Question 1 / 20 - SQL

Elapsed time: **04:32/05:00**

Write a query that returns all students whose average test score is 0.9 or higher.

Your query should output `FirstName` as the first column, `LastName` as the second column, and `AvgScore`, the student's average test score in the third column.

Round the average score up to keep only two decimals. Return the table rows sorted by their average test score, in descending score order with ties sorted by `FirstName` in ascending order.

Example of output:

```
---------------------------------
| FIRSTNAME | LASTNAME | AVGSCORE |
---------------------------------
| Jan       | Beavers  | 0.99     |
| Sherry    | Hall     | 0.95     |
| Tomas     | Tu       | 0.9      |
---------------------------------
```

Answer

```sql
-- SQL request(s) below
SELECT FirstName,LastName,ROUND(AVG(Score),2)
FROM Students
WHERE Score>0.9
GROUP BY FirstName,LastName
```

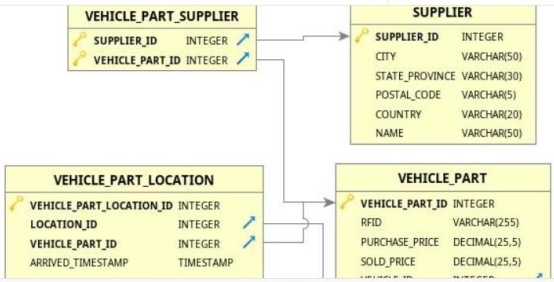
Console output

```
21 rows
-------------------------------------------------
| FIRSTNAME | LASTNAME    | ROUND(AVG(SCORE), 2) |
-------------------------------------------------
| Ada       | Clum        | 1.0                  |
| Bradley   | Gonzalez    | 0.97                 |
| Brandy    | Donahoo     | 0.94                 |
| Chung     | Cartwright  | 0.93                 |
| Cristobal | Mcelvain    | 0.98                 |
```

Test Your Code | Next Question

Question 2 / 20 - SQL

Elapsed time: 03:40/05:00



Answer

```sql
-- SQL request(s) below
SELECT VEHICLE_NAME,MAKE,MODEL
FROM vehicle
WHERE VEHICLE_NAME Like 'G%'
ORDER BY MAKE,MODEL ASC
```

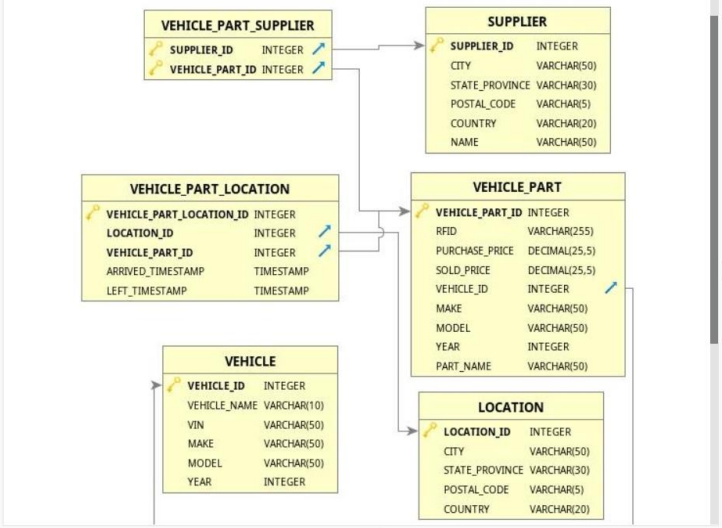
Console output

```
8 rows
-----------------------------------------------------
| VEHICLE_NAME | MAKE      | MODEL                  |
-----------------------------------------------------
| GR34G7       | BMW       | 3 Series               |
| GDJ584       | Cadillac  | DTS                    |
| GHT878       | Chevrolet | Avalanche              |
| GFD678       | Chevrolet | Silverado 3500 Classic |
| GF999        | Ford      | Taurus X               |
| GHJ678       | Isuzu     | i-Series               |
| GRD890       | Jeep      | Commander              |
| GHT878       | Toyota    | RAV4                   |
-----------------------------------------------------
```

