Javascript Assignment

Due Monday

Put JS Assignments in the repo under your: firstName\_lastName\_code/

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PART I

Create a single JavaScript file called assignment.js to answer these questions.

Please put the question itself as a comment above each answer.

Choose and complete at least 4 questions.

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1. Fibonacci

Define function: fib(n)

Return the nth number in the fibonacci sequence.

2. Bubble Sort

Define function: bubbleSort(numArray)

Use the bubble sort algorithm to sort the array.

Return the sorted array.

3. Reverse String

Define function: reverseStr(someStr)

Reverse and return the String.

4. Factorial

Define function: factorial(someNum)

Use recursion to compute and return the factorial of someNum.

5. Substring

Define function substring(someStr, length, offset)

Return the substring contained between offset and (offset + length) inclusively.

If incorrect input is entered, use the alert function and describe why the input was incorrect.

6. Even Number

Define function: isEven(someNum)

Return true if even, false if odd.

Do not use % operator.

7. Palindrome

Define function isPalindrome(someStr)

Return true if someStr is a palindrome, otherwise return false

8. Shapes

Define function: printShape(shape, height, character)

shape is a String and is either "Square", "Triangle", "Diamond".

height is a Number and is the height of the shape. Assume the number is odd.

character is a String that represents the contents of the shape. Assume this String contains just one character.

Use a switch statement to determine which shape was passed in.

Use the console.log function to print the desired shape.

Example for printShape("Square", 3, "%");

%%%

%%%

%%%

Example for printShape("Triangle", 3, "$");

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Example for printShape("Diamond", 5, "\*");

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9. Object literal

Define function traverseObject(someObj)

Print every property and it's value.

10. Delete Element

Define function deleteElement(someArr)

Print length

Delete the third element in the array.

Print length

The lengths should be the same.

11. Splice Element

Define function spliceElement(someArr)

Print length

Splice the third element in the array.

Print length

The lengths should be one less than the original length.

12. Defining an object using a constructor

Define a function Person(name, age)

The following line should set a Person object to the variable john:

var john = new Person("John", 30);

13. Defining an object using an object literal

Define function getPerson(name, age)

The following line should set a Person object to the variable john:

var john = getPerson("John", 30);

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PART II

Part II will focus on Javascript's ability to manipulate the DOM.

Use the provided index.html

Create a js file called domManipulation.js and attached to the html file

Choose and complete at least 4 questions

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1. USA

Define function getUSA()

Find the html element that contains "USA".

Print that element's contents.

2. Sales

Define function getPeopleInSales()

Print the names of all the people in the sales department.

3. Click Here

Define function getAnchorChildren()

Find all anchor elements with a <span> child.

Print the contents of <span>

4. Hobbies

Define function getHobbies()

Find all checked options in the 'skills' select element.

Print the value and the contents.

5. Custom Attribute

Define function getCustomAttribute()

Find all elements with "data-customAttr" attribute

Print the value of the attribute.

Print the element that has the attribute.

6. Sum Event

NOTE: Write unobtrusive Javascript

Regarding these elements:

<input id="num1" class="nums" type="text"/>

<input id="num2" class="nums" type="text"/>

<h3>Sum: <span id="sum"></span></h3>

Define onchange event handler.

Add <input> element values.

Put the sum in the <span> element.

If values cannot be added, put "Cannot add" in the <span> element

7. Skills Event

NOTE: Write unobtrusive Javascript

When user selects a skill, create an alert with a message similar to:

"Are you sure CSS is one of your skills?"

NOTE: no alert should appear when user deselects a skill.

8. Favorite Color Event

NOTE: Write unobtrusive Javascript

NOTE: This is regarding the favoriteColor radio buttons.

When a user selects a color, create an alert with a message similar to:

"So you like green more than blue now?"

In this example, green is the new value and blue is the old value.

Make the background color (of all favoriteColor radio buttons) the newly selected favoriteColor

9. Show/Hide Event

When user hovers over an employees name:

Hide the name if shown.

Show the name if hidden.

10. Current Time

Regarding this element:

<h5 id="currentTime"></h5>

Show the current time in this element in this format: 9:05:23 AM

The time should be accurate to the second without having to reload the page.

11. Delay

Regarding this element:

<p id="helloWorld">Hello, World!</p>

Three seconds after a user clicks on this element, change the text to a random color.

12. Walk the DOM

Define function walkTheDOM(node, func)

This function should traverse every node in the DOM. Use recursion.

On each node, call func(node).