Experiment No._____ *Date___/___/2020*

TITLE OF EXPERIMENT: - A Program to generate the multiplication table of a given number.

DIVISION:_____ **BRANCH:** _____

BATCH:_____ **ROLL NO.:** _____

PERFORMED ON DATE: _____

SIGNATURE OF TEACHING STAFF:

EXPERIMENT NO. 1

Aim: Write a JavaScript program to generate the multiplication table of a given number.

Prerequisites :

- For this **Javascript Lab**, it is assumed that you have a prior knowledge of HTML coding. It would help if you had some prior exposure to object-oriented programming concepts and a general idea on creating online applications.
- To understand this experiment, you should have the knowledge of the basic **JavaScript, for loop, arithmetic operators, relational operators.**

Editor:

1.	NotePad
2.	Visual studio code

Theory:

Definition and Usage:

The prompt() method displays a dialog box that prompts the user for input.

The prompt() method returns the input value if the user clicks "OK", otherwise it returns null.

The **prompt()** method is used to display a dialog box with an optional message prompting the user to input some text. It is often used if the user wants to input a value before entering a page. It returns a string containing the text entered by the user, or null.

Syntax:

prompt(message, default)

- **message** is a string of text to display to the user. It can be omitted if there is nothing to show in the prompt window i.e. it is optional.
- **default** is a string containing the default value displayed in the text input field. It is also optional.

Example:

Prompt for a user name and output a message:

```
let person = prompt("Please enter your name", "Harry Potter");

if (person != null) {
  document.getElementById("demo").innerHTML =
  "Hello " + person + "! How are you today?";
}
```

parseInt() function

The **parseInt()** function is used to accept the string ,radix parameter and convert it into an integer. The radix parameter is used to specify which numeral system to be used, for example, a radix of 16 (hexadecimal) indicates that the number in the string should be parsed from a hexadecimal number to a decimal number. If the string does not contain a numeric value then it returns NaN i.e, not a number.

Syntax:

parseInt(Value, radix)

Parameters: This function accepts two parameters as mentioned above and described below:

- **Value:** This parameter contains a string which is converted to an integer.
- **radix:** This parameter represents the radix or base to be used and it is optional.
- **Return value:** It returns a number and if the first character can't be converted to a number then the function returns NaN. It actually returns a number parsed up to that point where it encounters a character that is not a number in the specified radix(base).

- **Example:**

```
<script>

   var v1 = parseInt("3.14");

     document.write('Using parseInt("3.14") = '

   + v1 + "<br>"); </script>
```

- **Output:**

Using parseInt("3.14") = 3

Example 1: Multiplication Table Up to 10

```
// program to generate a multiplication table

// take input from the user
const number = parseInt(prompt('Enter an integer: '));

//creating a multiplication table
for(let i = 1; i <= 10; i++) {

    // multiply i with number
    const result = i * number;

    // display the result
    console.log(`${number} * ${i} = ${result}`);
}
```

Output

```
Enter an integer: 3
3 * 1 = 3
3 * 2 = 6
3 * 3 = 9
3 * 4 = 12
3 * 5 = 15
3 * 6 = 18
3 * 7 = 21
3 * 8 = 24
3 * 9 = 27
3 * 10 = 30
```

In the above program, the user is prompted to enter an integer value. Then, the for loop is used to iterate through **1** to **10** to create a multiplication table.

Example 2: Multiplication Table Up to a Range

```
/* program to generate a multiplication table
upto a range */

// take number input from the user
const number = parseInt(prompt('Enter an integer: '));

// take range input from the user
const range = parseInt(prompt('Enter a range: '));
```

```
//creating a multiplication table
for(let i = 1; i <= range; i++) {
   const result = i * number;
   console.log(`${number} * ${i} = ${result}`);
}
```

