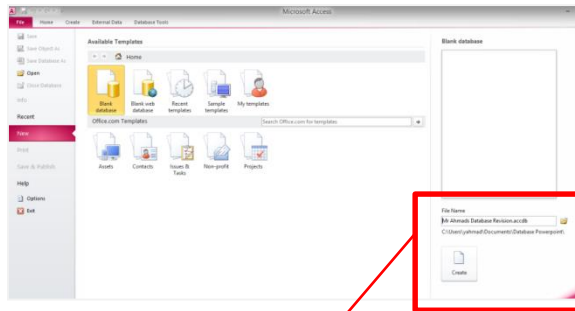## Databases (Access)

Chapter 18: Data Manipulation (Access)

Open and Save (Create) Database

3

1

2

File Name

Lawsons Database Revision

C:\Users\yahmad\Documents\

4
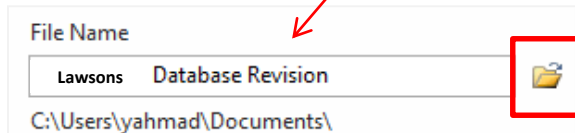
Create
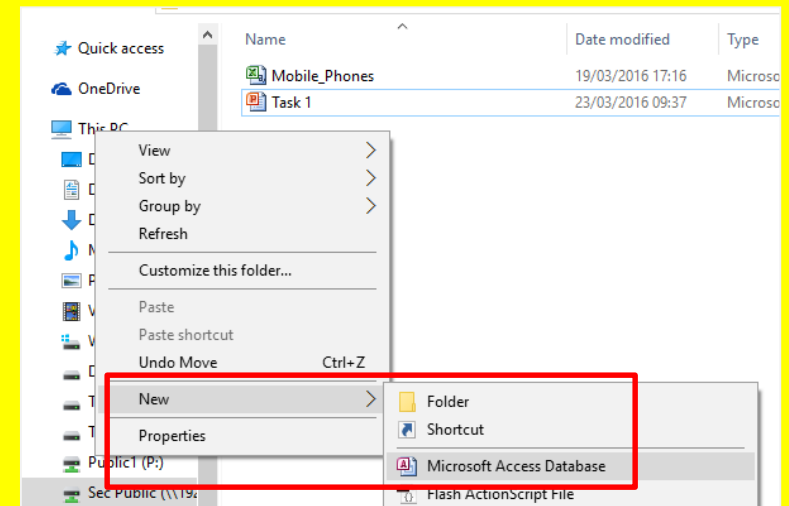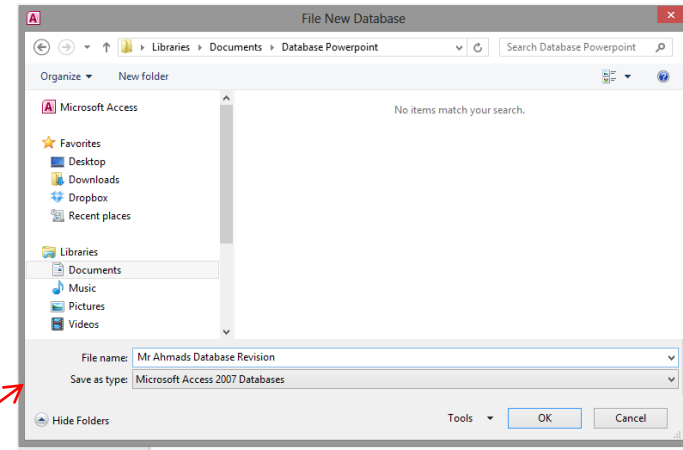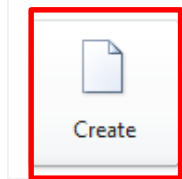
1) Open Microsoft Access
2) Write the name of the database file
3) Select the destination folder and choose the location for the file.
4) Select "**OK**" and then "**Create**"

You can also right click on your mouse to create a new database.
New >>> Microsoft Access Database

Databases (Access)

In a typical database exam question you will be asked to import a CSV file into a suitable database package (Microsoft Access).

30 Using a suitable database package, import the file **N122CARS.CSV**

Assign the following data types to the fields.

VIN	**Text**
Model	**Text**
Power	**Text**
Engine_size	**Text**
Price	**Numeric / Currency**
Colour	**Text**
Discount_applied	**Numeric / Integer**
Location	**Text**
Date_sold	**Date**
Sales_person	**Text**
Sold	**Boolean / Logical**

Make sure that you use these field names. The VIN is the Vehicle Identification Number, and each car will have a different VIN.

Tip:

Double check the data types. They have to be correct or you may get import errors.

Primary Key: This will be the unique field for each record. The VIN will be the primary key as each car will have a unique VIN.

Databases (Access)

Importing CSV

You are now going to prepare some reports. Make sure all currency values display the £ sign and are to two decimal places.

29 Using a suitable database package, import the file **J215VENUES.CSV**
    Use the following field names and data types:

FIELD NAME	DATA TYPE	FORMAT
Venue_Name	Text	
Location	Text	
Telephone	Text	
Best_Fish	Text	
Day_Permit	Numeric	Currency
Season_Permit	Numeric	Currency
Acres	Numeric	
Depth	Numeric	
Date_Opened	Date	dd-mmm-yy
Night_Fishing	Boolean/Logical	Display as Yes/No

Tip: Always check the currency and the format of the date.

£ - Pounds

You are now going to prepare some reports. *Make sure all currency values display the £ sign and are to two decimal places*.

01-Jan-2016

Date_Opened	Date	dd-mmm-yy

Tip: Always check data types when importing CSV File. **If you do not then you run the risk of getting import errors.**

NAME	DATA TYPE	FORMAT
ID	Text	
Country	Text	
Number	Number	Integer
Name	Text	
Distance	Number	1 decimal place
Operational	Boolean/Logical	Yes/No
Capacity	Number	Integer
Depth	Number	Integer
Height	Number	1 decimal place
Diameter	Number	Integer

Field Information:

Field Name	Data Type	
ID	Text	Y
Country	Text	N
Number	Long Integer	Y
Name	Text	N
Distance	Double	N
Operational	Yes/No	N

General	Lookup	
Field Size	Double	
Format	Standard	
Decimal Places	1	
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	No	
Indexed	No	
Smart Tags		
Text Align	General	

**Tip:** If it asks for **decimal places** then during the **import leave the data type as double.**

Tip: You can then format the number in design view. If a number is not showing to a certain decimal value then you can set the **format to standard**.

