# Week 3 Homework Assignment : 220962446

A red and white background

Description automatically generatedQuestion 1) Write the JavaScript program to show the below output.

Solution 1)

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

    <div>

        <form>

            <label><input type="radio" value="red" name="color"> Red</label>

            <label><input type="radio" value="green" name="color"> Green</label>

            <label><input type="radio" value="blue" name="color"> Blue</label>

        </form>

    </div>

    <div id="Container" style="width: 200px; height: 200px; border: 1px solid black;">

    </div>

    <script>

        const radios = document.getElementsByName("color");

        const container = document.getElementById("Container");

        radios.forEach(radio => {

A red square with black text

Description automatically generated            radio.addEventListener("change", () => {

                container.style.backgroundColor = radio.value;

            });

        });

    </script>

</body>

</html>

Question 2) Write a JavaScript code that displays text “FONT+++” with increasing font size in the interval of 200ms in RED COLOR, when the font size reaches 40pt it displays “FONT---” in BLUE color. Then the font size decreases to 5pt.

Solution 2)

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

    <div id="Container" style="width: 200px; height: 200px; border: 1px solid black;display: flex; justify-self: center;

    align-items: center;justify-content: center;">

    </div>

    <script>

        const container = document.getElementById("Container");

        let fontSize = 6;

        let x = 1;

        container.innerText = "FONT++";

        container.style.color="red";

        setInterval(() => {

        if(fontSize===40)

        {

            x=-x;

            container.innerText = "FONT--";

            container.style.color="blue";

        }

        if(fontSize===5)

A white square with red text

Description automatically generated        {

            x=-x;

            container.innerText = "FONT++";

            container.style.color="red";

        }

            fontSize += x;

            container.style.fontSize = fontSize + "px";

        }, 200);

    </script>

</body>

</html>

Question 3) Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

Solution 3)

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Single Input Calculator</title>

    <style>

        body {

            font-family: Arial, sans-serif;

            display: flex;

            justify-content: center;

            align-items: center;

            height: 100vh;

            background-color: #f4f4f4;

        }

        .calculator {

            background: white;

            padding: 20px;

            border-radius: 10px;

            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

            text-align: center;

        }

        input {

            width: 200px;

            height: 40px;

            font-size: 20px;

            text-align: right;

            margin-bottom: 10px;

            padding: 5px;

            border: 1px solid #ccc;

        }

        .buttons {

            display: flex;

            gap: 10px;

            justify-content: center;

        }

        button {

            width: 50px;

            height: 50px;

            font-size: 18px;

            cursor: pointer;

            border: none;

            background: orange;

            color: white;

            border-radius: 5px;

        }

        button.equal {

            background: green;

        }

        button.AC{

            background: blue;

        }

    </style>

</head>

<body>

    <div class="calculator">

        <input type="text" id="display" placeholder="0">

        <div class="buttons" style="display: flex;">

            <button onclick="setOperation('+')">+</button>

            <button onclick="setOperation('-')">-</button>

            <button class="AC" onclick="AC()">AC</button>

        </div>

        <div class="buttons" style="display: flex;">

            <button onclick="setOperation('\*')">x</button>

            <button onclick="setOperation('/')">/</button>

            <button class="equal" onclick="calculate()">=</button>

        </div>

    </div>

    <script>

        let expression = "";

        let lastOperator = "";

        let display = document.getElementById("display");

        display.focus();

        function AC()

        {

            expression="";

            lastOperator="";

            display.value ="";

            display.placeholder ="0";

            display.focus();

        }

        function setOperation(operator) {

            if (display.value=== "") return;

            if (lastOperator !== "") calculate();

            expression = display.value + " " + operator + " ";

            lastOperator = operator;

            display.value ="";

            display.placeholder= display.value + operator;

            display.focus();

        }

        function calculate() {

            try {

                expression += display.value;

                let result = eval(expression);

                display.value = result;

                expression = result.toString();

                lastOperator = "";

            } catch {

                display.value = "Error";

                expression = "";

            }

            display.focus();

        }

    </script>

</body>

</html>

Output 3)

