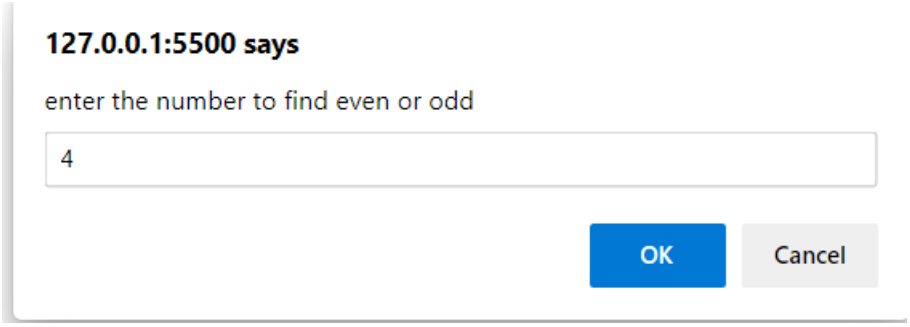
1NT19IS156

1.	**Programs to be done by learner's to demonstrate their readiness with "Conditional statements"** **a.** Write a program to accept a number N and print whether the number is EVEN or ODD. **b.** Write a program to accept two numbers and print whether their sum is EVEN or ODD

1a.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1a</title>
</head>
<body>
    <script>
        var a=Number(prompt("enter the number to find even or odd"));
        if(a%2==0)
        {
            document.write("The number is even");
        }
        else
        {
            document.write("The entered number is odd");
        }
        </script>
</body>
</html>
```

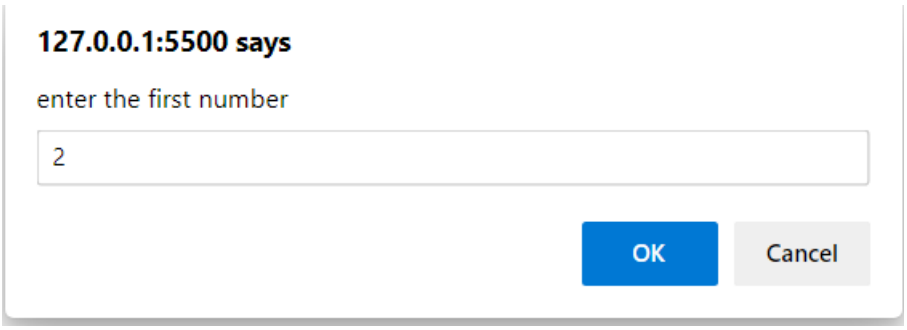
Output

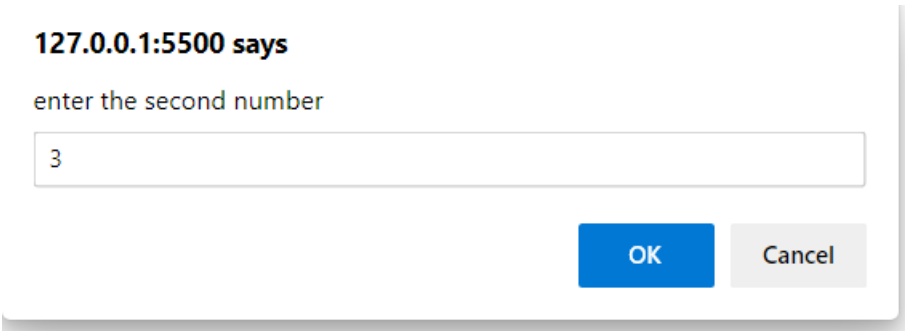


The number is even

1b.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1b</title>
</head>
<body>
    <script>
        var a=Number(prompt("enter the first number"));
        var b=Number(prompt("enter the second number"));

        sum=a+b;
        if(sum%2==0)
        {
            document.write("The sum is even and the sum is :"+sum);
        }
        else
        {
            document.write("The sum is odd and the sum is ",sum);
        }
        </script>

</body>
</html>
```





The sum is odd and the sum is 5

2.	**Programs to be done by learner's to demonstrate their readiness with "Looping constructs"** **c.** Write a program to print all numbers from 1 to 100 i.e. 1 2 3 4 5 6 7 . . . 98 99 100 **d.** Write a program to print alternate numbers starting from 1 to 99 i.e. 1 3 5 7 9 11 13 . . . 95 97 99 **e.** Write a program to print alternate numbers starting from 0 to 100 i.e. 0 2 4 6 8 10 12 . . . 96 98 100 **f.** Write a program to print all numbers backwards from 100 to 0 i.e. 100 99 98 97 96 . . . 4 3 2 1 0 **g.** Write a program to print numbers backwards from 100 to 1 by skipping 2 numbers i.e. 100 97 94 91 88 85 82 79. . . 22 19 16 13 10 7 4 1

2c.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1b</title>
</head>
<body>
    <script>
       function printNos(n)
    {
        if(n > 0)
        {
            printNos(n - 1);
            document.write(n + " ");
        }
        return;
    }

    printNos(100);
        </script>

</body>
</html>
```

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

2d.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1b</title>
</head>
<body>
    <script>
      for(var i=0;i<=101;i++)
{
if((i%2)!=0){
document.write(i +"<br/>")
}
}
        </script>

</body>
</html>
```

67
69
71
73
75
77
79
81
83
85
87
89
91
93
95
97
99

2e.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
```

```
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1b</title>
</head>
<body>
    <script>
      for(var i=0;i<=101;i++)
{
if(i%2==0){
document.write(i +"<br/>")
}
}
        </script>

</body>
</html>
```

```
0
2
4
6
8
10
12
14
16
18
20
68
70
72
74
76
78
80
82
84
86
88
90
92
94
96
98
100
```

2f.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1b</title>
```

```
</head>
<body>
    <script>
      function PrintReverseOrder(N)
    {

        for (let i = N; i > 0; i--)
            document.write(i + " ");

    }

     let N = 100;

    PrintReverseOrder(N);
        </script>

</body>
</html>
```

100 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

2g.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1b</title>
</head>
<body>
    <script>
      for(let i=100;i>=1;i=i-3)
      {
        document.write(i+"<br>");
      }
        </script>

</body>
</html>
```

100
97
94
91
88
85
82
79
76
73
70
67
64
61
58
55
52
49
46
43
40
37
34
31
28
25
22
19
16
13
10
7
4
1

3.	**Print the below shape on a browser window [10 rows right-angled left justified numbers]** 1 12 123 1234 12345 123456 1234567 12345678 123456789 12345678910

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>javascript1b</title>
</head>
<body>
    <script>
      for(let i=1;i<=10;i++)
        {
            for(let j=1;j<=i;j++) {
                document.write(j);
            }
```

```
            document.write("<br>");

        }

        </script>

</body>
</html>
```

```
1
12
123
1234
12345
123456
1234567
12345678
123456789
12345678910
```

4. **Print the below shape on a console window [10 rows right-angled right-justified stars]**

```
         *
        **
       ***
      ****
     *****
    ******
   *******
  ********
 *********
**********
```

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
         let n = 10;
    let string = "";
    for (let i = 1; i <= n; i++) {

      for (let j = 0; j < n - i; j++) {
        string += " ";
      }
      for (let k = 0; k < i; k++) {
```

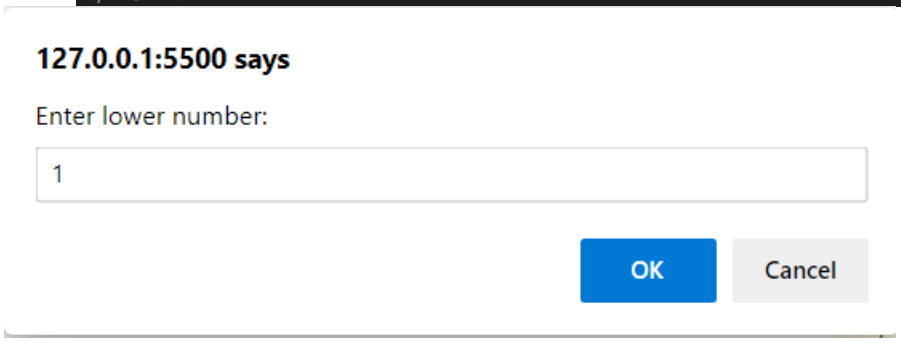
```
        string += "*";
      }
      string += "<br>";
    }
    document.write(`<pre>${string}</pre>`);
  </script>
    </script>

</body>
</html>
```

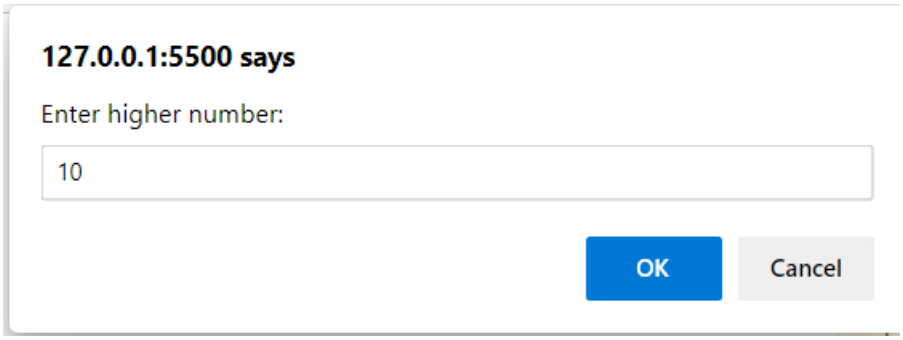
```
         *
        **
       ***
      ****
     *****
    ******
   *******
  ********
 *********
**********
```

6.	**Ramesh, a school student, was bored at home in the pandemic. He wanted to play but there was no one to play with. He was doing some mathematics questions including prime numbers and thought of creating a game using the same. After a few days of work, he was ready with his game. He wants to play the game with you.** **GAME:** Ramesh will randomly provide you a range **[L , R] (both inclusive)** and you have to tell him the maximum difference between the prime numbers in the given range. There are three answers possible for the given range. 1. There are two distinct prime numbers in the given range so the maximum difference can be found. 2. There is only one distinct prime number in the given range. The maximum difference in this case would be 0. 3. There are no prime numbers in the given range. The output for this case would be -1. To win the game, the participant should answer the prime difference correctly for the given range. Example: **Range: [1, 10]** The maximum difference between the prime numbers in the given range is 5. Difference = 7 - 2 = 5 **Range: [5, 5]** There is only one distinct prime number so the maximum difference would be 0. **Range: [8 , 10]** There is no prime number in the given range so the output for the given range would be -1. Can you win the game?

```
<!DOCTYPE html>
<html lang="en">
```

```html
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=<device-width>, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>

const lowerNumber = parseInt(prompt('Enter lower number: '));
const higherNumber = parseInt(prompt('Enter higher number: '));

console.log(`The prime numbers between ${lowerNumber} and ${higherNumber}
are:`);

for (let i = lowerNumber; i <= higherNumber; i++) {
    let flag = 0;


    for (let j = 2; j < i; j++) {
        if (i % j == 0) {
            flag = 1;
            break;
        }



    if (i > 1 && flag == 0) {
        console.log(i);
    }
}}

    </script>
</body>
</html>
```





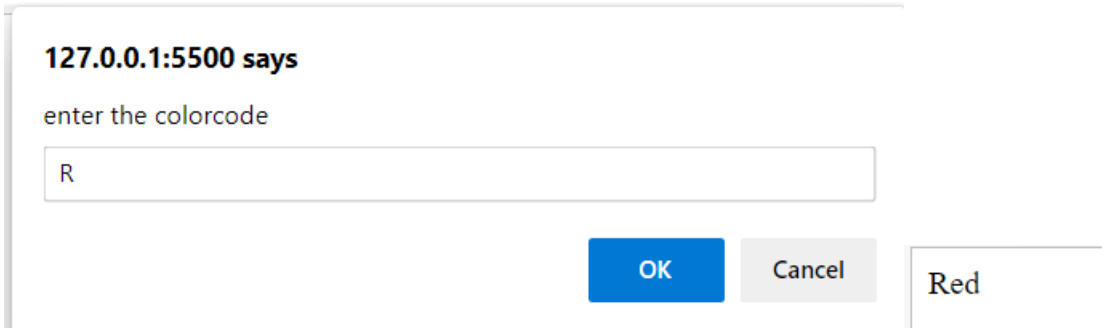

```
3
5
7
9
>
```

7	**Based on the ColorCode entered display corresponding color, below are the code and colors given** R-> Red B-> Blue

	G-> Green O-> Orange Y-> Yellow W-> White others-> Invalid Input

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=<device-width>, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
       var colors= prompt("enter the colorcode");
       switch(colors)
       {
           case 'R':document.write("Red<br/>");
```

```
            break;
            case 'B' : document.write("Blue<br/>");
            break;
            case 'G' : document.write("Green<br/>");
            break;
            case 'O' : document.write("Orange<br/>");
            break;
            case 'Y' : document.write("Yellow<br/>");
            break;
            case 'W' : document.write("White<br/>");
            break;
            default: document.write("Invalid Input<br/>");
            break;
        }

    </script>
</body>
</html>
```

