QUESTION 1.

7   A database, SOFASELECT, was set up to show the prices of suites, sofas and ch...
an online furniture warehouse. Part of the database is shown below.

Description	Brochure Number	Number of Seats	Number of Pieces	Material	Colour	Price in $
Sofa	SF17	2	1	Leather	Red	950
Sofa	SF19	3	1	Vinyl	Black	1,000
Suite	SU10	4	3	Velvet	Green	1,500
Suite	SU23	5	3	Leather	Brown	950
Recliner chair	RC01	1	1	Leather	Cream	600
Chair	CH16	1	1	Vinyl	Red	250
Recliner sofa	RS23	4	1	Leather	Cream	1,200
Chair	CH10	1	1	Velvet	Red	175

(a) How many fields are in each record?

....[1]

(b) State which field you would choose for the primary key.

....

Give a reason for choosing this field.

....

....[2]

(c) State the data type you would choose for each of the following fields.

Number of Seats ....

Price in $ ....[2]

(d) The query-by-example grid below selects all the furniture in cream leather.

Field:	Description	Material	Colour	Price in $	Brochure
Table:	SOFASELECT	SOFASELECT	SOFASELECT	SOFASELECT	SOFASELECT
Sort:				Descending	
Show:	✓	☐	☐	✓	✓
Criteria:		= 'Leather'	= 'Cream'		
or:					

Show the output from the query-by-example.

....

....[3]

(e) Complete the query-by-example grid below to select and show the brochure number, material, colour and price of all the furniture with 3 or more seats.

Field:					
Table:					
Sort:					
Show:	☐	☐	☐	☐	☐
Criteria:					
or:					

[5]

QUESTION 2.

5 A database table, SHEEP, is used to keep a record of the sheep on a farm. Ea[...] unique ear tag, EARnnnn; n is a single digit. The farmer keeps a record of the da[...] gender and the current weight of each sheep in kilograms.

(a) Identify the **four** fields required for the database. Give each field a suitable name an[...] type. Provide a sample of data that you could expect to see in the field.

Field 1 name ....

Data type ....

Data sample ....

Field 2 name ....

Data type ....

Data sample ....

Field 3 name ....

Data type ....

Data sample ....

Field 4 name ....

Data type ....

Data sample ....

[8]

(b) State the field that you would choose as the primary key.

....[1]

(c) Using the query-by-example grid below, write a query to identify the ear tags of all male sheep weighing over 10 kilograms. Only display the ear tags.

Field:				
Table:				
Sort:				
Show:	☐	☐	☐	☐
Criteria:				
or:				

[3]

QUESTION 3.

6 A garden centre sells garden tools and stores details of these in a database table. **Code** is the primary key in the TOOLS table.

Code	Description	Price ($)	Quantity_Stock	Quantity_Ord...
GFLG	Garden Fork	50.00	1	50
GSLG	Garden Spade	50.00	11	0
GHLG	Garden Hoe	45.00	8	0
HFSM	Hand Fork	9.99	42	0
HSSM	Hand Spade	9.99	40	0
HWSM	Hand Weeder	9.99	11	0
HS20	Hose (20 metres)	45.00	10	0
HS35	Hose (35 metres)	60.00	2	0
HS50	Hose (50 metres)	75.00	20	60
YBLG	Yard Brush	24.99	100	0
LMHD	Lawn Mower	99.99	5	0
LMBT	Lawn Mower (Battery)	249.99	7	0
LMPT	Lawn Mower (Petrol)	349.99	10	25
TRBT	Edge Trimmer (Battery)	79.99	15	0
TRPT	Edge Trimmer (Petrol)	59.99	20	0
SHSM	Shears	40.00	40	0
HCSM	Hedge Clippers	40.00	45	0

(a) State the purpose of the primary key in the TOOLS table.

....

....

.... [1]

(b) List the output from the data shown in the table TOOLS that would be given ~~~~~~
example.

Field:	Code	Description	Price ($)	Quantity_Stock	Quantity_O~
Table:	TOOLS	TOOLS	TOOLS	TOOLS	TOOLS
Sort:					Descending
Show:	✓	✓	☐	☐	✓
Criteria:			>40	>0	>0
or:					

....

....

....

....

....

.... [3]

(c) Complete the query-by-example grid to output the tools where the quantity in stock is below 25. Only show the Code, Description and Quantity_Stock fields in ascending order of Code.

