

15. The Caledonian Drone Racing League stores the results of their first season's competitions in a relational database. Pilots' times for each race are recorded in seconds.



The relational database uses the following three tables.

Pilot	Race	Entry
<u>pilotID</u>	<u>racelD</u>	<u>racelD*</u>
forename	title	<u>pilotID*</u>
surname	city	position
		raceTime

Sample data from the three tables is shown below.

Pilot		
pilotID	forename	surname
P001	Matthew	Thomas
P002	Ann	Wilson
P003	Joseph	Dow
P004	Sam	Friar
...

Race		
racelD	title	city
1	Granite Range	Aberdeen
2	Clyde Maze	Glasgow
3	Factory Frenzy	Ayr

Entry			
racelD	pilotID	position	raceTime
1	P001	2	92.4
1	P002	3	96.5
1	P003	1	86.8
1	P004	4	98.5
1	P005	5	98.9
...
2	P001	4	120.5
2	P003	2	109.7
2	P002	1	101.5
2	P004	3	115.5
2	P006	5	121.0
...
3	P001	3	109.8
3	P002	2	109.6
3	P003	1	106.9
3	P004	4	145.2
...



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

15. (continued)

Pilots win £150 for first place. The league would like to produce a list of the names and total amount of winnings for those pilots that have come in first place.

The expected output is shown below.

pilotID	forename	surname	Winnings
P002	Ann	Wilson	150
P003	Joseph	Dow	300

- (a) Design a query to display the output above.

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Field(s) and Calculation(s)	
Tables(s)	
Search Criteria	
Grouping	
Sort Order	

- (b) Write an SQL statement to display the title of each race and the average time for that race.

The expected output is shown below.

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title	Average Time
Clyde Maze	114.27
Factory Frenzy	116.67
Granite Range	103.22

15. (continued)

- (c) A query was created to display the fastest time in any race. This query was saved as ‘Fastest’ and the output of it is shown below.

FastestTime
86.8

Using the ‘Fastest’ query, complete the SQL statement below to display the name of the pilot(s) who achieved this time.

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```
SELECT forename,surname
```

- (d) The first season was such a success they are running a second season using the same races.

The pilot who won the first race of the second season in Aberdeen won the same race in the first season. When the organisers try to add this new record they found the database was not fit for purpose.

Explain why this record could not be added to the `Entry` table.

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