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Section: BSIT 2-D

Instruction: Read and follow the instructions per exercises. Take a SCREENSHOT of the actual code and the output of your answer. You may download and use any TEXT EDITOR (sublime text, VSCode, notepad++, etc.) available on the internet. (RECOMMENDED) Save your document in PDF Format.

1. **Exer #1:** Show way(s) to concatenate the following two strings together to get the string "I'm, <insert your name>."

Program

```
var Greetings = "I'm, "
var firstName = "Jefferson D. ";
var lastName = "Asis";
var fullName = Greetings + firstName + lastName ;
console.log(fullName);
```

Output

```
I'm, Jefferson D. Asis
```

2. **Exer #2:** Create a simple HTML form and accept the user's name and display the name through any JS output statement.

Program

```
<!DOCTYPE html>
<html>
  <head>
    <title>User Name Form</title>
  </head>
  <body>
    <form>
      <label for="name">Enter your name:</label>
      <input type="text" id="name">
      <button type="button" onclick="displayName()">Submit</button>
      <br><br>
      <div id="output"></div>
    </form>

    <script>
      function displayName() {
        var name = document.getElementById("name").value;
        var output = document.getElementById("output");
        output.innerHTML = "Hello, " + name + "!";
      }
    </script>
  </body>
</html>
```

Output

Enter your name: Amarus
Submit

Hello, Amarus!

3. **Exer #3:** Create a JS program to input week number (1-7) and print the corresponding day of week name.

   Example: Input week number: 1
   Output: Monday

Program

```
var day = prompt("Input week number: ");
switch (day) {
    case "1":
        console.log("Monday");
        break;
    case "2":
        console.log("Tuesday");
        break;
    case "3":
        console.log("Wednesday");
        break;
    case "4":
        console.log("Thursday");
        break;
    case "5":
        console.log("Friday");
        break;
    case "6":
        console.log("Saturday");
        break;
    case "7":
        console.log("Sunday");
        break;
    default:
        console.log("Invalid input")
}
```

Output

```
Input week number: 3
Wednesday
```

4. **Exer #4:** Create a JS program that will tell the user if the character they input is Vowel or Consonant. The five alphabets A, E, I, O and U are called vowels. All other alphabets except these 5 vowel letters are called consonants. Assuming that the user will always enter an alphabet character.

   Example: Enter an alphabet: G
   G is a consonant.

   Enter an alphabet: g
   g is a consonant.

Program

```
let character = prompt("Enter an alphabet: ");

if (character == "a" || character == "e" || character == "i" || character
    == "o" || character == "u" || character == "A" || character == "E" ||
    character == "I" || character == "O" || character == "U") {
  console.log(character + " is a vowel");
} else {
  console.log(character + " is a consonant");
}
```

Output

```
Enter an alphabet: a
a is a vowel
```

5. **Exer #5:** Create a JS program to read the age of a candidate and determine whether the user is eligible for casting his/her own vote.

   Eligibility: 18 Years old and above

Program

```
1  var age = prompt("Enter your age: ");
2  if (age >= 18) {
3    alert("You are eligible to vote");
4  } else {
5    alert("You are not eligible to vote");
6  }
```

Output

```
Enter your age: 18
You are eligible to vote
```

6. **Exer #6:** Create a JS program that identifies the proper remarks based on students' grade as an input.
   Grading Scale

   *Format
   Scale: Remarks
   96 – 100: Excellent
   90 – 95: Very Satisfactory
   84 – 89: Satisfactory
   78 – 83: Fairly Satisfactory
   75 – 77: Passed
   70 – 74: Conditional Failure
   69 and Below: Failed

Program

```
1  let grade = parseInt(prompt("Enter student's grade: "));
2
3  if (grade >= 96 && grade <= 100) {
4    console.log("Remark: Excellent");
5  }
6  else if (grade >= 90 && grade <= 95) {
7    console.log("Remark: Very Satisfactory");
8  }
9  else if (grade >= 84 && grade <= 89) {
10   console.log("Remark: Satisfactory");
11 }
12 else if (grade >= 78 && grade <= 83) {
13   console.log("Remark: Fairly Satisfactory");
14 }
15 else if (grade >= 75 && grade <= 77) {
16   console.log("Remark: Passed");
17 }
18 else if (grade >= 70 && grade <= 74) {
19   console.log("Remark: Conditional Failure");
20 }
21 else {
22   console.log("Remark: Failed");
23 }
```

Output

```
Enter student's grade: 76
Remark: Passed
```

7. **Exer #7:** Create a JS Program that accepts input from the user. Display a message telling whether the integer is:

   • Positive or Negative
   • Odd or Even

Program

```
var number = parseInt(prompt("Enter an integer:"));

var sign;
if (number > 0) {
  sign = "Positive";
} else if (number < 0) {
  sign = "Negative";
} else {
  sign = "Zero";
}

var parity;
if (number % 2 === 0) {
  parity = "Even";
} else {
  parity = "Odd";
}

console.log("Number:", number);
console.log("Sign:", sign);
console.log("Parity:", parity);

