next the person in sales checks to see if the items being ordered are in stock. They do this by checking a report on inventory that the Warehouse created at the end of each day. If the items being ordered are not in stock then the person in Sales notifies the customer who can then update or cancel their order. If the report indicates the items are in stock then the order goes to the Warehouse where the workers there will pick the order. Since Sales is looking at a report that is only updated at the end of each day, there is a chance that they accepted an order for an item that is not really in stock. If that is the case the Warehouse notifies Sales who then notifies the customer who can update or cancel their order...

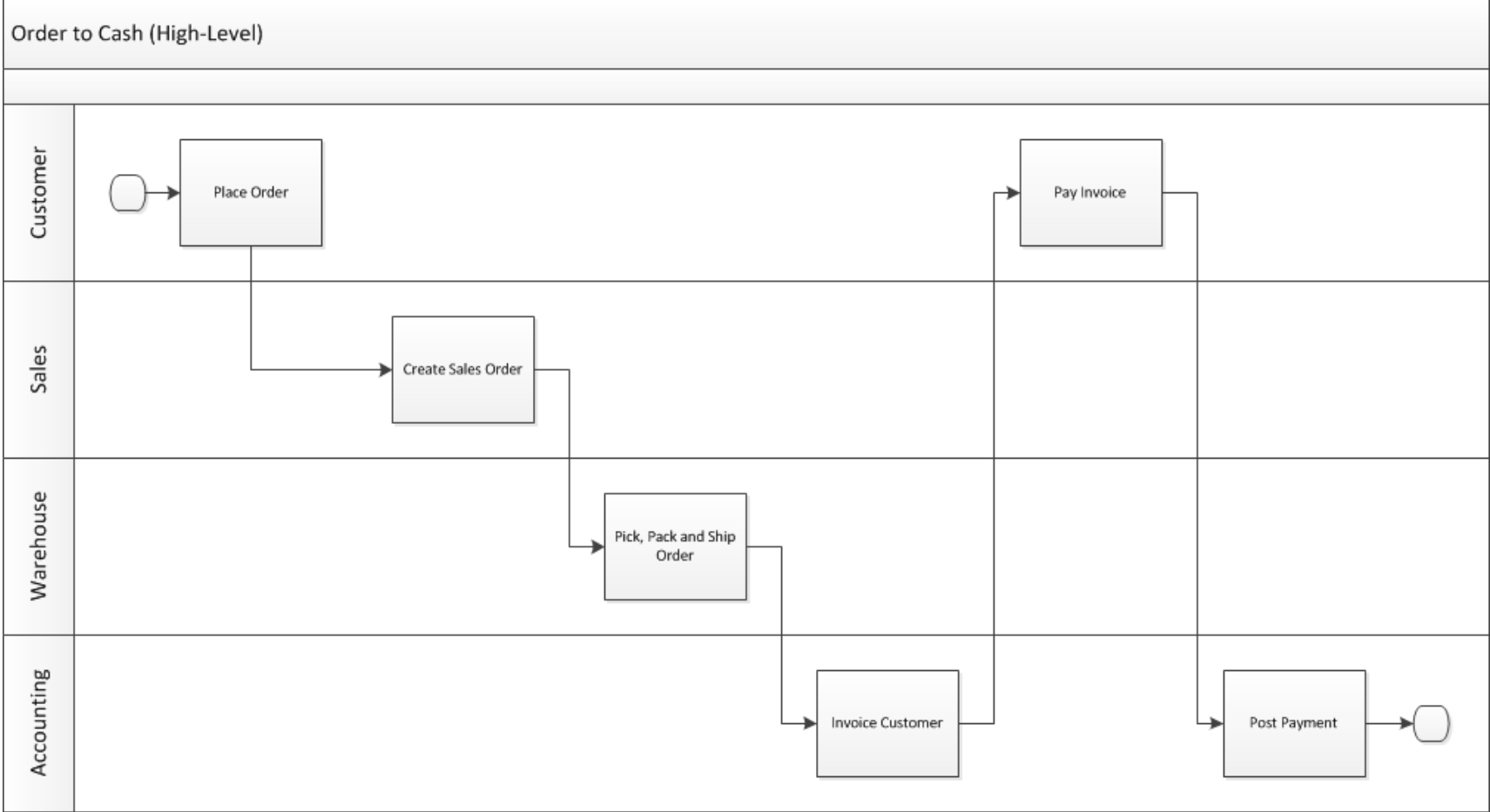
Swim Lane Diagrams – Order to Cash (O2C)

