Summative assessment

# Databases and SQL

| **CaptureID** | **Registered\_owner** | **Car\_reg** | **Speed** |
| --- | --- | --- | --- |
| 1 | Sara Bibi | JN03HNM | 83 |
| 2 | Danny Judd | YM15PTO | 70 |
| 3 | Cara Lichfield | LG01KZK | 75 |
| 4 | Abeni Barmore | UT02SKK | 68 |
| 5 | Baki Kaatz | XB18NVA | 67 |
| 6 | Cara Lichfield | LG01KZK | 72 |

The table above (tblSpeeds) is data collected from a speed camera on a motorway. The camera captures the car registration plate and the speed at which the car was travelling. The car reg is used to find the registered owner of the car, and the data is stored in a flat file database.

Q1. Which of the fields above would be most suitable to be the primary key? [1]

A. CaptureID

B. Registered\_owner

C. Car\_reg

D. Speed

Q2. Justify your answer to question 1. [1]

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Q3. What would be the most appropriate data type for car\_reg? [1]

A. TEXT

B. INTEGER

C. REAL

D. NULL

Q4. What would be the most appropriate data type for Speed? [1]

A. TEXT

B. INTEGER

C. REAL

D. NULL

Q5. The data is in a flat file database. Describe one problem that can arise from having a flat file database. [2]

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Q6. Write down the exact output for the following query: [1]

| 123 | SELECT Registered\_ownerFROM tblSpeedsWHERE Speed > 75; |
| --- | --- |

|  |
| --- |

Q7. The authorities want to offer a speed awareness course to those drivers recorded as travelling between 71 and 80. Write a query to extract the appropriate records from tblSpeeds. You must show all the fields in your output. [3]

| 123 |  |
| --- | --- |

Q8. The camera has captured a new car travelling down the motorway. Write an SQL script to insert the following data into tblSpeeds. [4]

| **Registered\_owner** | **Car\_reg** | **Speed** |
| --- | --- | --- |
| Allen Heard | CM20YGD | 70 |

| 12 |  |
| --- | --- |

Q9. The registered owner of vehicle YM15PTO has written to say that they are no longer the registered owner. Write a script to update the registered\_owner field in tblSpeeds for this vehicle to ‘Asif Shah’. [3]

| 123 |  |
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Q10. It has been proven that the camera needed calibrating and an incorrect speed was recorded for CaptureID number 6.

Write an SQL query that will delete this record from tblSpeeds. [2]

| 12 |  |
| --- | --- |

| **Total** |  | /19 |
| --- | --- | --- |
| **Feedback** |  |

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