Databases (Access)

Importing CSV

Dates, Times, and Numbers

Date Order: DMY
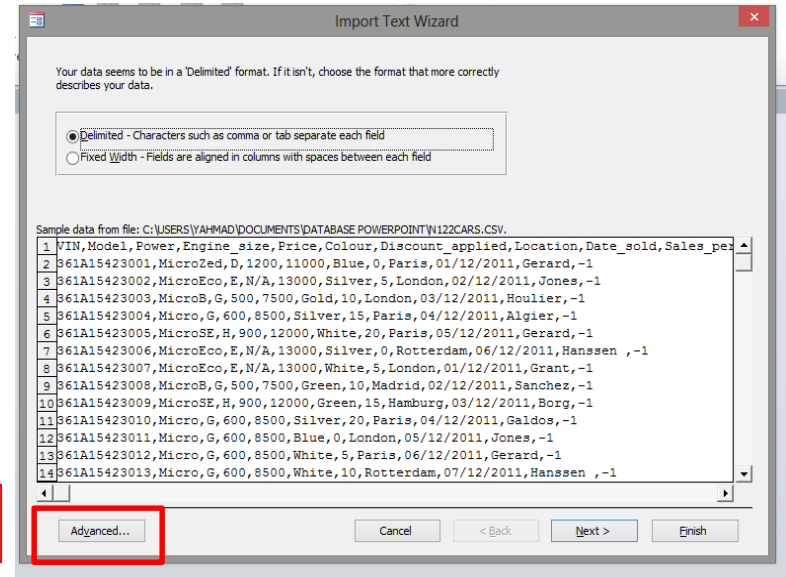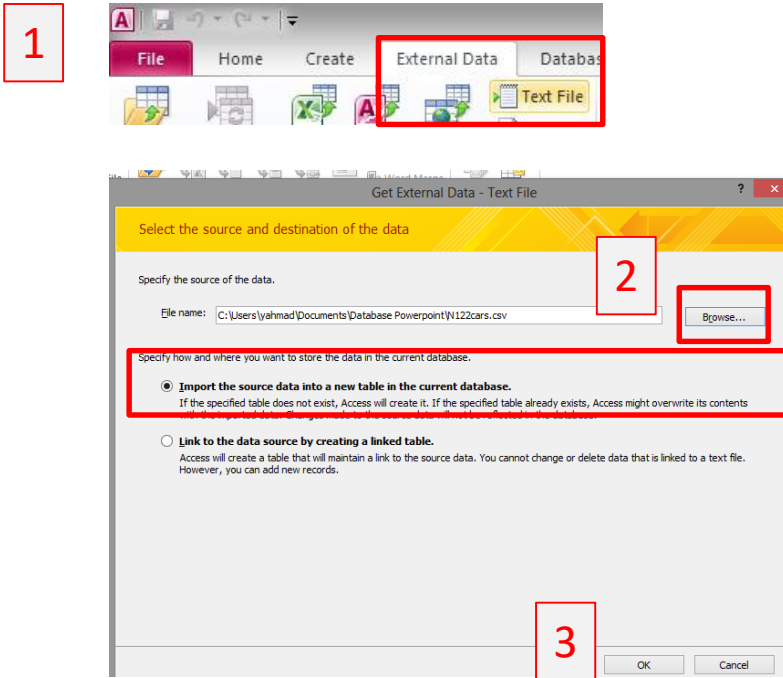
1) Click on **External Data Tab** and select **Text File**.
2) Browse and Select the **CSV File**.
3) Click **OK**
4) Click on Advanced and check the **format of the date** so it is set to **DMY**. Then click **Ok** and **Next**.

Chapter 18: Data Manipulation (Access)

Importing CSV
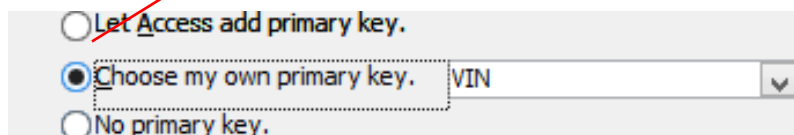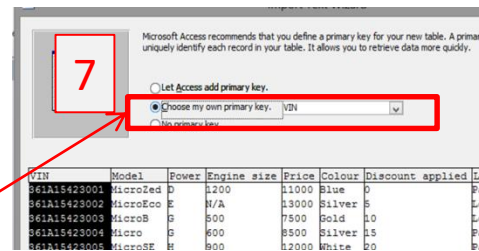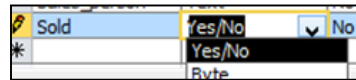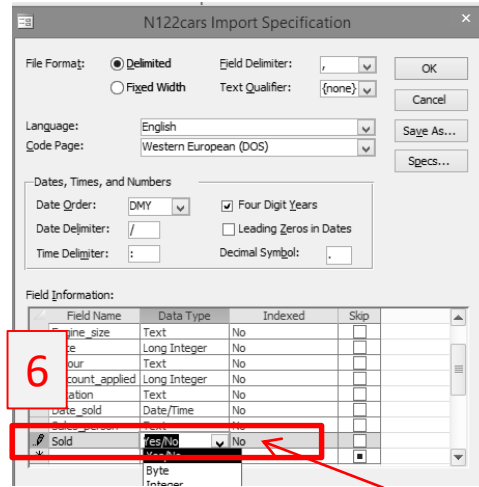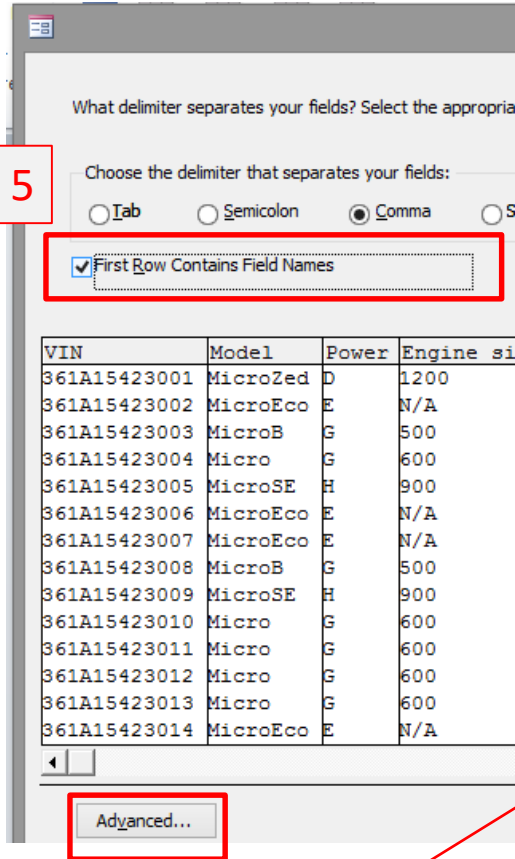
5) Click on **First Row Contains Field Names** and then click on **advanced.**

6) *__Double check all the data types__*. You would normally always have to change the **Boolean field**.