...Once the people in the warehouse pick the order, the people in Accounting have to make sure that the customer actually has enough credit to cover the order. Since the people in Sales use a credit report that is generated on Monday morning, there is a chance that the information on the credit report is old. If the customer doesn't have enough available credit then Accounting notifies Sales who then notifies the customer who can then choose to update or cancel their order. If the customer has enough available credit then their available credit is reduced by the total cost of the order and the warehouse is notified and they pack and ship the order. As soon as the order is shipped the people in the warehouse notify accounting and accounting generates and sends the invoice to the customer. When the customer pays the invoice the people in Accounting increase the customer's available credit by the amount of the payment, they post the payment and we're done.

Swim Lane Diagrams – Order to Cash (O2C)

Who does What & When

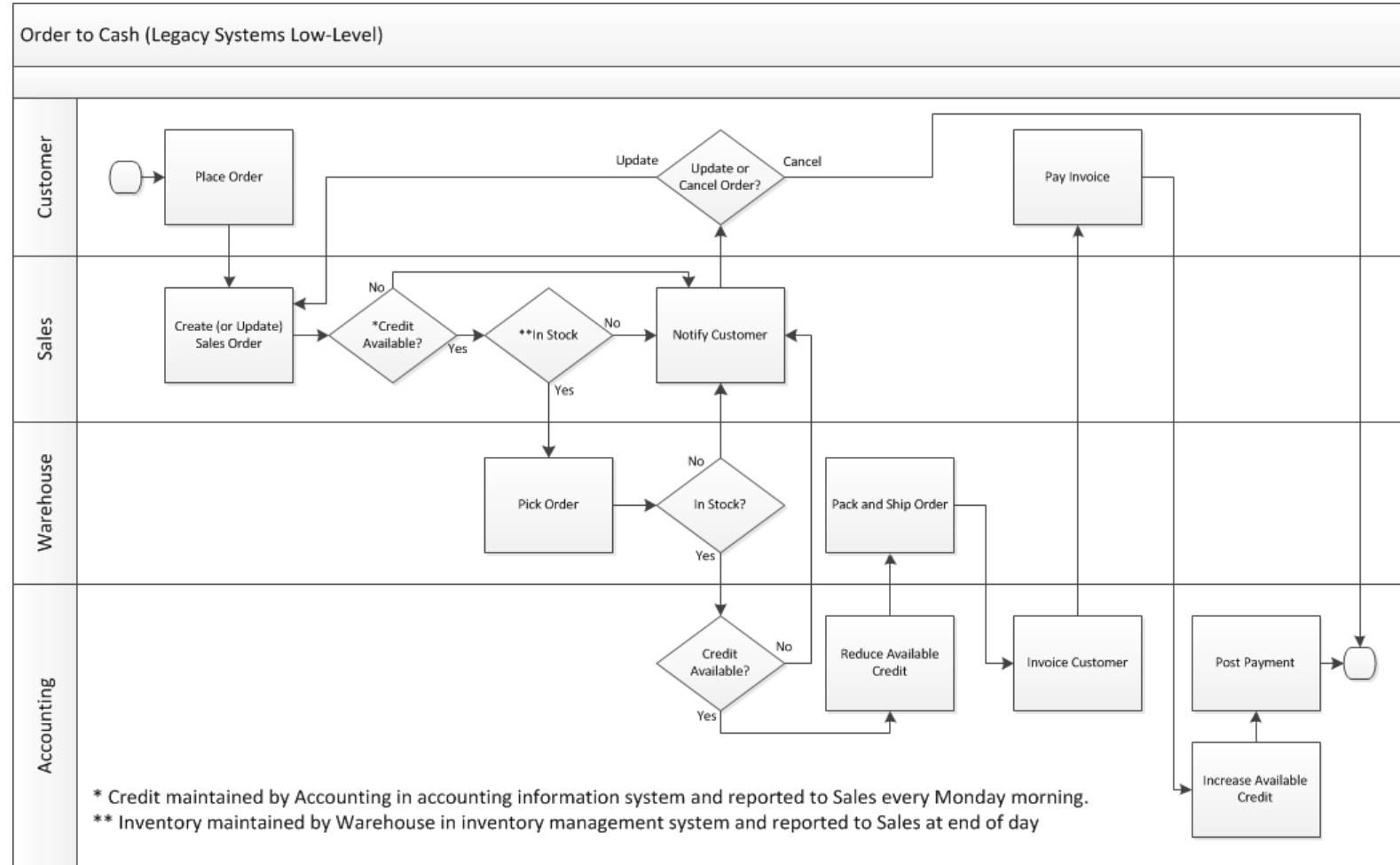
- Overview example



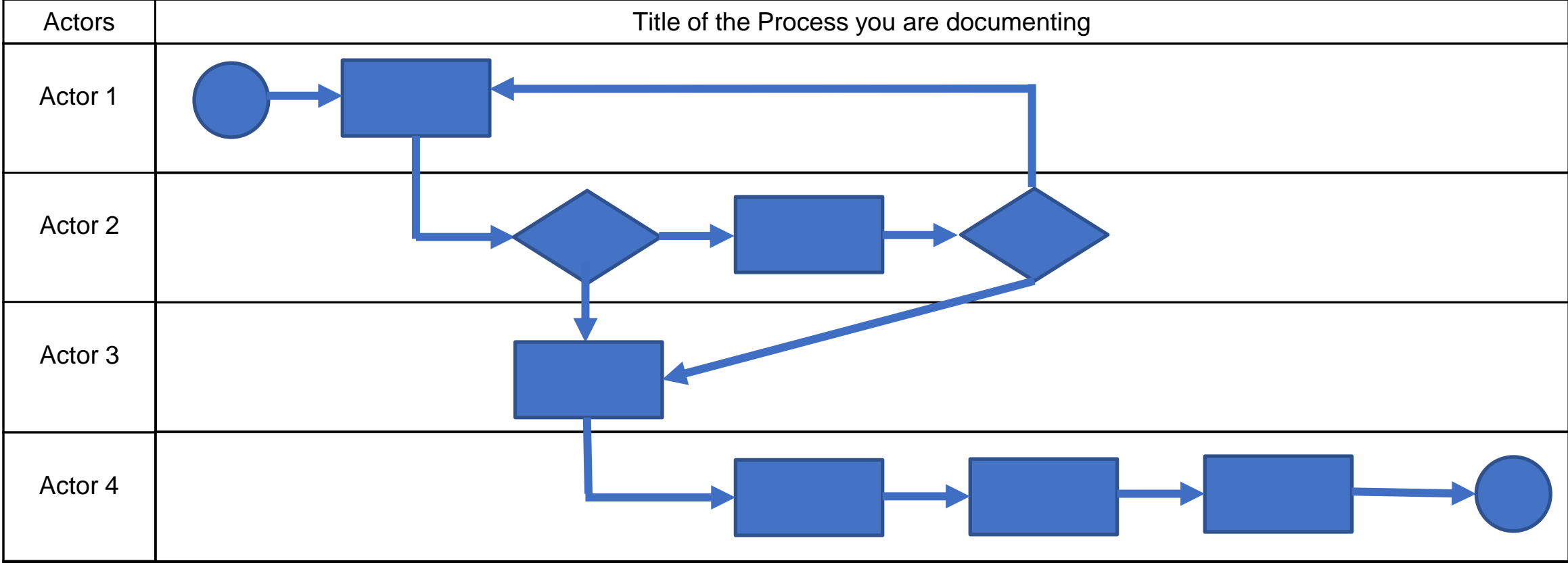
Swim Lane Diagrams – Order to Cash (O2C)