Output

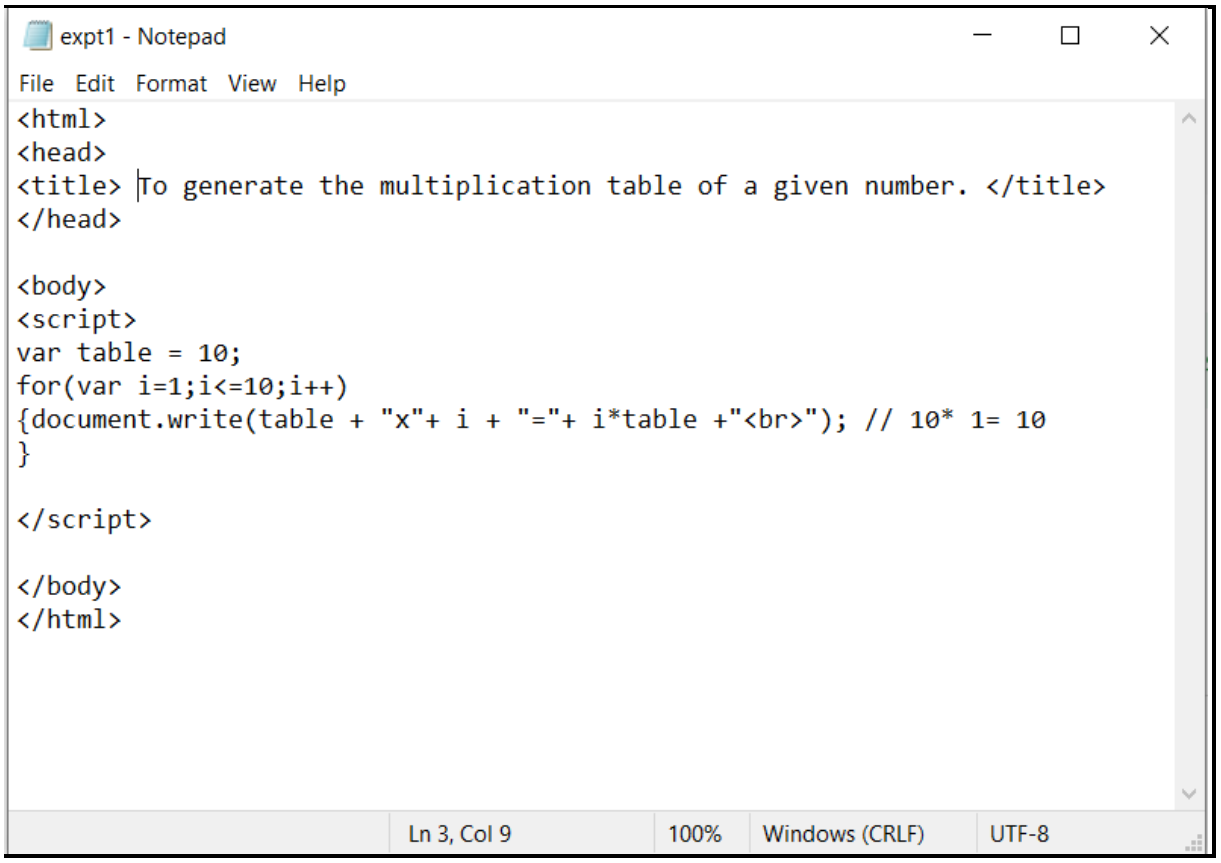
```
Enter an integer: 7
7* 1 = 7
7* 2= 14
7*3 = 21
7 * 4 = 28
7 * 5 = 35
```

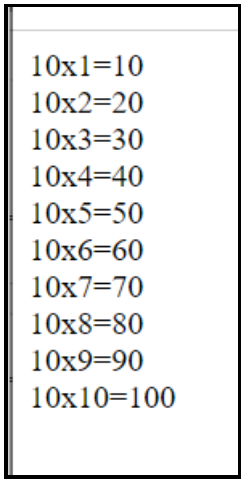
In the above example, the user is prompted to enter an integer and also a range for which they want to create a multiplication table.

Program:

```
<html>
<head>
<title> To generate the multiplication table of a given number. </title>
</head>
<body>
<script>
var table = 10;
for(var i=1;i<=10;i++)
{document.write(table + "x"+ i + "="+ i*table +"<br>"); // 10* 1= 10
}
</script>
</body>
</html>
```

Screenshot's of Output:





Conclusion: