

## Back-end Test

## Sunshine Caprio

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## Result

Status: **PASS**

Completed: Nov 14, 2021

Time: 1h 3min

Total:  
**79%**  
Top 19% of all candidates

## Breakdown

C#	<div><div></div></div>	100%
jQuery	<div><div></div></div>	100%
SQLite	<div><div></div></div>	50%
Numerical Reasoning	<div><div></div></div>	0%

## Notes

demo@testdome.com: The interview with the team was good, they are a good option to hire.

demo@testdome.com: This candidate has great C# skills.

## Question 1

C# . PUBLIC

Score:  100%

Time: **25min 54sec**

Difficulty: Easy

## Description:

Write a function that checks if a given sentence is a palindrome. A palindrome is a word, phrase, verse, or sentence that reads the same backward or forward. Only the order of English alphabet letters (A-Z and a-z) should be considered, other characters should be ignored.

For example, *IsPalindrome("Noel sees Leon.")* should return *true* as spaces, period, and case should be ignored resulting with "noelseesleon" which is a palindrome since it reads same backward and forward.

## Answer



```
using System;

public class Palindrome
{
    public static bool IsPalindrome(string str)
    {
        string cleanStr = "";
        string reverse = "";

        str = str.ToLower();

        for (int i = 0; i < str.Length; i++)
        {
            if (str[i] >= 'a' && str[i] <= 'z')
                cleanStr += str[i].ToString();
        }

        for (int j = cleanStr.Length - 1; j >= 0; j--)
        {
            reverse += cleanStr[j].ToString();
        }

        return reverse == cleanStr;
    }

    public static void Main(string[] args)
    {
        Console.WriteLine(IsPalindrome("Noel sees Leon."));
    }
}
```

### Evaluation

- ✓ Example case: Correct answer
- ✓ Lowercase single word: Correct answer
- ✓ Any case single word: Correct answer
- ✓ Sentence: Correct answer

## Question 2

NUMERICAL REASONING . PUBLIC

Score:  0%

Time: 2min 45sec

Difficulty: Easy

### Description:

How old is John if, in 38 years, he will be 3 times as old as he is today?

Answer **Correct answer** | ☒ Candidate's selection

- ☐ 13
- ☐ 17
- ☒ 19

- ☐ 21
- ☒ 24
- ☐ 38

**Question 3**

C# . STRINGS . PUBLIC

**Score:** 100%**Time:** 27min 21sec**Difficulty:** Hard**Description:**

Write a function that finds the zero-based index of the longest run in a string. A run is a consecutive sequence of the same character. If there is more than one run with the same length, return the index of the first one.

For example, `IndexOfLongestRun("abbcccddddcccbba")` should return 6 as the longest run is dddd and it first appears on index 6.

**Answer**

```
using System;

public class Run
{
    public static int IndexOfLongestRun(string str)
    {
        int bestRun = 0, bestIndex = 0;
        int i, j;
        for (i = 0, j = 0; i < str.Length; i++)
        {
            if (str[i] == str[j])
            {
                if (bestRun < i - j)
                {
                    bestRun = i - j;
                    bestIndex = j;
                }
            }
            else
            {
                j = i;
            }
        }

        return bestIndex;
    }

    public static void Main(string[] args)
    {
        Console.WriteLine(IndexOfLongestRun("abbcccddddcccbba"));
    }
}
```

## Evaluation

- ✓ Example case: Correct answer
- ✓ Word with single longest run: Correct answer
- ✓ Word with 200 letters: Correct answer
- ✓ Performance test on a large word: Correct answer

## Question 4

JQUERY . THIS . JAVASCRIPT . PUBLIC

**Score:** 100%**Time:** 5min 4sec**Difficulty:** Hard

### Description:

Fix the bugs in the JavaScript code without removing the *setTimeout* function. The code currently alerts undefined instead of anchor inner contents.

### Answer

```
function registerClickHandler() {  
  $('#clickme').click(function() {  
    setTimeout(function() {  
      alert($('#clickme').html());  
    }, 200);  
  });  
}
```

## Evaluation

- ✓ Alert content: Correct answer
- ✓ Alert content and timing: Correct answer

## Question 5

SQLITE . CONDITIONS . PUBLIC

**Score:** 50%**Time:** 57sec**Difficulty:** Easy

### Description:

A table containing the enrollment year has incorrect data in records with ids between 20 and 100.

Select all queries below that, for the faulty records, set the year to 2015.

**Answer** **Correct answer** | ☒ Candidate's selection

- ☒ UPDATE enrollments SET year = 2015 WHERE id IN (20, 100);
- ☒ UPDATE enrollments SET year = 2015 WHERE id >= 20 AND id <= 100;
- ☒ UPDATE enrollments SET year = 2015 WHERE id BETWEEN 20 AND 100;
- ☐ UPDATE enrollments SET year = 2015 WHERE id >= 20 OR id <= 100;