Who does What & When

- Complexity added
- Legacy system



Swim Lane Diagrams – Create your own





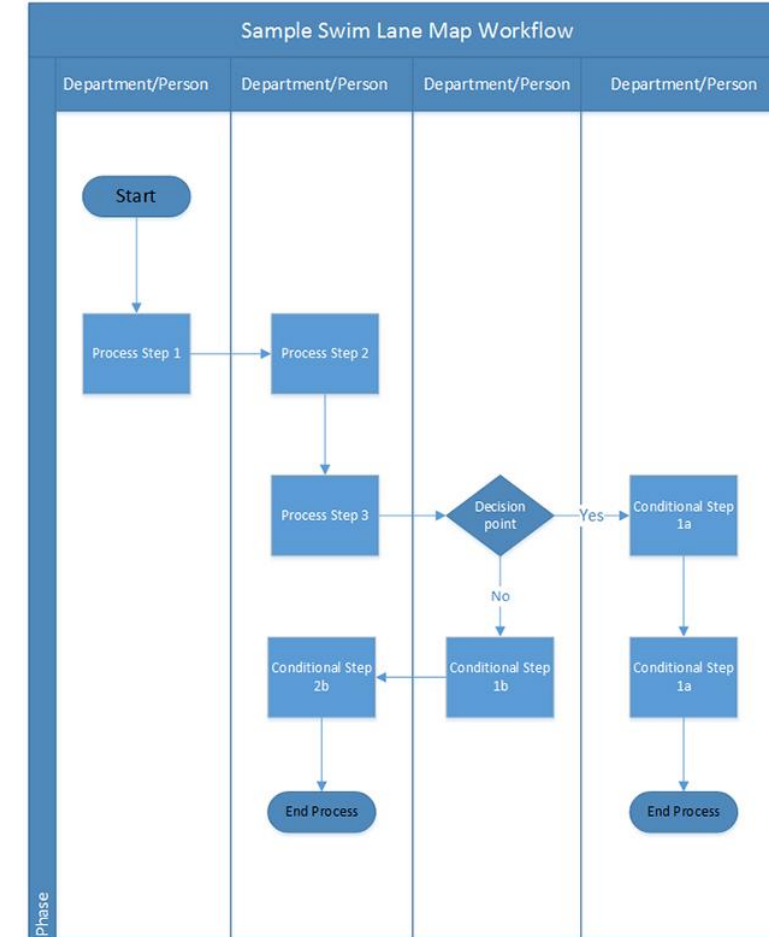
Digital Systems

Swim Lane Diagrams #1
In-Class Activity

FOX
MIS

ICA#2: Swim Lane Diagrams

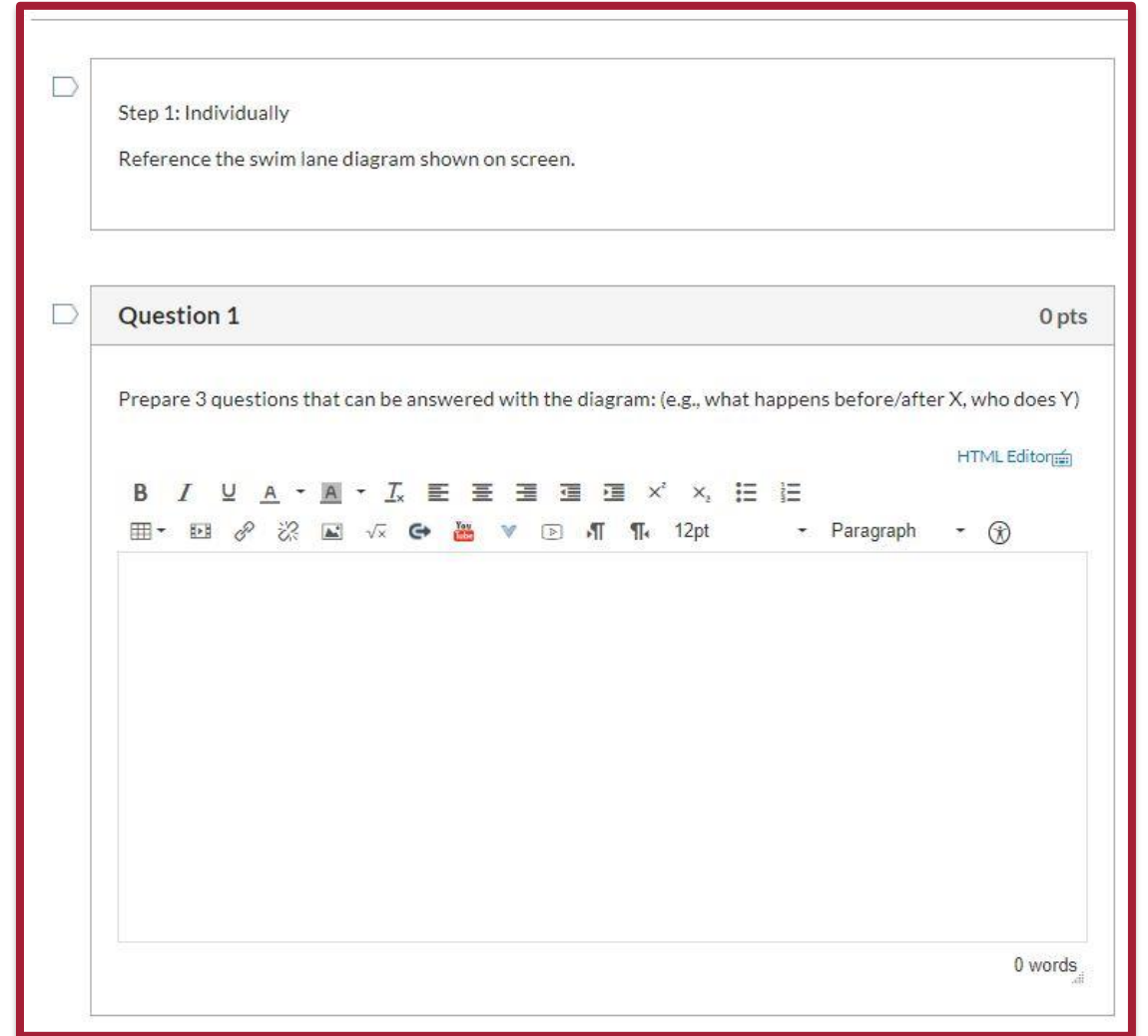
- **What?**
 - Interpret a swim lane diagram
 - Construct a swim lane diagram from provided story
- **Why?**
 - Simple, effective tools for documenting a business process and eventually improve it!
 - Everything you do at work will be part of a business process
 - Modeling processes = analysis and improvement opportunities
 - **Swim lane diagrams will be on the first 2 exams!**