Test Your Code | Next Question

Question 2 / 20 - SQL

Elapsed time: 03:50/05:00



Answer

```sql
-- SQL request(s) below
SELECT VEHICLE_NAME,MAKE,MODEL
FROM vehicle
WHERE VEHICLE_NAME Like 'G%'
ORDER BY MAKE,MODEL ASC
```

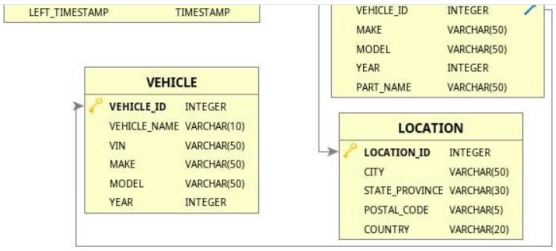
Console output

Test Your Code

Next Question

Question 2 / 20 - SQL

Elapsed time: 03:56/05:00



Modify the query to select only the vehicles having their name (`VEHICLE_NAME`) starting with 'G', sorted alphabetically by `MAKE` then `MODEL`.

Only output the columns `MAKE` and `MODEL` in that order.

Example of output:

```
| MAKE    | MODEL      |
| Ford    | F150       |
| Toyota  | Tercel     |
```

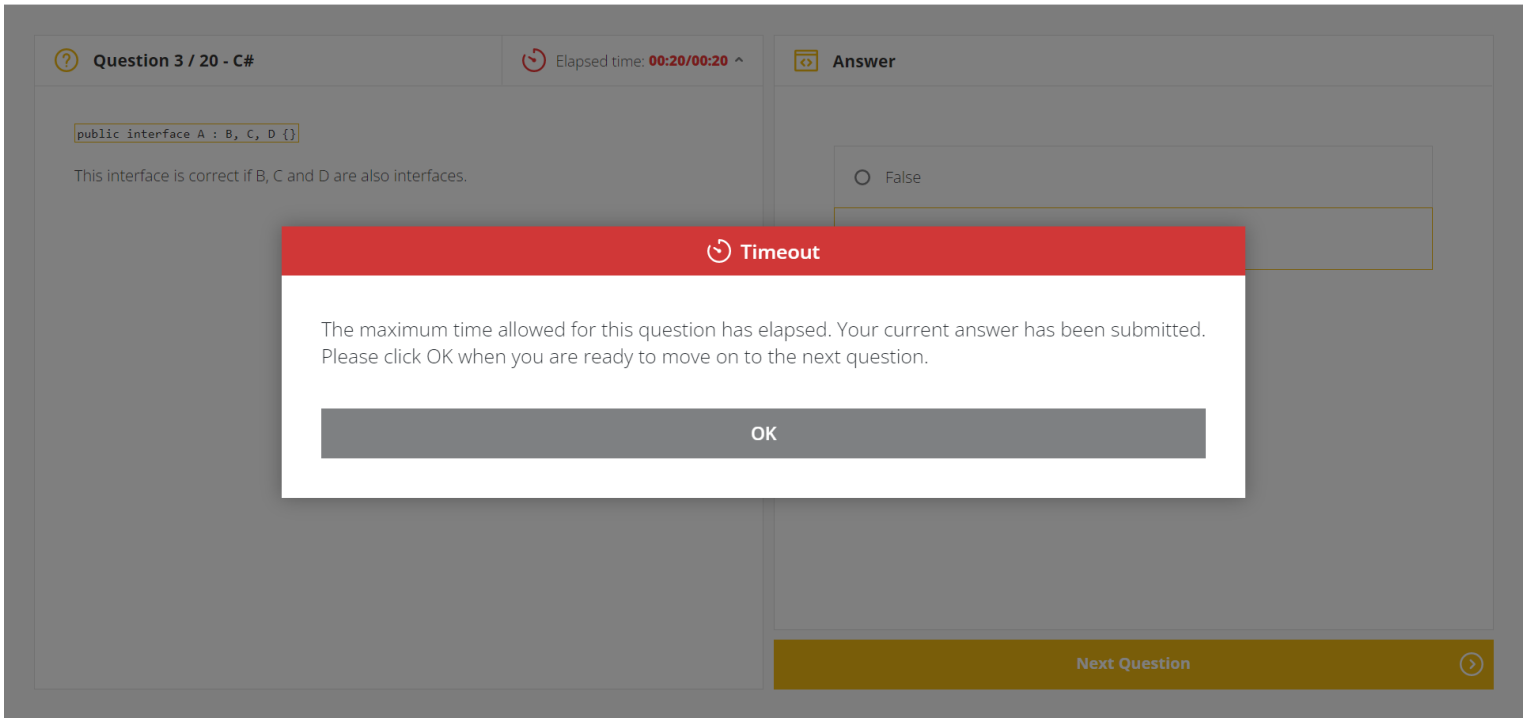
Answer

```sql
-- SQL request(s) below
SELECT VEHICLE_NAME,MAKE,MODEL
FROM vehicle
WHERE VEHICLE_NAME Like 'G%'
ORDER BY MAKE,MODEL ASC
```