7) Select the **Primary Key** or let **Access choose**. If you have a unique data for each record in a field then select this as your primary key.
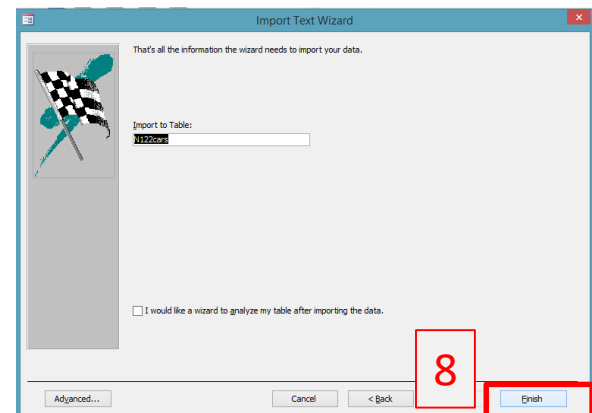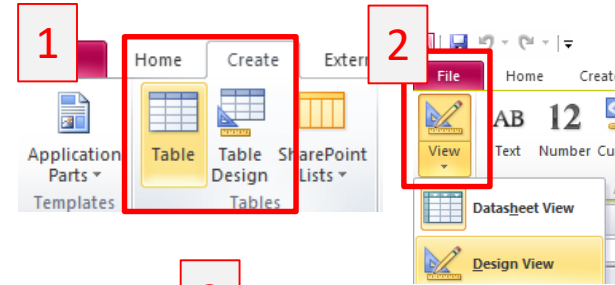
8) Click on **Next** then **Finnish** to import the **CSV file**.

Databases (Access)

In this exam question you have to first create the table (Including Fields & Data Types) and then import the CSV file.

You are going to prepare some reports for the company. Make sure all currency values are in pounds sterling (£) to two decimal places.
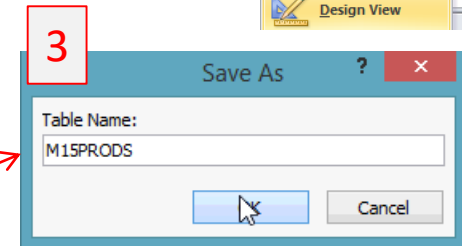
33 Create a database with the following field names and data types:

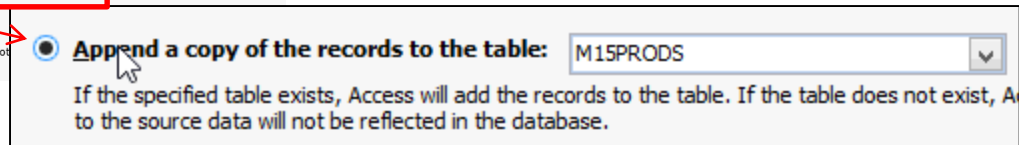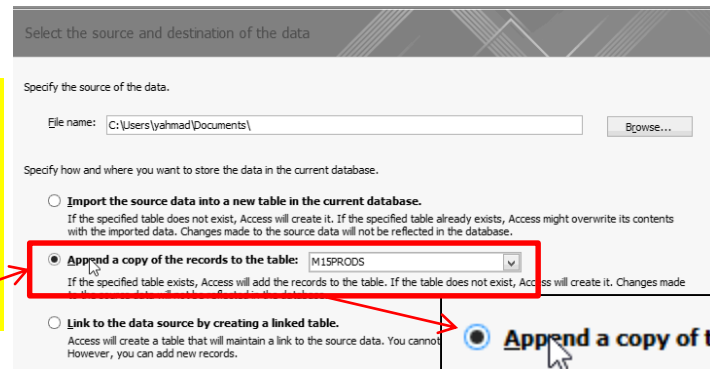|	
Code	Numeric/Integer (this field contains unique data)
Country	Text
Product	Text
Stock	Numeric/Integer
Reorder	Numeric/Integer
Price	Numeric/Currency
Special	Boolean/Logical (to be displayed as Yes/No or a checkbox)
Notes	Memo or Text

Select an appropriate field and set it as the primary key.

Import the file M15PRODS.CSV to your database.

1

Home | Create | Exter

Application Parts ▾ | Table | Table Design | SharePoint Lists ▾

Templates | Tables

2

File | Home | Crea

View ▾ | AB Text | 12 Number | Cu

Datasheet View

Design View

3

Save As

Table Name:

M15PRODS

OK | Cancel

4

M15PRODS

Field Name	Data Type
🔑 Code	Number
Country	Text
Product	Text
Stock	Number
Reorder	Number
Price	Currency
Special	Yes/No
Notes	Text

When importing the CSV file you have to append a copy of the records to the table you created.

Select the source and destination of the data

Specify the source of the data.

File name: C:\Users\yahmad\Documents\ | Browse...

Specify how and where you want to store the data in the current database.

○ **Import the source data into a new table in the current database.**
If the specified table does not exist, Access will create it. If the specified table already exists, Access might overwrite its contents with the imported data. Changes made to the source data will not be reflected in the database.

◉ **Append a copy of the records to the table:** M15PRODS
If the specified table exists, Access will add the records to the table. If the table does not exist, Access will create it. Changes made to the source data will not be reflected in the database.

○ **Link to the data source by creating a linked table.**
Access will create a table that will maintain a link to the source data. You cannot
However, you can add new records.

◉ **Append a copy of the records to the table:** M15PRODS

If the specified table exists, Access will add the records to the table. If the table does not exist, A to the source data will not be reflected in the database.

Databases (Access)

Print Screen Evidence

Place a screenshot showing the field names and data types used into your evidence document.

Tip: When you print screen your data types ensure you also show the formats. Don't crop the bottom part off.

Using a suitable database package, import the file **N122CARS.CSV**

Assign the following data types to the fields.

Field	Data Type
VIN	**Text**
Model	**Text**
Power	**Text**
Engine_size	**Text**
Price	**Numeric / Currency**
Colour	**Text**
Discount_applied	**Numeric / Integer**
Location	**Text**
Date_sold	**Date**
Sales_person	**Text**
Sold	**Boolean / Logical**

Relationship Database

A '**relational**' database is one that contains **two or more tables** of data, connected by **key fields.**

Shops			Book Table			Authors	
Field	**Data**		**Field**	**Data**		**Field**	**Data**
Shop Code	Text		**BookID**	Number		**Author Code**	Text
Shop Name	Text		Book Name	Text		Author Name	Text
Online	Boolean Y/N		Author_ID	Text		Nationality	Text
Headquarters	Text		Genre	Text		DOB	Date/Time
Owner	Text		Shop	Text		University	Text
			Current Stock	Number			
			Sale	Boolean Y/N			
			Sold	Number			
			Price	Currency			

Key Fields (Primary)

Key Fields (Foreign)

```
Teacher        Students
(Primary Key)   (Foreign Key)
```
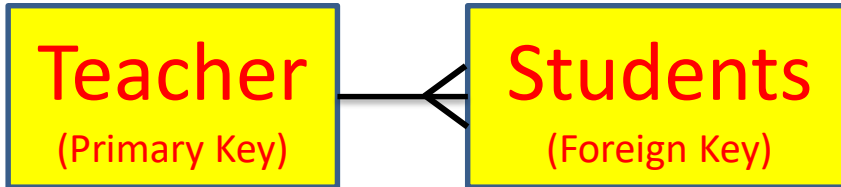
The 'One' side is usually the primary key
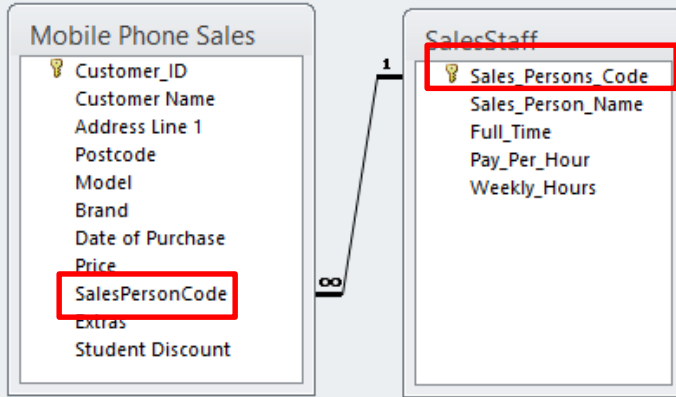**The 'Many' side is usually the foreign key**

A **relational database** has more than **one table** and the tables are linked using **key fields.**
Advantages:

- **Teacher details only need to be entered once into the database.**
- **Mistakes are less likely to happen when entering data if it already exists.**
- **Avoids duplicating data.**
- **Data can be accessed using key fields (Primary and Foreign Keys).**
- **Queries and reports can be created using data (fields) from a number of tables which have a relationship.**

Databases (Access)

Relationship Database

Mobile Phone Sales
- Customer_ID
- Customer Name
- Address Line 1
- Postcode
- Model
- Brand
- Date of Purchase
- Price
- SalesPersonCode
- Extras
- Student Discount

SalesStaff
- Sales_Persons_Code
- Sales_Person_Name
- Full_Time
- Pay_Per_Hour
- Weekly_Hours

Edit Relationships

Table/Query:	Related Table/Query:
SalesStaff	Mobile Phone Sales
Sales_Persons	SalesPersonCode

- OK
- Cancel
- Join Type..
- Create New..

☑ Enforce Referential Integrity
☐ Cascade Update Related Fields
☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Click the Enforce Referential Integrity. Ensures no orphan records.

SalesStaff | Mobile Phone Sales

Sales_Persons_Code	Sales_Person_Name	Full_Time	Pay_Per_Hour	Weekly_Hours
ALA	Alan Lawson	No	£9.00	15
BJO	Ben Jones	Yes	£12.00	35
HHA	Hattem Hassine	Yes	£13.50	40
YAH	Yasar Ahmad	Yes	£12.00	30

Tip: The same data should appear in both fields

SalesStaff | **Mobile Phone Sales**

Customer_ID	Customer Name	Address Line 1	Postcode	Model	Brand	Date of Purc	Price	SalesPerson	Extras	Student Disc
1001	Lionel Messi	23 Kings Road	K43 K54	Lumia 525	Nokia	12/12/2013	£175.50	YAH	5 MP camera Wi-Fi GPS	Yes
1002	Cristiano Ronaldo	43 Evergreen Road	E45 EYU	I phone 5	Apple	12/12/2013	£350.00	BJO	LCD display 8 MP camer	No
1003	Xavi	35 Albert Road	A53 P66	I phone 4	Apple	14/12/2013	£250.00	BJO	5 MP camera Wi-Fi GPS	Yes
1004	Andres Iniesta	35 Cresset Road	C32 G84	I phone 5	Apple	15/12/2013	£350.00	ALA	LCD display 8 MP camer	No
1005	Zlatan Ibrahimovic	33 Baker Street	B34 5HG	I phone 4	Apple	15/12/2013	£250.00	ALA	5 MP camera Wi-Fi GPS	No

Databases (Access)

Relationship Database

Authors | BookTable | Shops

Author Code	Author Name	Nationality	DOB	University	email
JD555	James Dashner	American	26/11/1972	Brigham Young University	JD@hotmail.com
JG345	John Green	American	24/08/1977	Kenyon College	JG@hotmail.com
JK100	J.K. Rowling	British	31/07/1965	Exeter University	JK@hotmail.com
JR200	J. R. R. Tolkien	British	07/01/1892	University of Oxford	JR@hotmail.com
RR750	Rick Riordan	American	05/06/1964	University of Texas	RR@hotmail.com
SC450	Suzanne Collins	American	10/08/1962	New York University	SC@hotmail.com
VR700	Veronica Roth	American	19/08/1988	Northwestern University	VR@hotmail.co.uk