```

Output

```
Enter an integer:6
Number: 6
Sign: Positive
Parity: Even
```

8. **Exer #8:** Create a JS Program that will display an integer from 0 to 15 using the following looping statements:
   • while loop
   • do-while loop
   • for loop

   Print the result in vertical order

Program

```
let i = 0;
while(i <= 15){
   console.log(i);
   i++;
}
```

Using While loop

Output

```
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```

Output

```
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```

Program

```
1  let j = 0;
2  do{
3     console.log(j);
4     j++;
5  }while(j <= 15);
```

Using Do-While loop

Output

```
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```

Program

```
1  for(let k = 0; k <= 15; k++){
2     console.log(k);
3  }
```

Using For loop

9. **Exer #9:** Create a JS program that displays the result of cubing a number coming from the user. Pass a number to a function that cubes a number and returns the result. The display should execute within the function that calls the cube method.

Program

```
function cube(number) {
  return number * number * number;
}

const userInput = prompt("Enter a number to be cubed: ");

const result = cube(userInput);

console.log(`The cube of ${userInput} is ${result}.`);
```

Output

```
Enter a number to be cubed: 8
The cube of 8 is 512.
```

10. **Exer #10:** Create a JS program that calculates two (2) numbers input by the user. Perform the following math operations using the given inputs:

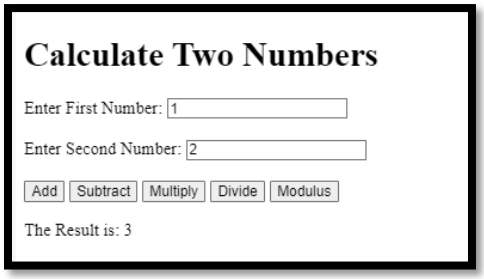
    - Addition
    - Subtraction
    - Multiplication
    - Division
    - Modulus / Modulo

Program

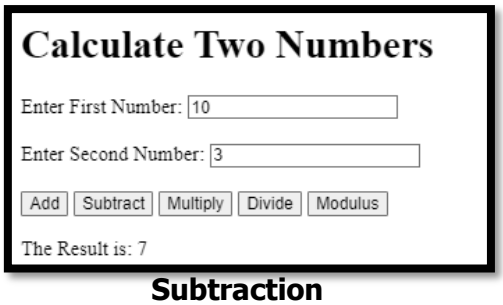
```
<!DOCTYPE html>
<html>
<head>
  <title>Simple Calculator</title>
</head>
<body>
  <h1>Calculate Two Numbers</h1>
  <form>
    <label for="num1">Enter First Number: </label>
    <input type="number" id="num1" name="num1"><br><br>

    <label for="num2">Enter Second Number: </label>
    <input type="number" id="num2" name="num2"><br><br>

    <input type="button" value="Add" onclick="add()">
    <input type="button" value="Subtract" onclick="subtract()">
    <input type="button" value="Multiply" onclick="multiply()">
    <input type="button" value="Divide" onclick="divide()">
    <input type="button" value="Modulus" onclick="modulus()">

    <p id="result"></p>
  </form>

```

```
<script>
  function add(){
    let num1 = parseFloat(document.getElementById("num1").value);
    let num2 = parseFloat(document.getElementById("num2").value);
    let result = num1 + num2;
    document.getElementById("result").innerHTML = "The Result is: " + result;
  }

  function subtract(){
    let num1 = parseFloat(document.getElementById("num1").value);
    let num2 = parseFloat(document.getElementById("num2").value);
    let result = num1 - num2;
    document.getElementById("result").innerHTML = "The Result is: " + result;
  }

  function multiply(){
    let num1 = parseFloat(document.getElementById("num1").value);
    let num2 = parseFloat(document.getElementById("num2").value);
    let result = num1 * num2;
    document.getElementById("result").innerHTML = "The Result is: " + result;
  }

  function divide(){
    let num1 = parseFloat(document.getElementById("num1").value);
    let num2 = parseFloat(document.getElementById("num2").value);
    let result = num1 / num2;
    document.getElementById("result").innerHTML = "The Result is: " + result;
  }

  function modulus(){
    let num1 = parseFloat(document.getElementById("num1").value);
    let num2 = parseFloat(document.getElementById("num2").value);
    let result = num1 % num2;
    document.getElementById("result").innerHTML = "The Result is: " + result;
  }
</script>
</body>
</html>
```

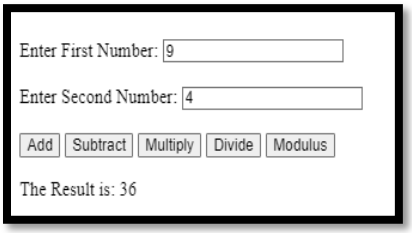
Outputs



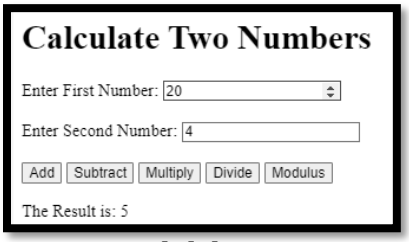
Addition



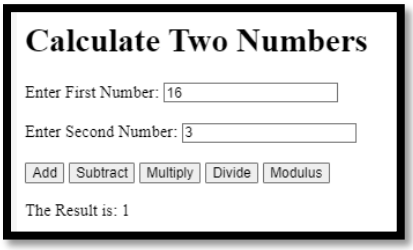
Subtraction



Multiplication



Division



Modulus

11. **Exer #11:** Create a JS program to find age group on the basis of age.

Age/Group:
0-12/Child
13-19/Teenage
20-59/Adult
60 and Above/Senior Citizen

Program