Console output

Test Your Code

Next Question



Question 4 / 20 - C# — Elapsed time: 00:37/01:00 — **Answer**

Among these two solutions, which one do you prefer?

Solution #1 :

```
interface FlyAble
{
   void fly();
}
abstract class AirPlane : FlyAble
{
   abstract void fly();
}
abstract class Bird : FlyAble
{
   abstract void fly();
}
```

Solution #2 :

```
abstract class AirPlane
{
   public abstract void fly();
}
abstract class Bird : AirPlane
{
}
```

- Solution #2
- (•) Solution #1

Next Question

Question 5 / 20 - C#

Elapsed time: 00:12/00:20

C# interfaces can contain concrete methods.

Answer

- True
- True, but only since C# 8.0
- False

Next Question

Question 6 / 20 - C#

Elapsed time: 00:07/00:20

If two objects are equals then they should have the same hashcode.

Answer

- True
- False

Next Question

Question 7 / 20 - C#

Elapsed time: 00:24/00:45

What is the best way of declaring an out parameter that is **never** going to be used?

Answer

- `var isParsed = int.TryParse("1", _ out);`
- `var isParsed = int.TryParse("1", out int _);`
- `var isParsed = int.TryParse("1", out _);`
- `var isParsed = int.TryParse("1", out int unused);`
- `var isParsed = int.TryParse("1", _);` ✓

Next Question

Question 8 / 20 - C#

Elapsed time: 00:36/00:45

Select the answer that will call the method below by supplying **only** the `str` and `number` parameters.

```
public string Method(string str, string anotherString = " ", int number = 66)
{
    /* do something */
}
```

Answer

- `var result = Method(str, number: 55)`
- `var result = Method(str, number = 55)`
- `var result = Method(str, " ", 55);`
- `var result = Method(str, number=: 55)`
- `var result = Method(str, , 55);`

Next Question

Question 11 / 20 - C#

Elapsed time: 00:06/00:45

```
var m = new Dictionary<object, int>();
var o1 = new object();
var o2 = o1;
m[o1] = 1;
m[o2] = 2;
```

What is the value returned by `m[o1]` ?

Answer

- 2
- 3
- null
- 1

Next Question

Question 12 / 20 - C#

Elapsed time: 00:32/12:00

In order to detect errors on identification numbers, a check digit is often added at the end of that number.

Implement the method `ComputeCheckDigit(identificationNumber)` that takes a number (as a string) and returns the check digit, using the following algorithm:

- Sum the digits in the even-numbered positions (positions 0, 2, 4, etc.).
- Multiply the result by three.
- Add the digits in the odd-numbered positions to the result (positions 1, 3, 5, etc.).
- Take the last digit of the result.
- If it's not 0, subtract this digit from 10. Otherwise, keep it as 0.
- Return the result

(Assuming that the first digit on the left has the position 0)

Example:

Given the identification number `39847` :

- Sum the digits in the even-numbered positions: `3 + 8 + 7 = 18`
- Multiplied by three: `18 x 3 = 54`
- Add the digits in the odd-numbered positions: `54 + (9 + 4) = 67`
- Last digit: `7`
- Subtract 7 from 10: `10 - 7 = 3`

Answer

```
using System;
using System.Linq;
using System.IO;
using System.Text;
using System.Collections;
using System.Collections.Generic;

class Solution
{

    public static int ComputeCheckDigit(string identificationNumber)
    {
        // Write your code here
        // To debug: Console.Error.WriteLine("Debug messages...");

        return -1;
    }

    /* Ignore and do not change the code below */
    #region ···
}
```

Tests

01 Example: 39847

02 2 digits only: 34

Console output

Run all tests

Next Question

In order to detect errors on identification numbers, a check digit is often added at the end of that number.

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- Add the digits in the odd-numbered positions to the result (positions 1, 3, 5, etc.).
- Take the last digit of the result.
- If it's not 0, subtract this digit from 10. Otherwise, keep it as 0.
- Return the result

(Assuming that the first digit on the left has the position 0)

Example:

Given the identification number `39847` :

- Sum the digits in the even-numbered positions: `3 + 8 + 7 = 18`
- Multiplied by three: `18 x 3 = 54`
- Add the digits in the odd-numbered positions: `54 + (9 + 4) = 67`
- Last digit: `7`
- Subtract 7 from 10: `10 - 7 = 3`

The expected result is `3` for `39847`.

Constraints:

The length of `identificationNumber` can vary from 1 to 12 characters.

Question 13 / 20 - JavaScript

Elapsed time: 00:14/00:40

Which one of the following options is true about `Object.entries()`?

Answer

- `Object.entries()` returns an array of `[key, value]` pairs
- `Object.entries()` returns the number of properties in an object
- `Object.entries()` returns an array of property values from the object
- `Object.entries()` returns an array of property keys from the object

Next Question

Question 14 / 20 - JavaScript

Elapsed time: 00:09/00:30

Which of the following array methods **cannot** be used to add an element to or remove an element from an array?

Answer

- push()
- splice()
- slice()
- pop()

Next Question

Question 15 / 20 - JavaScript

Elapsed time: 00:17/01:45

While conducting a scientific experiment, Michelle comes up with an array of results:

```
[0.1, 2.3, 5.6, 7.8, 10.9]
```

The professor however wants the results to be integers, not floating-point values, and suggests using `Math.floor`.

The professor wants the **original values to be preserved as well.**

Which **array method** would you recommend her to use to come up with the integer array?

Answer in one word.

Answer

Type your answer

Next Question

Question 16 / 20 - JavaScript

Elapsed time: 00:02/00:40

In CSS, what do the following values correspond to?

```
margin: 10px 20px 15px -10px;
```

Answer

- top right bottom left
- This is not a valid CSS rule
- face front reverse alpha
- top bottom left right
- top left bottom right

Next Question

Question 17 / 20 - JavaScript

Elapsed time: 00:02/00:45

Select the correct way to declare an array in JavaScript.

Answer

- var a = (1, 2, 3);
- var a = new Array([1,2,3]);
- var a = {1, 2, 3};
- var a = [1, 2, 3];
- var a = 1, 2, 3;

Next Question

Question 18 / 20 - JavaScript

Elapsed time: 00:02/00:40

Which of the following HTML elements is **not** closed properly?

Answer

- `<img src="hello.jpg" />`
- `<span>hello&ltspan>`
- `<br />`
- `<br>`
- `<div></div>`

Next Question

Question 19 / 20 - JavaScript

Elapsed time: 00:03/00:30

In HTML5, what attribute is used to display a placeholder background for a <video> element?

Answer

- `<video preview="image.jpg">`
- `<video onload="image.jpg">`
- `<video poster="image.jpg">`
- `<video><param name="thumbnail" value="image.jpg" /></video>`

Next Question

Question 20 / 20 - JavaScript

Elapsed time: 00:02/00:45

Based on the following HTML code:

```
<div id="container">
  <div>
    I am a sub container
  </div>
</div>
```

which CSS selector(s) should you use to select the element whose id is equal to "container"?

Check all possible answers.

Answer

- [ ] #container
- [ ] .container
- [ ] @container
- [ ] [id = "container"]
- [ ] container

Submit