

Practice Exercises

Review Questions

1. What are the built-in objects in JavaScript?_____.
2. What are the different ways to create objects in JavaScript?_____.
3. Does JavaScript has a built-in concept of inheritance?_____.
4. How do you create an object in JavaScript?_____.
5. How to you assign a value to an object?_____.
6. What does "1" + 2 + 4 evaluate to?_____.
7. A string function which returns the character at the specified position is_____.
8. Given the following line of code, what would be the output?_____.

```
1 var x1 = 'Hello RAM';  
2 document.write('indexOf ' + x1.indexOf('RAM'));
```
9. Given the following line of code, what would be the output?_____.

```
1 var x1 = 'Hello World';  
2 document.write(x1.substring(5));  
3 document.write(x1.substring(3,6));
```
10. What is the use of Math function in JavaScript?_____.
11. What's Math Constants using JavaScript?_____.
12. `Math.ceil(29.89)`; returns_____.
13. A Math function which rounds a number downward to its nearest integer is_____.
14. `Math.pow(4, Math.pow(2,3))`; returns_____.
15. How to create a Date object in JavaScript?_____.

16. Given the following line of code, what would be the output?_____.

```
1 var d = new Date();
2 document.write (d.getDay());
```

17. How does JavaScript store dates in a date object?_____.

Exercises

- Write the expected output, or compiler errors if any, for each of the following programs in the box provided below each program.
- Then execute the programs and check your answers.
- Then answer the questions given below.

program 1

```
1 <script type = ‘‘text/JavaScript’’ language = ‘‘JavaScript’’>
2     var s_prim = ‘‘foo’’;
3     var s_obj = new String(s_prim);
4     document.write(typeof s_prim + ‘‘<br>’’);
5     document.write(typeof s_obj);
6 </script>
```

Q1: What will be the output for the above code snippet?

Q2: What happens if line 5 is changed to `document.write(s_obj);`?

Program 2

```
1 <script type = ‘‘text/JavaScript’’ language = ‘‘JavaScript’’>
2     document.write(String(‘Hello’) === ‘Hello’);
3     document.write(new String(‘Hello’) === ‘Hello’);
4     document.write(new String(‘Hello’) === ‘Hello’);
5 </script>
```

Q1: What will be the output for the above code snippet?

Q2: What happens if line 1 is changed to `document.write(String('Hello'))`
`== 'Hello');`?

Program 3

```
1 <script type = 'text/JavaScript' language = 'JavaScript'>
2     var num1 = '10', num2 = '9';
3 </script>
```

Q1: What is the value of `num1 < num2`?

Q2: What is the value of `+num1 < num2`?

Q3: What is the value of `num1 + num2`?

Q4: What is the value of `+num1 + num2`?

Program 4

```
1 <script type = 'text/JavaScript' language = 'JavaScript'>
2     var message = 'Hello world!';
3 </script>
```

Q1: What is the value of `message.substring(1, 4)`?

Q2: What is the value of `message.substr(1, 4)`?

Program 5

```
1 <script type = 'text/JavaScript' language = 'JavaScript'>
2     var ts = 'wise module';
3     var result = ts.lastIndexOf('s');
4     document.write(result);
5 </script>
```

Q1: What will be the output for the above code snippet?

Q2: What happens if line 3 is changed to `var result = ts.substring(5);`?

Q3: What will be the output if line 3 is changed to `var result = ts.charAt(2);`?

Program 6

```
1 <script type = ‘‘text/JavaScript’’ language = ‘‘JavaScript’’>
2     var text = prompt (‘‘Enter Integer for var N ’’,‘‘’’)
3     var num1 = parseInt(text)
4     var text = prompt (‘‘Enter decimal number for var x ’’,‘‘’’)
5     var num2 = parseInt(text)
6     result = Math.pow(num1, num2)
7     document.write(‘‘power of numbers is = ’’ + result);
8 </script>
```

Q1: What will be the output for the above code snippet?

Q2: What happens if the input value for num1 = “2” and num2 = 3?

Q3: What happens if the input value for num1 = 2.5 and num2 = 3.9?

Program 7

```
1 <script type = ‘‘text/JavaScript’’ language = ‘‘JavaScript’’>
2     var ran_number = Math.random() * 5;
3     document.write(ran_number);
4 </script>
```

Q1: What will be the output of the above code snippet?

Q2: Rewrite the code such that it prints only integer values between 0 and 4?

Program 8

```

1 <script type = ‘‘text/JavaScript’’ language = ‘‘JavaScript’’>
2     var d = new Date();
3     document.write(d.getHours() + ‘‘<br>’’);
4     document.write(d.getDate() + ‘‘<br>’’);
5     document.write(d.getDay() + ‘‘<br>’’);
6     document.write(d.getFullYear() + ‘‘<br>’’);
7 </script>

```

Q1: What will be the output of the above code snippet?

Additional Exercises

- Given a string of numbers in sequence order. Find the missing number.
Input: "9899100101103104105"
Output: 102
- A string of characters are given, find the highest occurrence of the character and display it.
Input: MISSISIPPI
Output: I
- Write a JavaScript that receives a string composed by words separated by spaces and returns a string where words appear in the same order but than the original string, but every word is inverted.
Input: the boy ran
Output: eht yob nar
- Write a JavaScript to reverse the words in a given sentence.
- Write a JavaScript to search for the existence of a string(target) in another string. The program takes two strings as the input and returns the index where the second string is found. If the target string cannot be found, then return -1.
- You have a string str = "I love you". Write a program to print the output as "you love I".
- Write a JavaScript to remove the characters from string1 which are present in string2 and display the resultant string.
- How to write a random number from 0 to 10, using the round and the random method.

9. Write JavaScript to find out the circumference of a circle using Math.PI .
10. Write JavaScript to display today's date including date, month, and year. Note that the `getMonth` method returns 0 in January, 1 in February etc. So add 1 to the `getMonth` method to display the correct date.
11. Write JavaScript to display the current local time including hour, minutes, and seconds. To return the GMT time use `getUTCHours`, `getUTCMinutes` etc.
12. How to write a complete date with the name of the day and the name of the month.