```
const display = document.getElementById("demo");
const displaySol = document.getElementById("demo2");
const EqualTo = document.getElementById("solution");


let onButton = document.getElementById("On");
onButton.onclick = onMe;
function onMe () {
display.innerHTML = 0;
displaySol.innerHTML = "Answer";
}


let offButton = document.getElementById("Off");
function allOff () {
    offMe();
    offUs();
}

offButton.onclick = allOff;
function offMe () {
switch (display.innerHTML) {
case " ":
    display.innerHTML = " ";
    break;
case "0" :
    display.innerHTML = " ";
    break;
default:
    display.innerHTML = " ";

}
}

function offUs() {
    displaySol.innerHTML = "";
}


// Display 5 at the output if button no. 5 is clicked.
let number5 = document.getElementById("five");
number5.onclick = displayFive;
function displayFive () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "5";
            break;
```

```
            default:
            display.innerHTML = `${display.innerHTML}5`

    }
}
// Display 4 at the output if button no. 4 is clicked.
let number4 = document.getElementById("four");
number4.onclick = displayFour;
function displayFour () {
    switch(display.innerHTML){
        case " ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "4";
            break;

            default:
            display.innerHTML = `${display.innerHTML}4`

    }
}

// Display 3 at the output if button no. 3 is clicked.
let number3 = document.getElementById("three");
number3.onclick = displayThree;
function displayThree () {
    switch(display.innerHTML){
        case " ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "3";
            break;

            default:
            display.innerHTML = `${display.innerHTML}3`

    }
}

// Display 2 at the output if button no. 2 is clicked.
let number2 = document.getElementById("two");
number2.onclick = displayTwo;
function displayTwo () {
    switch(display.innerHTML){
        case " ":
```

```
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "2";
            break;

            default:
            display.innerHTML = `${display.innerHTML}2`

    }
}

// Display 1 at the output if button no. 1 is clicked.
let number1 = document.getElementById("one");
number1.onload = offMode;
function offMode () {
    number1.onclick = dontShow;
    function dontShow () {
        switch(display.innerHTML){
            case" ":
            display.innerHTML = " ";
            break;

            case "0":
                display.innerHTML = "1";
                break;

                default:
                display.innerHTML = `${display.innerHTML}1`

        }

    }
    return dontShow;
}
offMode();


let number6 = document.getElementById("six");
number6.onclick = displaySix;
function displaySix () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "6";
            break;
```

```
            default:
            display.innerHTML = `${display.innerHTML}6`

    }
}


let number7 = document.getElementById("seven");
number7.onclick = displaySeven;
function displaySeven () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "7";
            break;

            default:
            display.innerHTML = `${display.innerHTML}7`

    }
}


let number8 = document.getElementById("eight");
number8.onclick = displayEight;
function displayEight () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "8";
            break;

            default:
            display.innerHTML = `${display.innerHTML}8`

    }
}


let number9 = document.getElementById("nine");
number9.onclick = displayNine;
function displayNine () {
    switch(display.innerHTML){
        case" ":
```

```
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "9";
            break;

            default:
            display.innerHTML = `${display.innerHTML}9`

    }
}


let number0 = document.getElementById("zero");
number0.onclick = displayZero;
function displayZero () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "0";
            break;

            default:
            display.innerHTML = `${display.innerHTML}0`

    }
}




// Display x at the output if button name x is clicked.
let operatorX = document.getElementById("multiply");
operatorX.onclick = displayX;
function displayX () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "x";
            break;

            default:
            display.innerHTML = `${display.innerHTML}x`
```

```
    }
}
```

```
 //display 2 each time it is clicked on
let operatorX2 = document.getElementById("scuare");
function myFunc () {
displayX2();
calculateX2();
}

operatorX2.onclick = myFunc;
function displayX2 () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "2";
            break;

            default:
            display.innerHTML = `${display.innerHTML} ^2`

    }
}


// it square and assign answer to = sign.
function calculateX2 () {
    let a = parseInt(display.innerHTML);
    let calc = a*a;
    let giveSol = calc;
    EqualTo.onclick = showAnswer;
function showAnswer () {
    displaySol.innerHTML = giveSol;
        }
    return showAnswer;
}


// Display root at the output if button root is clicked.
