JavaScript Essentials

Assignments

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RECORD OF CHANGES

No	Effective Date	Change Description	Reason	Reviewer	Approver
1	25/Jun/2018	Create a new Lab	Create new	DieuNT1	VinhNV
2	01/May/2019	Update Fsoft Template	Update	DieuNT1	VinhNV

Contents

CODE:	JS-E.M.A401
TYPE:	Medium
LOC:	N/A
DURATION:	60 MINUTES

Unit 4 – Strings

Objectives:

- ✓ Assess whether you are able to handle strings and able to use strings methods in JavaScript

Project Structure

- Create a new folder called **JS-E.M.A401** (this will be your top folder)
- Create folder **problem1** inside top folder and put every file related to this problem inside
- Create folder **problem2** inside top folder and put every file related to this problem inside
- Create folder **problem3** inside top folder and put every file related to this problem inside

Problem 1:

In our first strings task, we start off small. You already have half of a famous quote inside a variable called **quoteStart**; we would like you to:

1. Look up the other half of the quote, and add it to the example inside a variable called **quoteEnd**.
2. Concatenate the two strings together to make a single string containing the complete quote. Save the result inside a variable called **finalQuote**.

You'll find that you get an error at this point. Can you fix the problem with **quoteStart**, so that the full quote displays correctly?

Try updating the code below to recreate the Expected output:

```
1.      // Add your code here
2.      var quoteStart = 'Don't judge each day by the harvest you reap ';
3.      var quoteEnd = 'but by the seeds that you plant.';
4.
5.      // Don't edit the code below here!
6.      var section = document.querySelector('section');
7.      var para1 = document.createElement('p');
8.      para1.textContent = finalQuote;
9.
10.     section.appendChild(para1)
```

Expected output:

> Don't judge each day by the harvest you reap but by the seeds that you plant.

Problem 2:

In this task you are provided with two variables, **quote** and **substring**, which contain two strings. We would like you to:

1. Retrieve the length of the quote, and store it in a variable called **quoteLength**.
2. Find the index position where substring appears in quote, and store that value in a variable called **index**.
3. Use a combination of the variables you have and available string properties/methods to trim down the original quote to "I do not like green eggs and ham.", and store it in a variable called **revisedQuote**.

Try updating the code below to recreate the Expected output:

```
1.      let quote = 'I do not like green eggs and ham. I do not like them, Sam-I-Am.';
2.      let substring = 'green eggs and ham';
3.
4.      // Add your code here
5.
6.      // Don't edit the code below here!
7.
8.      const section = document.querySelector('section');
9.
10.     section.innerHTML = ' ';
11.     let para1 = document.createElement('p');
12.     para1.textContent = `The quote is ${ quoteLength } characters long.`;
13.     let para2 = document.createElement('p');
14.     para2.textContent = revisedQuote;
15.
16.     section.appendChild(para1);
17.     section.appendChild(para2);
```

Expected output:

The quote is 63 characters long.

I do not like green eggs and ham.

Problem 3:

In the next string task, you are given the same quote that you ended up with in the previous task, but it is somewhat broken! We want you to fix and update it, like so:

1. Change the casing to correct sentence case (all lowercase, except for upper case first letter). Store the new quote in a variable called **fixedQuote**.
2. In **fixedQuote**, replace "green eggs and ham" with another food that you really don't like.
3. There is one more small fix to do — add a full stop onto the end of the quote, and save the final version in a variable called **finalQuote**.

Try updating the code below to recreate the Expected output:

```
1.      let quote = 'I dO nOT lIke gREen eGgS anD HAM';
2.
3.      // Add your code here
4.
5.      // Don't edit the code below here!
6.
7.      const section = document.querySelector('section');
8.
9.      let para1 = document.createElement('p');
10.     para1.textContent = fixedQuote;
11.     let para2 = document.createElement('p');
12.     para2.textContent = finalQuote;
13.
14.     section.appendChild(para1);
15.     section.appendChild(para2);
```

Expected output:

I do not like green eggs and ham

I do not like green eggs and ham.

Problem 4:

In the final string task, we have given you the name of a theorem, two numeric values, and an incomplete string (the bits that need adding are marked with asterisks (*)). We want you to change the value of the string as follows:

1. Change it from a regular string literal into a template literal.
2. Replace the four asterisks with four template literal placeholders. These should be:
    1. The name of the theorem.
    2. The two number values we have.
    3. The length of the hypotenuse of a right-angled triangle, given that the two other side lengths are the same as the two values we have. You'll need to look up how to calculate this from what you have. Do the calculation inside the placeholder.

Try updating the code below to recreate the Expected output:

```
1.      let theorem = 'Pythagorean theorem';
2.
3.      let a = 5;
4.      let b = 8;
5.
6.      let myString = 'Using *, we can work out that that if the two shortest sides of a right-
    angled triangle have lengths of * and *, the length of the hypotenuse is *.';
7.
8.      // Don't edit the code below here!
9.
10.     const section = document.querySelector('section');
11.
12.     let para1 = document.createElement('p');
13.     para1.textContent = myString;
14.     section.appendChild(para1);
```

Expected output:

> Using Pythagorean theorem, we can work out that that if the two shortest sides of a right-angled triangle have lengths of 5 and 8, the length of the hypotenuse is 9.433981132056603.

-- THE END --