```
<!DOCTYPE html>
<html lang="en">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document Title</title>
<body>
   <script>
   var recursion1 = (n)=>{
        if(n<=0)
        return 1;
   else{
        return n*recursion1(n-1);
    document.write(recursion1(10));
   </script>
</body>
</html>
                                                                +
                                    Ocument Title
         Document Title
                                   → C ① File C:/Users/student/Desktop/jai.html
                 (i) File C:/U:
                               120
 3628800
```

```
</head>
<body>
   <script>
      function fibo(n)
        if(n==0)
        return 0;
      else if(n==1)
        return 1;
      else{
        return fibo(n-1)+fibo(n-2);
      let n=prompt("N??",0);
      document.write("THE FIBONICI NUMBER OF "+ n +" IS " + fibo(n));
  </script>
</body>
</html>
                                                            Document Title
                                                                                               ×
 This page says
 N??
                                                                     i File C:/Users/student/Des
  10
                                                       THE FIBONICI NUMBER OF 10 IS 55
                                 OK
                                         Cancel
```

```
function steps(n)
        if(n==0 || n==1)
        return 1;
      else if(n==2)
        return 2;
      else if(n==3)
        return 4;
      else
        return steps(n-1)+steps(n-2)+steps(n-3);
      let totalsteps = prompt("N??");
      document.write("THE TOTAL STEPS OF "+ totalsteps + " IS " +
steps(totalsteps));
   </script>
</body>
</html>
                                                        Document Title
  This page says
  N??
                                                                 i File C:/Users/student/De
                                                   THE TOTAL STEPS OF 5 IS 13
                                OK
                                       Cancel
```

TASK 4

```
<title>Document Title</title>
</head>
<body>
  <script>
     result =[];
         function flattened(arr)
            arr.forEach(element => {
             if(typeof element == 'number')
               result.push(element);
            else
              flattened(element);
            });
          let nestedarray = [1,2,[3,4],[],[4,5,[7,8],9]];
         flattened(nestedarray);
         document.write(JSON.stringify(nestedarray) + "<br>") ;
         document.write(JSON.stringify(result))
  </script>
</body>
</html>
      Document Title
                                             +
               i File C:/Users/student/Desktop/jai.html
 [1,2,[3,4],[],[4,5,[7,8],9]]
 [1,2,3,4,4,5,7,8,9]
```

```
<meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Tower of Hanoi</title>
</head>
<body>
  <script>
    function towerOfHanoi(n, source, auxiliary, destination) {
        if (n === 1) {
            document.write(`Move disk 1 from ${source} to ${destination}<br>`);
            return;
        towerOfHanoi(n - 1, source, destination, auxiliary);
        document.write(`Move disk ${n} from ${source} to ${destination}<br>>`);
        towerOfHanoi(n - 1, auxiliary, source, destination);
    let n = 3;
    towerOfHanoi(n, 'A', 'B', 'C');
   </script>
</body>
</html>
 Tower of Hanoi
      C (i) File | C:/Users/stu
 Move disk 1 from A to C
 Move disk 2 from A to B
 Move disk 1 from C to B
 Move disk 3 from A to C
 Move disk 1 from B to A
 Move disk 2 from B to C
 Move disk 1 from A to C
```

```
function sum(...num)
      { let sum =0;
        num.forEach(element => {
         sum+=element;
        });
        return sum;
      document.write(sum(9,5,3,4,6,3,6,5,3)+"<br>");
      document.write(sum(9,5,3,4,6,3,6,5,1010)+"<br>");
      document.write(sum(9,5,3,4,75,3,6,5,3)+"<br>");
      document.write(sum(98,5,3,4,6,3,6,5,3)+"<br>";
  </script>
</body>
</html>
      Tower of Hanoi
 \leftarrow C
               (i) File | C:/
 44
 1051
 113
 133
```

```
<!DOCTYPE html>
<html lang="en">
   <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Tower of Hanoi</title>
<body>
   <script>
   let student = {
      name:"Jai",
      roll:'65',
      dept:"CSE"
   };
      document.write("ELEMENTS = "+JSON.stringify(student)+ "<br>");
      document.write(" DEEP CLONE = "+JSON.parse(JSON.stringify(student)));
   </script>
</body>
</html>
```

