4 a) Create one button on every click of button different colors should be applied to background.

<html>

<head>

</head>

<body>

    <input type="button" value="Change color" onclick="myfunc()">

<script>

    var i=0;

    function myfunc(){

        var color=['red','green','blue'];

    document.bgColor=color[i];

    i++;

    if(i==color.length)

    {

        i=0;

    }

    }

</script>

</body>

</html>

4 b) Create one button on every click of button different images should be applied.

<html>

<head></head>

<body>

    <img src=" " id="ig" height="200px" width="200px">

    <input type="button" value="Change image" onclick="myfunc()">

    <script>

        var i=0;

        function myfunc(){

            var img1=['img1.jpg','img2.jpeg','img3.jpg'];

            x=document.getElementById('ig');

            x.src=img1[i];

            i++;

            if(i==img1.length)

            {

                i=0;

            }

        }

    </script>

</body>

</html>

4 c) Declare a JavaScript string array of colors say colors = [“Red”, “Green”, “Blue”] Accept a value from the user and add it to the array if the value is not present in the array.

<html>

<head></head>

<body>

    Enter a color: <input type="text" id="txt1">

    <input type="button" value="Click" onclick="myfunc()">

    <h2>New color pallette<h2>

    <h3 id="h"></h3>

    <script>

        var color=['red','green','blue'];

        function myfunc(){

            var ic= document.getElementById('txt1').value;

            var newcolor=ic.toLowerCase();

            if(color.indexOf(newcolor)==-1)

            {

                alert("Color is not present in the list");

                color.push(newcolor);

                alert(color);

            }

            else

            {

                alert(newcolor+" is already present in the list!!");

            }

            document.getElementById('h').innerHTML=color;

        }

    </script>

</body>

</html>

4 d) Write a JavaScript code to apply front color and background color to heading from dropdown, if front color and background color is same no changes should be reflected.

<!DOCTYPE html>

<html>

    <head>

    <title>Heading color change</title>

    </head>

    <body align = "center">

        <h1 id="id1">Heading color change</h1>

        <br>

        <label>Select background color</label><br><br>

        <select id="bg">

            <option value="red">red</option>

            <option value="blue">blue</option>

            <option value="green">green</option>

        </select><br><br>

        <label>Select font color</label><br><br>

        <select id ="font">

            <option value="red">red</option>

            <option value="blue">blue</option>

            <option value="green">green</option>

        </select>

        <br><br>

        <button type="submit" onclick="func()">click</button>

        <br><br><label id="l1"></label>

        <script>

            function func()

{

    var h = document.getElementById("id1");

    var bg = document.querySelector('#bg');

    var bg1 = bg.value;

    var ft = document.querySelector('#font');

    var ft1 = ft.value;

    h.bgcolor = bg1;

    if(bg1 != ft1){

        h.style.color = ft1;

        h.style.backgroundColor = bg1;

        document.getElementById("l1").innerHTML = "";

    }

    else

    {

        document.getElementById("l1").innerHTML = "Please select different font color and background color";

    }

}

        </script>

    </body>

</html>

4 e) Create an array using JavaScript and display the occurrences of a specific character (For example; arr = [‘a, ‘b’, ‘a’, ‘c’, ‘z’] Output should be occurrences of a is 2)

<!DOCTYPE html>

<html>

<head>

    <meta charset="utf-8">

    <meta name="viewport" content="width=device-width, initial-scale=1">

    <title></title>

</head>

<body>

    <input type="button" value="click" onclick="myfunc()">

    <!--<input type="text" id="search">!-->

    <script type="text/javascript">

        function myfunc()

        {

            const letters=['a','b','b','a','a','a'];

            search='a';

            let counter=0;

            for(i of letters){

                if(i==search)

                    counter++;

            };

            document.write("Occurences of a is: ",counter);

        }

    </script>

</body>

</html>