Field:				
Table:				
Sort:				
Show:	☐	☐	☐	☐
Criteria:				
or:				

[3]

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6 A database table, JUICE, is used to keep a record of cartons of fresh fruit juice av

Juice code	Fruit 1	Fruit 2	Size	Volume (ml)	Sto
LMO10	Mango	Orange	Large	1000	18
MOO05	Orange	Orange	Medium	500	8
SAM02	Apple	Mango	Small	200	25
SAA02	Apple	Apple	Small	200	50
SPP02	Pineapple	Pineapple	Small	200	10
MMM05	Mango	Mango	Medium	500	12
LMM10	Mango	Mango	Large	1000	5
MGG05	Guava	Guava	Medium	500	5
SMO02	Mango	Orange	Small	200	7
MOP05	Orange	Pineapple	Medium	500	12
LAA10	Apple	Apple	Large	1000	32
SGO02	Guava	Orange	Small	200	10
LPP10	Pineapple	Pineapple	Large	1000	3
LOO10	Orange	Orange	Large	1000	25
SOO02	Orange	Orange	Small	200	40

(a) Identify a suitable field to use as the primary key. State a reason for your choice.

Field ....

Reason ....

....

[2]

(b) Complete the query-by-example grid to display only the stock level and size of all cartons containing only apple juice.

Field:				
Table:				
Sort:				
Show:	☐	☐	☐	☐
Criteria:				
or:				

[4]

14

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6 Draw the flowchart symbol for **Decision** and the flowchart symbol for **Process**.

Decision	Process

[2]

7 A convenience store which sells general groceries wants to set up a database table called STOCK. The table will contain fields including a description of the item, the price of the item and the number in stock for each item. The STOCK table also has a fourth field to be used as a primary key.

(a) Complete the table to suggest a suitable field name for each of the **four** fields in the table STOCK. Give the purpose of the data to be stored in each field.

Field name	Purpose of field contents

[4]

(b) Complete the query-by-example grid to output stock items where the quantity in stock has fallen below 20. Only show the primary key and description of the items.

Field:				
Table:				
Sort:				
Show:	☐	☐	☐	☐
Criteria:				
or:				

[3]

6   A wildlife park has a database table, called LIVESTOCK, to classify and record its
Part of the database table is shown.

Species	Classification	Diet	Legs
Giraffe	Mammal	Herbivore	4
Elephant	Mammal	Herbivore	4
Crocodile	Reptile	Carnivore	4
Ostrich	Bird	Omnivore	2
Gorilla	Mammal	Herbivore	2
Bear	Mammal	Omnivore	4
Rhinoceros	Mammal	Herbivore	4
Hippopotamus	Mammal	Herbivore	4
Flamingo	Bird	Omnivore	2
Lion	Mammal	Carnivore	4
Turtle	Reptile	Omnivore	4
Penguin	Bird	Carnivore	2

(a) Suggest another appropriate field that could be added to this database by stating its name
and data type. State its purpose and give an example of the data it could contain.

Field name ....

Data Type ....

Purpose ....

....

Example of data ....
[2]

(b) Use the query-by-example grid below to provide a list of all four legged mammals that are
herbivores, sorted alphabetically by species, with only the species displayed.

Field:					
Table:					
Sort:					
Show:	☐	☐	☐	☐	☐
Criteria:					
or:					

[4]

QUESTION 7.

6 A database table, TRAIN, is to be set up for a railway company to keep a reco[...] available for use. Each engine has a unique number made up of 5 digits, nnnnn. [...] are classified as freight (F) or passenger (P) together with a power classification tha[...] number between 0 and 9, for example F8. The railway company keeps a record of the da[...] last service for each engine.

(a) Identify the **three** fields required for the database. Give each field a suitable name and dat[...] type. Provide a sample of data that you could expect to see in the field.

Field 1 Name ....

Data type ....

Data sample ....

Field 2 Name ....

Data type ....

Data sample ....

Field 3 Name ....

Data type ....

Data sample ....[6]

(b) State the field that you should choose as the primary key.

....[1]

(c) Using the query-by-example grid below, write a query to identify all passenger engines that have not been serviced in the past 12 months. Only display the engine numbers.

Field:				
Table:				
Sort:				
Show:	☐	☐	☐	☐
Criteria:				
or:				

[3]

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