```
let age = prompt("Enter your age: ");

function findAgeGroup(age) {
  if (age >= 0 && age <= 12) {
    return "Child";
  } else if (age >= 13 && age <= 19) {
    return "Teenage";
  } else if (age >= 20 && age <= 59) {
    return "Adult";
  } else if (age >= 60) {
    return "Senior Citizen";
  } else {
    return "Please enter valid age";
  }
}

console.log("Age group: " + findAgeGroup(age));
```

Output

```
Enter your age: 87
Age group: Senior Citizen
```

12. **Exer #12:** Create a JS program that accepts three (3) integers and tells which integer is the largest among the three inputs.

Program

```
let num1 = prompt("Enter first number: ");
let num2 = prompt("Enter second number: ");
let num3 = prompt("Enter third number: ");

if(num1>num2 && num1>num3){
   console.log(num1 + " is the largest number");
}
else if(num2>num1 && num2>num3){
   console.log(num2 + " is the largest number");
}
else{
   console.log(num3 + " is the largest number");
}
```

Output

```
Enter first number:4
Enter second number:3
Enter third number:3
4 is the largest number
```

13. **Exer #13:** Create a JS program that accepts three (3) integers and tells which integer is the smallest among the three inputs.

Program

```
let a = parseInt(prompt("Enter first number:"));
let b = parseInt(prompt("Enter second number:"));
let c = parseInt(prompt("Enter third number:"));

if (a <= b && a <= c) {
    console.log(a + " is the smallest number");
} else if (b <= a && b <= c) {
    console.log(b + " is the smallest number");
} else {
    console.log(c + " is the smallest number");
}
```

Output

```
Enter first number:2
Enter second number:5
Enter third number:0
0 is the smallest number
```

14. **Exer #14:** Create a JS program that accepts three (3) integers. Find and display the average of the three (3) integers.

Program

```
let firstNumber = parseInt(prompt('Enter the first number: '));
let secondNumber = parseInt(prompt('Enter the second number: '));
let thirdNumber = parseInt(prompt('Enter the third number: '));

let average = (firstNumber + secondNumber + thirdNumber) / 3;

console.log(`The average of ${firstNumber}, ${secondNumber}, and
    ${thirdNumber} is ${average}`);
```

Output

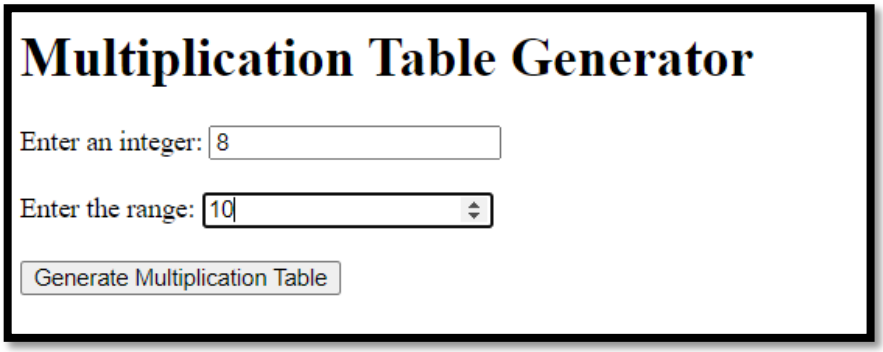
```
Enter the first number: 2
Enter the second number: 6
Enter the third number: 4
The average of 2, 6, and 4 is 4
```

15. **Exer #15:** Create a JS program to generate a Multiplication Table Entered by the user. The output should display vertically.

Program

```
<!DOCTYPE html>
<html>
<head>
  <title>Multiplication Table Generator</title>
</head>
<body>
  <h1>Multiplication Table Generator</h1>
  <form>
    <label for="num">Enter an integer: </label>
    <input type="number" id="num" name="num" required><br><br>
    <label for="range">Enter the range: </label>
    <input type="number" id="range" name="range" required><br><br>
    <input type="submit" value="Generate Multiplication Table" onclick="generateTable()">
  </form>

  <script type="text/javascript">
    function generateTable() {
      let num = parseInt(document.getElementById("num").value);
      let range = parseInt(document.getElementById("range").value);
      let output = "";

      for (let i = 1; i <= range; i++) {
        output += num + " x " + i + " = " + num * i + "<br>";
      }

      document.write(output);
    }
  </script>
</body>
</html
```

Output



8 x 1 = 8
8 x 2 = 16
8 x 3 = 24
8 x 4 = 32
8 x 5 = 40
8 x 6 = 48
8 x 7 = 56
8 x 8 = 64
8 x 9 = 72
8 x 10 = 80