Authors | **BookTable** | Shops

BookID	Book Name	Author_ID	Genre	Shop	Current Stock	Sale	Sold	Price
1001	Catching Fire	SC450	Adventure	ama222	5	Yes	45	£4.00
1002	The Fall of Arthur	JR200	Crime	pow554	25	Yes	65	£6.50
1003	Harry Potter And The Go	JK100	Adventure	vin343	3	No	3	£4.00
1004	Insurgent	VR700	Science Fiction	pow554	25	Yes	56	£5.75
1005	The Hunger Games	SC450	Adventure	ama222	17	Yes	34	£4.00
1006	The Heroes of Olympus	RR750	Adventure	pow554	12	No	53	£4.50

There are more books

Authors | BookTable | **Shops**

Shop Code	Shop Name	Online	Headquarters	Owner
abe123	abebooks	Yes	Victoria British Columbia Canad	Hannes Blum
ama222	Amazon	Yes	Seattle	Jeff Bezos
bam555	Books A Millio	No	Birmingham Alabama United Sta	Clyde W. Anderson
pow554	Powell's Books	No	Portland Oregon United States	Emily Powell
vin343	Virgin	No	London	Richard Branson

Databases (Access)
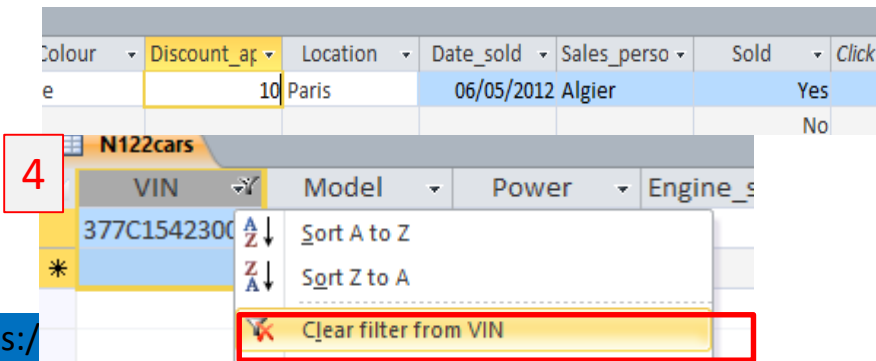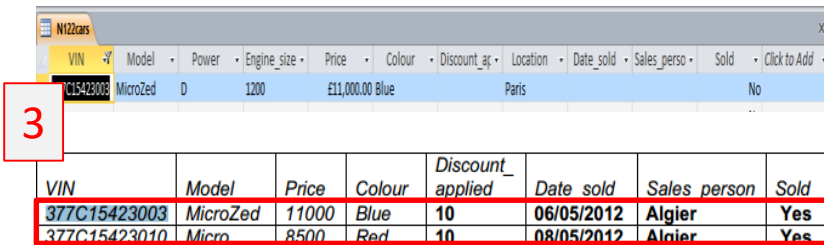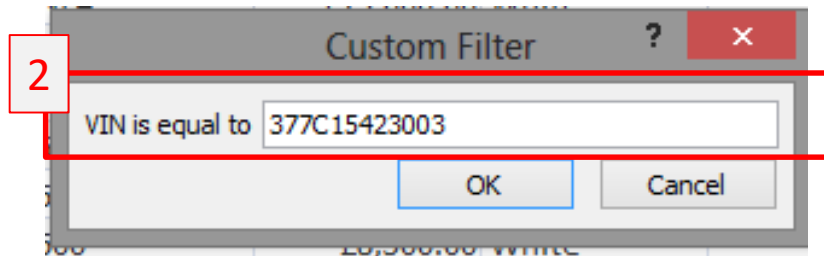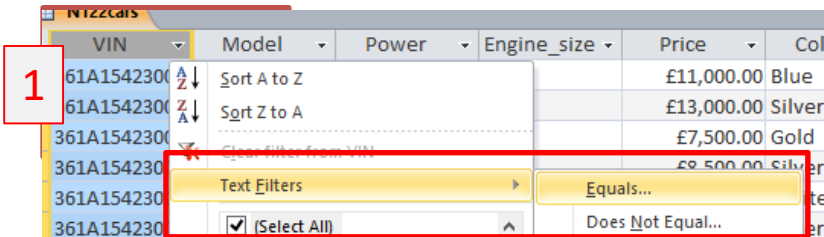
You will be asked to either add, edit or delete data. In this example you are asked to update 3 records.

The best way to update an existing record is to use the filter tool and search by the **Primary Key** (VIN).

1) Select the **VIN Field >> Text Filters >> Equals**.
2) Type in the Primary Key (**377C15423003**) and press Ok.
3) Update the record according to the details on the exam paper.

Discount Applied: **10**
Date Sold: **06/05/2012**
Sales Person: **Algier**
Sold: **Yes**

4) Clear the **text filter** and repeat the same process with the next two records.

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Databases (Access)

Tip: When you are creating a report ensure you have identified all <u>query</u> and <u>reports</u> tasks.

1. **Query**
2. **Report**
- Contains a new field called Turbine_Capacity which is calculated at run-time. This field will calculate the Capacity divided by the Number of turbines
- Has the Turbine_Capacity field displayed to 1 decimal place
- Shows only the records where the Sea is North Sea or Irish Sea and Operational is Yes
- Shows only the fields Country, ID, Name, Number, Distance, Operational, Capacity, Height, Sea and Turbine_Capacity in this order with their labels in full
- Sorts the data into ascending order of Country and then ascending order of Name
- Fits on a single page wide
- Has a page orientation of landscape
- Calculates the total Number of turbines and places it at the bottom of the report
- Has a label to the left of this number Total turbines in operation
- Includes the heading Power from North and Irish Seas at the top of the page
- Has your name, Centre number and candidate number on the right in the footer.

Search Criteria: When creating the query only select the fields stated.

However you may have to insert additional fields later to complete your search. These fields must not be shown.

Report Title: Name the query as the report title.