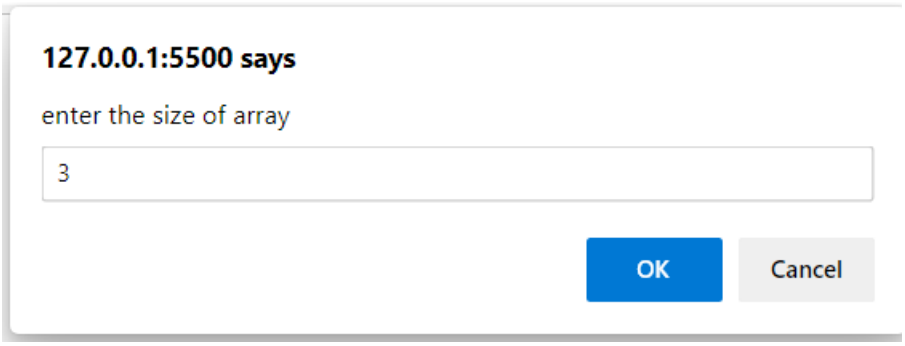


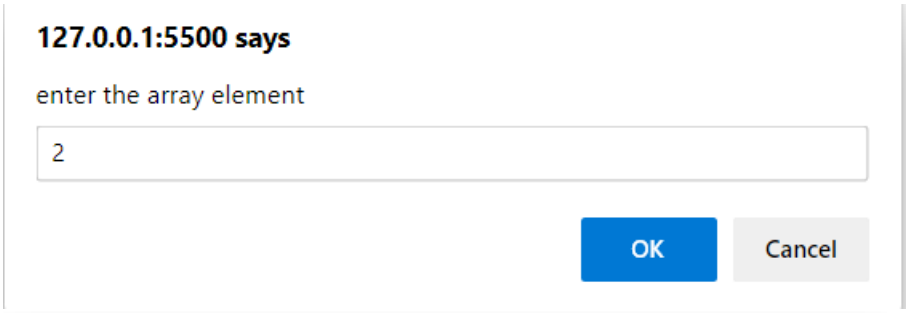
1.	Write a JavaScript program to sort the items of an array. *Sample array*: var arr1 = [4, 6, 7, 8, 2, 1, -2]; *Sample Output*: -2, 1, 2, 4, 6, 7, 8
2.	Write a JavaScript program to find the most frequent item of an array *Sample array*: var arr1= [1, 'a', 'a', 2, 3, 'a', 3, 'a', 2, 4, 9, 'a']; *Sample Output*: a (5times)
3.	A. Write a JavaScript program that compares two arrays and returns true if they are identical. B. Write a JavaScript method that splits an array into parts of determined size. C. Write a JavaScript method that returns a duplicate-free array. D. Write a JavaScript method that reverts the input array
4.	A. Write a JavaScript program to find the leap years in a given range of years. B. Write a JavaScript Program to Print the Fibonacci Sequence. C. Write a JavaScript Program to add elements to the existing array at specific positions. D. Write a JavaScript Program to delete elements from the existing array at a specific position.
5.	Demonstrate the difference between let, var and const.

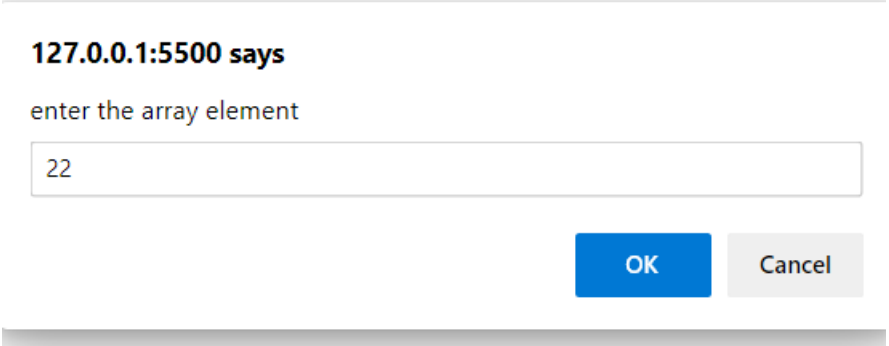
1.