let root = document.getElementById("root");
```

```
// All equalTo function
function allEqualTo () {
    calcRoot();
    calcSine();
    doMultiplication();
    doAddition();
    doSubtraction();
    doDivision();
    calcCosine();
    calcTangent();
    calcLog();
}


EqualTo.onclick = allEqualTo;
root.onclick = displayRoot;

function displayRoot () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "root";
            break;

            default:
            display.innerHTML = `${display.innerHTML}root`

    }
}

function calcRoot () {
    let b;
    let a;
    let p;
    let m;
    let s = display.innerHTML;
    let reg = /root[0-9]/;
    if(reg.test(s) === true) {
        m = s.replace(/root(?=[0-9])/, "");
        p = parseInt(m);
        a = Math.sqrt(p);
        b = a.toFixed(3);
        console.log(b);
        displaySol.innerHTML = b;
    }
}
```

```
let operatorSine = document.getElementById("sine");
operatorSine.onclick = displaySine;
function displaySine () {
    switch(display.innerHTML){
        case " ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "sin";
            break;

            default:
            display.innerHTML = `${display.innerHTML}sin`

    }
}

//EqualTo.onclick = allEqualTo;
function calcSine () {
    let b;
    let a;
    let p;
    let m;
    let s = display.innerHTML;
    let reg = /sin[0-9]/;
    if(reg.test(s) === true) {
        m = s.replace(/sin(?=[0-9])/, "");
        p = parseInt(m);
        a = Math.sin(p * (Math.PI/180));
        b = a.toFixed(3);
        console.log(b);

        displaySol.innerHTML = b;
    }
}

let operators = document.getElementsByName("operators");
operators.forEach(element => {
    element.style.backgroundColor = "orange"
});

let brackets = document.getElementsByName("bracket");
brackets.forEach(element => {
    element.style.backgroundColor = "grey"
});

let bracket = document.getElementById("obracket");
bracket.onclick = displayBrackets;
```

```
function displayBrackets (){
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "(";
            break;

            default:
            display.innerHTML = `${display.innerHTML}(`
        }
}

let cbracket = document.getElementById("cbracket");
cbracket.onclick = displayCBrackets;
function displayCBrackets (){
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = ")";
            break;

            default:
            display.innerHTML = `${display.innerHTML})`
        }
}

// multiplication code
EqualTo.onclick = allEqualTo;
function doMultiplication () {
    let reg = /[0-9]+x/;
    if(reg.test(display.innerHTML)=== true) {
         let p = parseInt(display.innerHTML);
         let n = display.innerHTML.replace(/[0-9]+x(?=[0-9])/, "");
         let ans = parseInt(n);
        let b = p * ans;
        displaySol.innerHTML = b;
    }
}

let addition = document.getElementById("addition");
addition.onclick = displayAddition;
function displayAddition (){
    switch(display.innerHTML){
        case" ":
```

```
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "+";
            break;

            default:
            display.innerHTML = `${display.innerHTML}+`
        }
}

EqualTo.onclick = allEqualTo;
function doAddition () {
    let reg = /[0-9]+\+/;
    if(reg.test(display.innerHTML)=== true) {
         let p = parseInt(display.innerHTML);
         let n = display.innerHTML.replace(/[0-9]+\+(?=[0-9])/, "");
         let ans = parseInt(n);
        let b = p + ans;
        displaySol.innerHTML = b;
    }
}


let subtraction = document.getElementById("subtraction");
subtraction.onclick = displaySubtraction;
function displaySubtraction (){
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "-";
            break;

            default:
            display.innerHTML = `${display.innerHTML}-`
        }
}

EqualTo.onclick = allEqualTo;
function doSubtraction () {
    let reg = /[0-9]+\-/;
    if(reg.test(display.innerHTML)=== true) {
         let p = parseInt(display.innerHTML);
         let n = display.innerHTML.replace(/[0-9]+\-(?=[0-9])/, "");
         let ans = parseInt(n);
        let b = p - ans;
```

```
        displaySol.innerHTML = b;
    }
}


let division = document.getElementById("division");
division.onclick = displayDivision;
function displayDivision (){
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "/";
            break;

            default:
            display.innerHTML = `${display.innerHTML}/`
        }
}

EqualTo.onclick = allEqualTo;
function doDivision () {
    let reg = /[0-9]+\//;
    if(reg.test(display.innerHTML)=== true) {
         let p = parseInt(display.innerHTML);
         let n = display.innerHTML.replace(/[0-9]+\/(?=[0-9])/, "");
         let ans = parseInt(n);
        let b = p / ans;
        displaySol.innerHTML = b;
    }
}


let Cosine = document.getElementById("cosine");
Cosine.onclick = displayCosine;
function displayCosine () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "cos";
            break;

            default:
            display.innerHTML = `${display.innerHTML}cos`
```

```
    }
}

function calcCosine () {
    let b;
    let a;
    let p;
    let m;
    let s = display.innerHTML;
    let reg = /cos[0-9]/;
    if(reg.test(s) === true) {
        m = s.replace(/cos(?=[0-9])/, "");
        p = parseInt(m);
        a = Math.cos(p * (Math.PI/180));
        b = a.toFixed(3);
        displaySol.innerHTML = b;
    }
}

let Tangent = document.getElementById("tangent");
Tangent.onclick = displayTangent;
function displayTangent () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "tan";
            break;

            default:
            display.innerHTML = `${display.innerHTML}tan`

    }
}

function calcTangent () {
    let b;
    let a;
    let p;
    let m;
    let s = display.innerHTML;
    let reg = /tan[0-9]/;
    if(reg.test(s) === true) {
        m = s.replace(/tan(?=[0-9])/, "");
        p = parseInt(m);
        a = Math.tan(p * (Math.PI/180));
        b = a.toFixed(3);
        displaySol.innerHTML = b;
```

```
    }
}


let Log = document.getElementById("log");
Log.onclick = displayLog;
function displayLog () {
    switch(display.innerHTML){
        case" ":
        display.innerHTML = " ";
        break;

        case "0":
            display.innerHTML = "log";
            break;

            default:
            display.innerHTML = `${display.innerHTML}log`

    }
}

function calcLog () {
    let b;
    let a;
    let p;
    let m;
    let s = display.innerHTML;
    let reg = /log[0-9]/;
    if(reg.test(s) === true) {
        m = s.replace(/log(?=[0-9])/, "");
        p = parseInt(m);
        a = Math.log10(p);
        b = a.toFixed(3);
        displaySol.innerHTML = b;
    }
}
```