Query	Report
• **Selecting Fields** • **Calculated run-time field + formatting** • **Search criteria** • **Sort (1)**	• **Sort (2)** • **Report header/footer** • **Calculation (Count, Sum, Max & Min)** • **Labels for formulas** • **Page orientation** • **Show labels in full**

Databases (Access)

Annotating Exam Paper

Course_Cost:[Daily_Cost]*[Duration]+[Insurance]

36 Produce a report from all the data which:

Query
- contains a new field called **Course_Cost** which is calculated at run-time. This field will calculate the *Daily_Cost* multiplied by *Duration* plus the *Insurance*

Query
- has the *Course_Cost* field displayed as currency

Query
- shows only the records where the *Level* is **Extreme**, *Residential* is **Yes**, *Duration* is **10** days or less and excludes those activities located in **Ireland**

Query
- shows only the fields *Course_Code, Activity, Type, Location, Level, Daily_Cost, Duration* and *Course_Cost* in this order with all data and labels displayed in full

Report
- sorts the data into ascending order of *Location* and then into descending order of *Daily_Cost*

Report
- fits on a single page wide

Report
- has a page orientation of landscape

Report
- calculates the average *Daily_Cost*, positioned below the *Daily_Cost* column and formatted as currency

Report
- has a label to the left of this number **Average cost per day**

Query
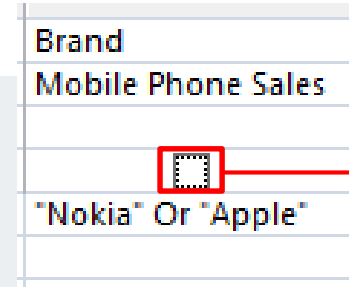- includes the heading **Extreme Outdoor Activities** at the top of the page

Report
- has your name, Centre number and candidate number on the right at the top of the report.

1) Level - Extreme, 2) Residential - Yes,
3) Duration - <=10, 4) Location - not "Ireland"

Databases (Access)

Query
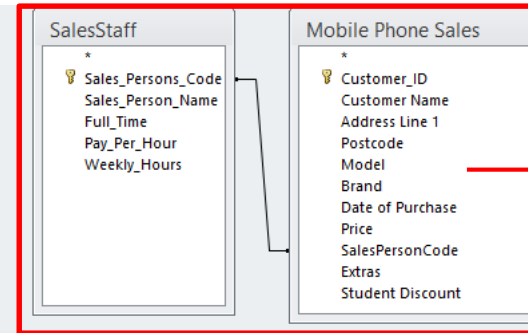
Tip: Extend the tables just in case you may need to select and use another field.

Tip: You can search by a field and then hide it. Before hiding it check to see if the search criteria has worked.

Field:	Customer Name	Address Line 1	Model	Brand	Price	Sales_Person_Name	Full_Time	Sale_Price: [Price]*0.9	extras
Table:	Mobile Phone Sales	Mobile Phone Sales	Mobile Phone Sales	Mobile Phone Sales	Mobile Phone Sales	SalesStaff	SalesStaff		Mobile Phone Sales
Sort:									
Show:	✓	✓	✓	☐	✓	✓	✓	✓	✓
Criteria:			<> "Lumia 525"	"Nokia" Or "Apple"					Like "5 mp*"
or:									

Tip: Always check the number of records after you have typed in one search criteria.

The number of records should reduce every time you type in a search criteria.

Databases (Access)
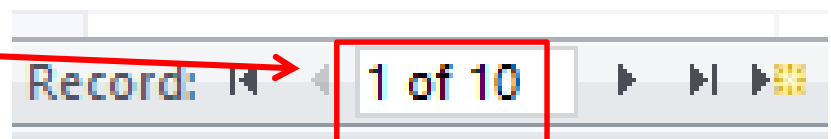
Calculated Run Time Formulas in the Query

Calculated Run time is used when we have to calculate specific values using data from existing fields.
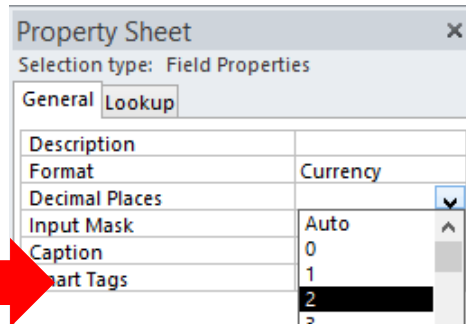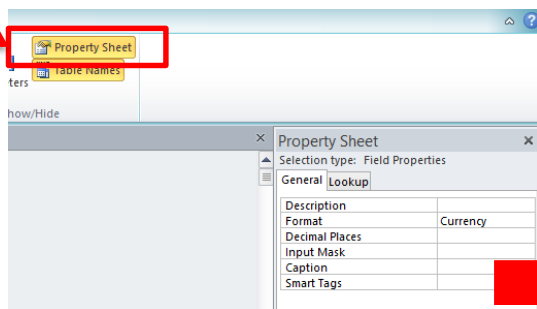
Enter New Calculated Run Time Field here

Field:	Book Name	Genre	Shop Name	Current Stock	Sale	Price	Author Name	New Stock Level: [Current Stock]+5
Table:	BookTable	BookTable	Shops	BookTable	BookTable	BookTable	Authors	
Sort:								
Show:	✓	✓	✓	✓	✓	✓	✓	✓
Criteria:			"amazon"		No			
or:								

New Stock Level:[Current Stock]+5

Number of Books Added to Stock

Name of new field

Required Field in Square Brackets

Design View

Property Sheet

Property Sheet

Property Sheet
Selection type: Field Properties
General Lookup

Description	
Format	Currency
Decimal Places	
Input Mask	Auto
Caption	0
Smart Tags	1
	2
	3

In Design View using the Property Sheet the formatting can be set for the new field.

Databases (Access)

Wild Card – Sometimes a field may contain more than one word. To find something specific you need to write a wildcard search.

Like "*Channing Tatum *"

[Actors]
Movies

☑

Like "*Channing Tatum*"

Between	Between 01/01/2010 And 02/02/2012 Between 100 And 150
Or	North Sea Or Irish Sea
Not	Not "Horror"
<90	Less than <90
>90	More than >90
>=90	More than and equal to >=90
37*____	Fields **starts** with **37**
____*37	Fields **Ends** with **37**

	Actors
14	Allison Miller Zach Gilford Sam Anderson
13	halle berry
13	Patrick Wilson Vera Farmiga Ron Livingston
13	Alden Ehrenreich
13	Miles Teller Shailene Woodley Kyle Chandler
13	kristen bell
13	Dylan O'Brien
13	Owen Wilson
13	james franco
13	brad pitt mireille enos daniella kertesz
13	jesse Eisenberg
13	max irons
13	Leonardo DiCaprio
13	Julianne Hough Josh Duhamel Cobie Smulders
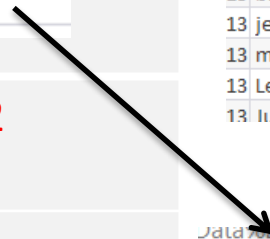
Data%20Manipulation/Movie%20Task/video%20tutc

	Actors
013	Dwayne Johnson Channing Tatum Adrianne Palicki
013	channing tatum
012	Rachel McAdams Channing Tatum Sam Neill
012	channing tatum Jonah hill eric morson
010	Channing Tatum Amanda Seyfried Richard Jenkins
008	Robert Hoffman Briana Evigan Channing Tatum
006	Channing Tatum Jenna Dewan-Tatum

Only field containing Channing Tatum are shown

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Databases (Access)

Report

What title do you want for your report?

Discount Phone Sales

Report Wizard

What title do you want for your report?

Discount Phone Sales

That's all the information the wizard needs to create your report.

Do you want to preview the report or modify the report's design?

◉ Preview the report.
○ Modify the report's design.

Cancel | < Back | Next > | Finish

Discount Phone Sales

Discount Phone Sales

Yasar Ahmad

Customer Name	Address Line 1	Model	Price	Sales_Person_Name	Full_Time	Sale_Price	extras
Edinson Cavani	53 Phoenix Road	I phone 4	£250.00	Alan Lawson	No	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Thiago Silva	10 Abbey Road	I phone 4	£250.00	Alan Lawson	No	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Bastian Schweinsteiger	32 Baker Street	I phone 4	£250.00	Yasar Ahmad	Yes	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Luis Suarez	75 Albert Road	I phone 4	£250.00	Ben Jones	Yes	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Sergio Ramos	43 Bridge Street	I phone 4	£250.00	Yasar Ahmad	Yes	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Mario Gotze	42 Bridge Street	I phone 4	£250.00	Yasar Ahmad	Yes	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Karim Benzema	53 Jersey Terrace	I phone 4	£250.00	Yasar Ahmad	Yes	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Gareth Bale	23 Peace Street	I phone 4	£250.00	Yasar Ahmad	Yes	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Xavi	35 Albert Road	I phone 4	£250.00	Ben Jones	Yes	£225.00	5 MP camera Wi-Fi GPS Bluetooth
Zlatan Ibrahimovic	33 Baker Street	I phone 4	£250.00	Alan Lawson	No	£225.00	5 MP camera Wi-Fi GPS Bluetooth

Total Price | £2,250.00

Layout View

1) Make sure **Report title** is the same as the **Report Header**
2) **Format** the report in **Layout View** making sure al field names and data is visible.

Page Footer/Header: Anything information will appear each printed page either in the (header) or (footer) of the report.

Discount Phone Sales

◆ Report Header

Discount Phone Sales

◆ Page Header

| Customer Name | Address Line 1 | Model | Price | Sales_Person_Name | Full_Time | Sale_Price | extr |

◆ Detail

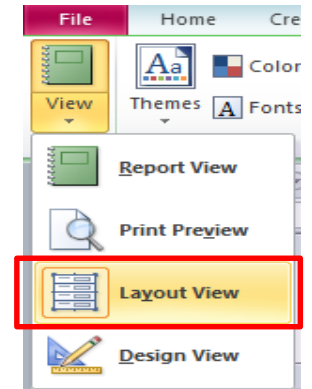| Customer Name | Address Line 1 | Model | Price | Sales_Person_Name | Full_Time | Sale_Price | extr |

◆ Page Footer

=Now()

◆ Report Footer

Total Price | =Sum([Sale

Report Footer/Header: Anything information will appear on only the **first (header)** or **last page (footer)** of the report.

Formulas in the Report

We can use a number of formula in the report to calculate values from fields including: Sum, Average, Count, Max, Min etc. **You need to ensure you are in layout view.**
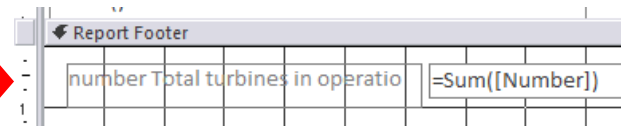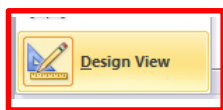
File | Home | Cre

View | Themes | Color | Fonts

Report View

Print Preview

Layout View

Design View

Function Tool

Σ Totals

Sum
Average
Count Records
Count Values
Max
Min
Standard Deviation
Variance

Controls

Insert Image | Page Numbers | Logo | Title | Date and Time | Add Existing Fields | Property Sheet

Header / Footer | Tools

BookTable

	Genre	Shop Name	Current Stock	Sale	Price	Author Name	New Stock Level
Harry Potter and the Half Blood Prince	Adventure	Amazon	13	No	£4.00	J. K. Rowling	18
Harry Potter And The Order Of The Phoenix	Adventure	Amazon	12	No	£4.00	J. K. Rowling	17
The Fault In Our Stars	Drama	Amazon	12	No	£3.75	John Green	17
Harry Potter and the Deathly Hallows	Adventure	Amazon	7	No	£4.99	J. K. Rowling	12
Harry Potter and the Prisoner of Azkaban	Adventure	Amazon	0	No	£4.45	J. K. Rowling	5

27 April 2015

Selected Fields

Design View → Database Tools | Design | Arrange | Forma

Details | Aa | xxxx

Report Footer

number Total turbines in operatio | =Sum([Number])

In Design View you can add a label for your calculation. Make sue formula is in Report footer.

Databases (Access)

Labels

34 Produce a report which:

Query • contains a new field called **Retail_Price** which is calculated at runtime. This field will calculate the *Cost_Price* plus 20%

Query • shows only *wireless* or *dual* connected *Gaming* mice

Query • is sorted into *descending order of Retail_Price*

Report • is in label format with 2 labels side by side and 8 labels to the page

Report • fits on one page wide in portrait layout

Report • includes the title **Mice for Gamers** at the top of each label

Query • shows only the fields *Make, Model, Connection, Retail_Price,* and *Notes*

Report • shows suitable text to identify the fields

Report • has an increased font size for the title *Mice for Gamers*

Report • has your name, Centre number and candidate number at the bottom of each label.

Retail_Price:[Cost_Price]*1.2

Criteria 1) Connection: Wireless or Dual
Criteria 2) Gaming: Yes

When creating the label in report wizard include the title.

Create the query first for your labels using the specified fields and search criteria.

1. Select the labels icon.
2. Select the dimensions and the number across (2).
3. Write in the heading, Field names and select the field data.
4. In design view can you format the label.

Mice for Gamers

Make: Razer
Model: Naga
Connection: Wireless
Retail Price: 65.988
Notes:
Yasar Ahmad, 1234, 5678

Databases (Access)

Summery Query

4

Model	Sum Of Price: Price	Count Of N122cars: C	Sold	Location
N122cars	N122cars		N122cars	N122cars
Group By	Sum	Expression	Group By	Group By
☑	☑	☑	☐	☐
MicroEco			Yes	"Madrid"

Find only the **MicroEco** cars that have been sold in **Madrid**
Using this selection produce a new report which:

- shows only the *Sales_person*, *Model* and *Price*
- calculates the total value of these sales for each *Sales_person*
- counts the number of these cars sold by each *Sales_person*

Save this report in a form which can be imported into another document.

You can also enter search criteria into the summery query

On most occasions a summery query will ask for calculation and a count. One of the fields will contain numerical values which can be calculated.

1

2

3

Calculate

Count

Total Value of records
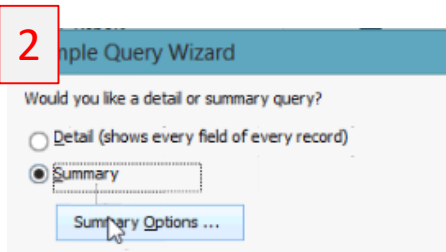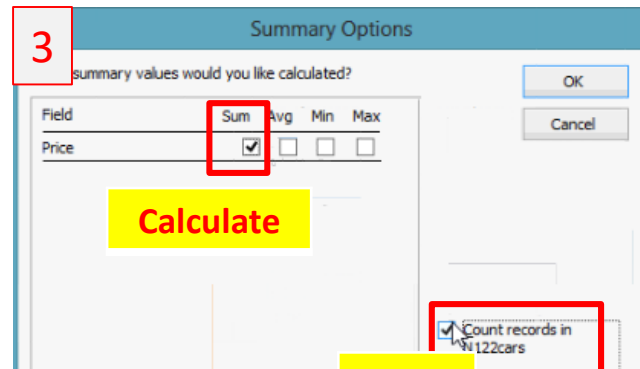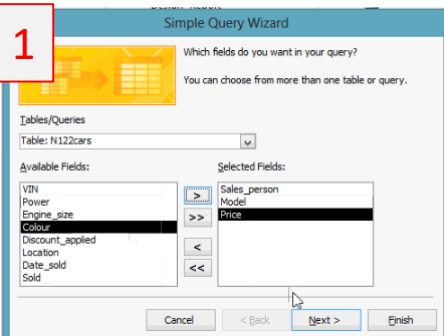
Sales_perso	Model	Sum Of Price	Count Of N1
Leon	MicroEco	£39,000.00	3
Machado	MicroEco	£52,000.00	4
Marcos	MicroEco	£52,000.00	4
Sanchez	MicroEco	£195,000.00	15
Villalobos	MicroEco	£91,000.00	7

Number of Records

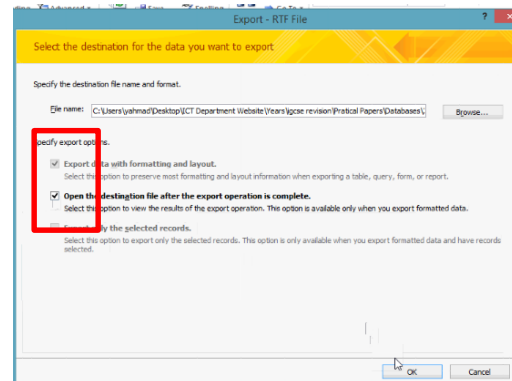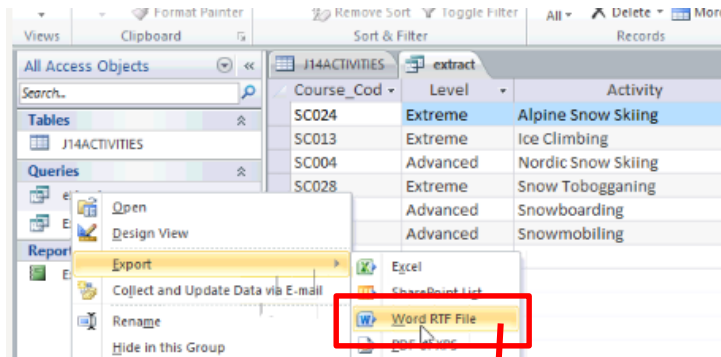## Databases (Access)

Extracting Data

Tip: To extract a query or report you have to right click and select the export option.
You may be required to export into Excel to create a graph.
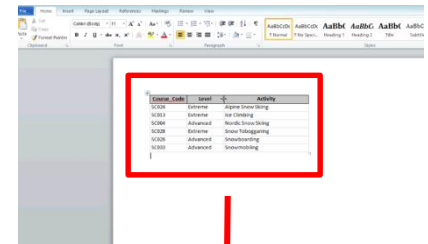
37   Save and print this report.

This Extract will be imported into a Word Document

38   Produce an extract from all the data which:

Query
- selects only those activities
  - containing Snow or Ice
  - located in Scotland
  - where the *Type* is Thrill

*Criteria 1) Activity - Like "*snow* or "*ice*"*
Criteria 2) Location - Scotland
Criteria 3) Type - Thrill

Query
- shows only the fields *Course_Code*, *Level* and *Activity* in this order

Query
- sorts the *Activity* in ascending alphabetical order.

39   Save this data in a form which can be imported into the document that you saved in step 29.

40   Import this data into your document as a table after the paragraph which ends: ...*even the most demanding thrill seeker.*