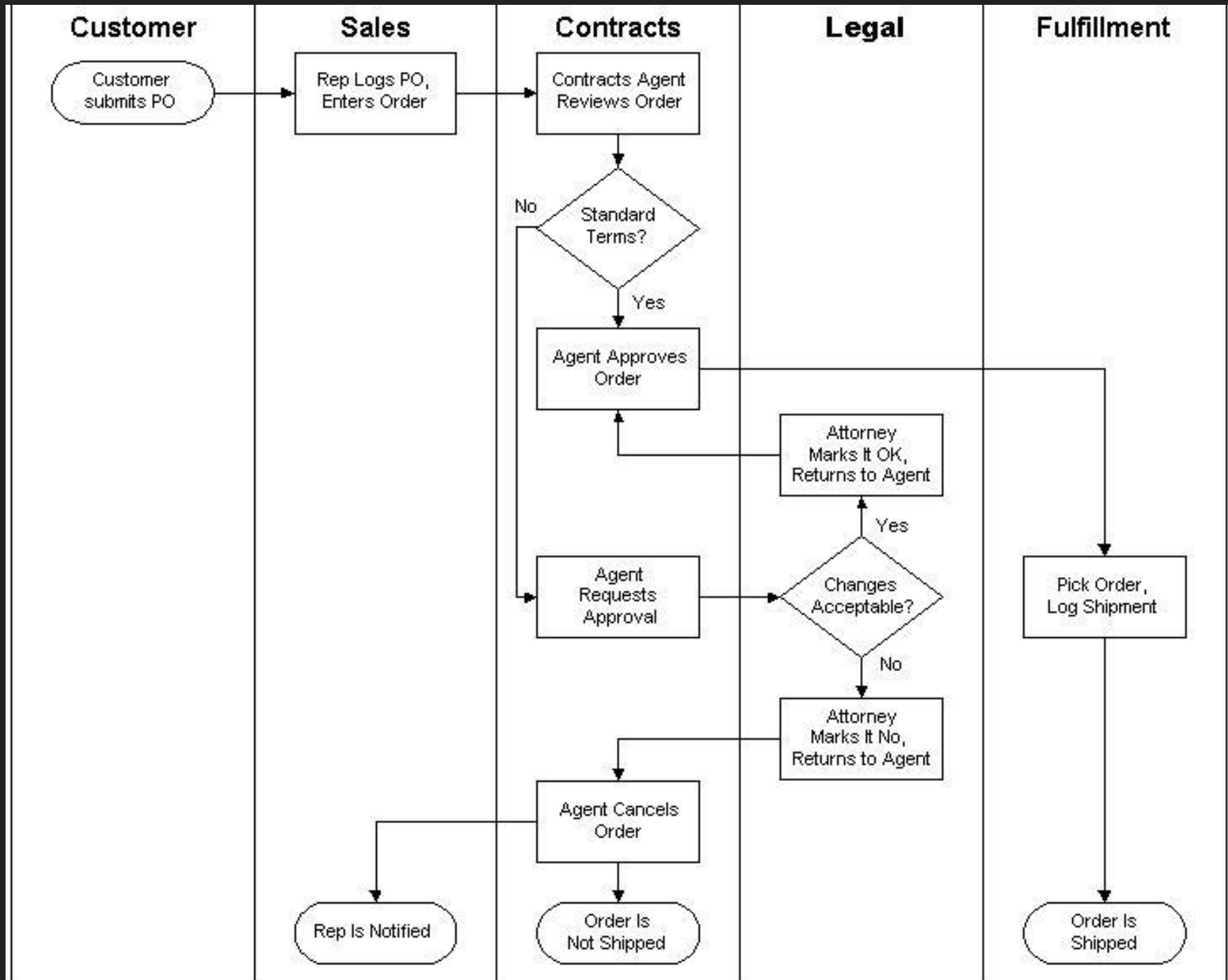
Source: <https://www.businessport.net/wp-content/uploads/2018/10/Swim-Lane-Map-Businessport-blog.jpg>

