Practical 2:- Develop a Scientific Calculator using JavaScript.

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Practical 2</title>
</head>
<body>
    <h2>Scientific Calculator</h2>
    <table border="1">
        <tr>
            <th colspan="6">
                <input type="text" id="input" placeholder="0">
            </th>
        </tr>

        <tr>
            <td>
                <button onclick="backspace()" >CE</button>
            </td>
            <td>
                <button onclick="fact()" >x!</button>
            </td>
            <td>
                <button class="btn" >(</button>
            </td>
            <td>
                <button class="btn" >)</button>
            </td>
            <td>
                <button onclick="input.value=''" >Clear</button>
            </td>
            <td>
                <button class="btn" >%</button>
            </td>
        </tr>

        <tr>
            <td>
                <button onclick="sin()" >sin</button>
            </td>
            <td>
                <button onclick="pi()" >&#8508;</button>
            </td>
            <td>
                <button class="btn" >7</button>
            </td>
            <td>
                <button class="btn" >8</button>
            </td>
            <td>
```

```
            <button class="btn" >9</button>
        </td>
        <td>
            <button class="btn" >/</button>
        </td>
    </tr>

    <tr>
        <td>
            <button onclick="cos()" >cos</button>
        </td>
        <td>
            <button onclick="log()" >log</button>
        </td>
        <td>
            <button class="btn" >4</button>
        </td>
        <td>
            <button class="btn" >5</button>
        </td>
        <td>
            <button class="btn" >6</button>
        </td>
        <td>
            <button class="btn" >*</button>
        </td>
    </tr>

    <tr>
        <td>
            <button onclick="tan()" >tan</button>
        </td>
        <td>
            <button onclick="sqrt()" >&#8730;</button>
        </td>
        <td>
            <button class="btn" >1</button>
        </td>
        <td>
            <button class="btn" >2</button>
        </td>
        <td>
            <button class="btn" >3</button>
        </td>
        <td>
            <button class="btn" >-</button>
        </td>
    </tr>

    <tr>
        <td>
            <button onclick="e()" >e</button>
        </td>
        <td>
```

```
                <button onclick="pow()" >x<sup>2</sup></button>
            </td>
            <td>
                <button class="btn" >0</button>
            </td>
            <td>
                <button class="btn" >.</button>
            </td>
            <td>
                <button onclick="input.value=eval(input.value);">=</button>
            </td>
            <td>
                <button class="btn" >+</button>
            </td>
        </tr>

        <tr>
            <td>
                <button onclick="radian()" >Rad</button>
            </td>
            <td>
                <button onclick="degree()" >Deg</button>
            </td>
            <td colspan="4">
                <input type="text" disabled placeholder="Asif Alam B.tech CE
26" style="text-align: center;">
            </td>
        </tr>
    </table>
</body>
</html>
```

calc.js

```
let input = document.getElementById('input');
    let btn = document.getElementsByClassName('btn');
    for(item of btn){
        item.addEventListener('click',function(e){
            btnText = e.target.innerHTML;
            input.value += btnText;
        });
    }
    function sin(){
        input.value = Math.sin(input.value);
    }
    function cos(){
        input.value = Math.cos(input.value);
    }
    function tan(){
        input.value = Math.tan(input.value);
    }
    function pow(){
        input.value = Math.pow(input.value,2);
    }
    function log(){
```

```
    input.value = Math.log(input.value);
}
function sqrt(){
    input.value = Math.sqrt(input.value);
}
function pi(){
    input.value = 3.14159265359;
}
function e(){
    input.value = 2.7182812846;
}
function fact(){
    var f=1;
    for (i=1; i<=input.value; i++){
        f *= i;
    }
    input.value = f;
}
function backspace(){
    input.value = input.value.substr(0,input.value.length-1);
}
function radian(){
    let rad = input.value;
    input.value = (rad*180)/3.14;
}
function degree(){
    let deg = input.value;
    input.value = (deg*180)/3.14;
}
```

Output:-

Scientific Calculator

256-2					
CE	x!	(	)	Clear	%
sin	π	7	8	9	/
cos	log	4	5	6	*
tan	√	1	2	3	-
e	x^2	0	.	=	+
Rad	Deg	Asif Alam B.tech CE 26			