

13. A garage offers vehicle services, maintenance, and MOTs. The management uses a relational database to store details of customers, vehicles, appointments and parts.

Sample data from the database tables is shown below.

Customer		
custID	name	telNo
0013	K Amin	05767490813
0017	J Atigah	05534384344
0024	F Hunter	05848534323
0027	H Moore	05583223411
0039	L Fletcher	05748339222
...	...	...

Part			
partID	partName	quantity	price
P001	Air filter	34	11.99
P002	Brake disc	21	61.99
P003	Brake pad	8	68.99
P004	Oil filter	43	20.99
P005	Shock absorbers	13	95.99
...	...	...	...

Vehicle				
regNo	custID	make	model	year
HK69 TYR	0013	Ford	Transit	2019
LR16 JRD	0017	Vauxhall	Mokka	2016
SO70 KRF	0013	Kia	Creed	2020
GL65 ORJ	0024	Vauxhall	Adam	2015
SC15 YHA	0017	Renault	Clio	2015
HR19 JWW	0024	Ford	Focus	2019
KK20 DRT	0039	Vauxhall	Mokka	2020
...	...	...	...	...

Appointment					
appID	regNo	description	partID	date	cost
AP011	HK69 TYR	Service	P001	24/03/2025	169.50
AP015	LR16 JRD	Maintenance	P002	29/03/2025	246.83
AP021	SO70 KRF	Service	P004	30/03/2025	78.50
AP020	HR19 JWW	Service	P001	30/03/2025	185.23
AP023	GL65 ORJ	MOT		01/04/2025	54.95
AP025	SC15 YHA	MOT	P005	02/04/2025	233.74
AP026	KK20 DRT	Maintenance	P005	02/04/2025	210.00
...	...	...	...	...	...



\* X 8 1 6 7 6 0 1 2 2 \*

## 13. (continued)

- (a) The garage wants to use a query to invoice a customer for the work done on their vehicle.

Design a query to display the full name, vehicle registration number and the name of the part for customer 'L Fletcher'.

2

Field(s) and calculation(s)	
Table(s)	
Search criteria	
Grouping	
Sort order	

- (b) Write the SQL statement to display the total value of all parts in stock as shown below.

2

Total value
4411.81



\* X 8 1 6 7 6 0 1 2 3 \*

## 13. (continued)

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MARGIN

- (c) The garage would like to display details of all appointments that cost more than the average appointment cost.

- (i) Write the SQL statement to display the average appointment cost, as shown below.

2

Average cost
168.39

- (ii) The query from part (i) is saved as ‘avgCost’. Using this query, complete the SQL statement below to display details of all appointments that cost more than the average cost. The details should be displayed in the order shown below.

4

regNo	appID	make	model	year	cost
LR16 JRD	AP015	Vauxhall	Mokka	2016	246.83
SC15 YHA	AP025	Renault	Clio	2015	233.74
KK20 DRT	AP026	Vauxhall	Mokka	2020	210.00
HR19 JWW	AP020	Ford	Focus	2019	185.23
HK69 TYR	AP011	Ford	Transit	2019	169.50

```
SELECT regNo, appID, make, model, year, cost
```



**13. (continued)**

- (d) At present only one part can be used in a single repair so the database design would require an additional entity called `PartsListing` to be added.

Complete the diagram below showing the cardinality between the `PartsListing` entity and the two existing entities.

1