Step #1

- Reference the swim lane diagram shown on the following slide
- Prepare three questions that can be answered with the diagram (e.g. what happens before/after X, who does Y) and enter these questions in Canvas



The screenshot displays a Canvas LMS interface. At the top, a section titled "Step 1: Individually" contains the instruction: "Reference the swim lane diagram shown on screen." Below this is a question editor for "Question 1", which is currently worth 0 points. The question text reads: "Prepare 3 questions that can be answered with the diagram: (e.g., what happens before/after X, who does Y)". The editor includes a rich text toolbar with options for bold, italic, underline, text color, background color, link, unlink, insert image, insert video, insert link, and insert table. The current font size is 12pt and the text format is Paragraph. The word count at the bottom right of the editor is 0 words.



Step #2

- **Review the provided narrative and create a swim lane diagram that describes the hiring process at Playwicki Financial Services**
- **Upload your swim lane diagram individually into canvas**

Step 3: Review the following narrative & create a swim lane diagram that describes the hiring process:

Mike is the HR manager at Playwicki Financial Services. They need to hire a new systems analyst. The job has been posted on the company's web site and a few people have applied for the position. The hiring process starts when Mike reviews the applications and matches them up with the job requirements to identify the best candidate. Once the best candidate has been identified, their resume is sent to the hiring manager to review. If the hiring manager is not interested they ask Mike for another candidate and Mike starts looking for another candidate. If the hiring manager is interested in interviewing the candidate, they let Mike know and Mike schedules a phone interview with the hiring manager. The hiring manager conducts the phone interview with the candidate. If the hiring manager is not happy with the candidate, they ask Mike for another candidate and the process starts over again. If the hiring manager is happy with the candidate, then they let Mike know and Mike schedules a face-to-face interview for the candidate with the hiring manager. The hiring manager conducts the interview. If the hiring manager is not happy with the candidate, they let Mike know and the process starts over again. If the hiring manager is happy with the candidate, they notify Mike that they'd like to hire the candidate. Mike call the candidate to offer them the position over the phone. If the candidate is interested, Mike assembles the formal offer and mails it to the candidate. The candidate signs the offer, returns it to Mike and the new employee is officially hired.

Question 2 0 pts

Step 4: Draw a diagram and discuss it as a class. Attach a picture or screenshot of your diagram here.

Upload

Mike is the HR manager at Playwicki Financial Services. They need to hire a new systems analyst. The job has been posted on the company's web site and a few people have applied for the position. The hiring process starts when Mike reviews the applications and matches them up with the job requirements to identify the best candidate. Once the best candidate has been identified, their resume is sent to the hiring manager to review. If the hiring manager is not interested, they ask Mike for another candidate and Mike starts looking for another candidate. If the hiring manager is interested in interviewing the candidate, they let Mike know and Mike schedules a phone interview with the hiring manager. The hiring manager conducts the phone interview with the candidate. If the hiring manager is not happy with the candidate, they ask Mike for another candidate and the process starts over again. If the hiring manager is happy with the candidate, then they let Mike know and Mike schedules a face-to-face interview for the candidate with the hiring manager. The hiring manager conducts the interview. If the hiring manager is not happy with the candidate, they let Mike know and the process starts over again. If the hiring manager is happy with the candidate, they notify Mike that they'd like to hire the candidate. Mike calls the candidate to offer them the position over the phone. If the candidate is interested, Mike assembles the formal offer and mails it to the candidate. The candidate signs the offer, returns it to Mike and the new employee is officially hired.

Step #3

- **Discuss as a class**



Source: <https://i1.wp.com/www.nationalreview.com/wp-content/uploads/2016/12/school-bans-students-raising-their-hands-answer-questions-2.jpg?fit=788%2C460&ssl=1>

Want more practice with Swim Lane?

- Look for my email tonight!

Want to use a free software to draw a swim lane diagram?

- <https://www.lucidchart.com/pages/>

More to Come

Prepare with Readings & Videos before our next class!!!