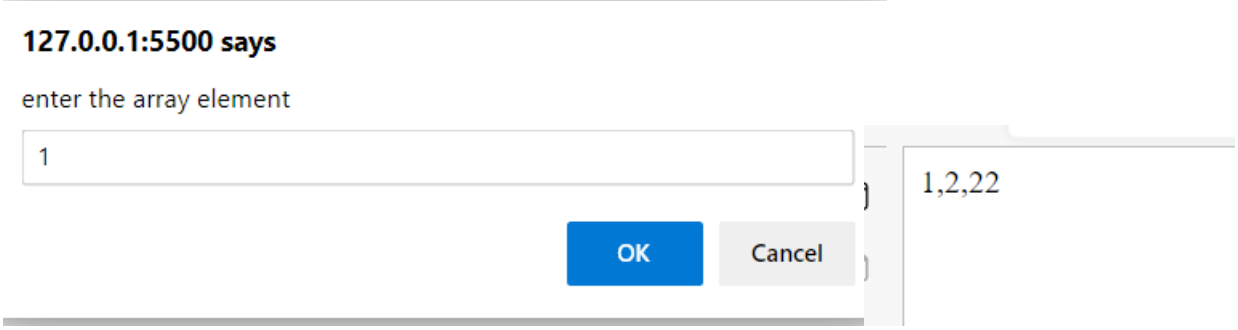
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=<device-width>, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
      var arr1=[];
      var size= prompt("enter the size of array");
      var temp,i,j;
      for(i=0;i<size;i++)
      {
          arr1[i]=prompt("enter the array element");
      }
      console.log(arr1);
      for(i=0;i<size;i++)
      {
          for(j=i;j<size;j++)
          {
              if(arr1[i]>arr1[j])
              {
                  temp=arr1[i];
                  arr1[i]=arr1[j];
                  arr1[j]=temp;
```

```
            }
        }
    }
    document.write(arr1);


</script>
</body>
</html>
```



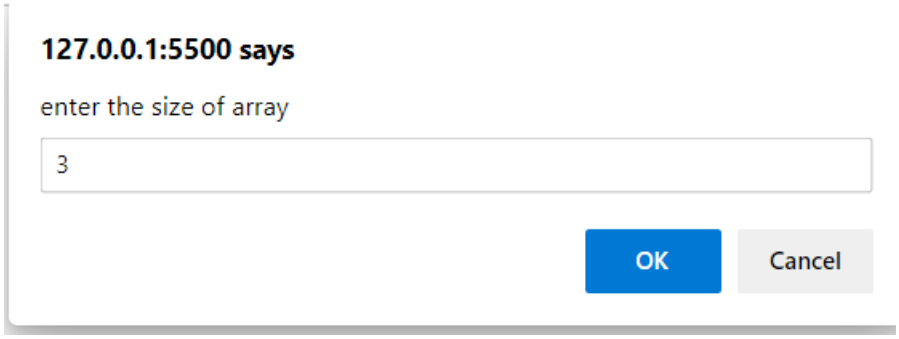


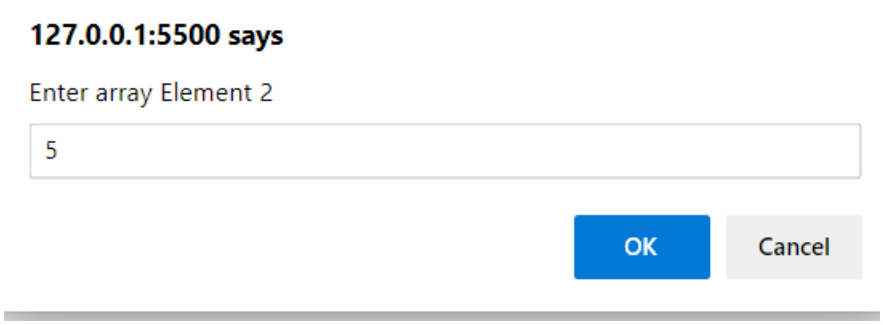


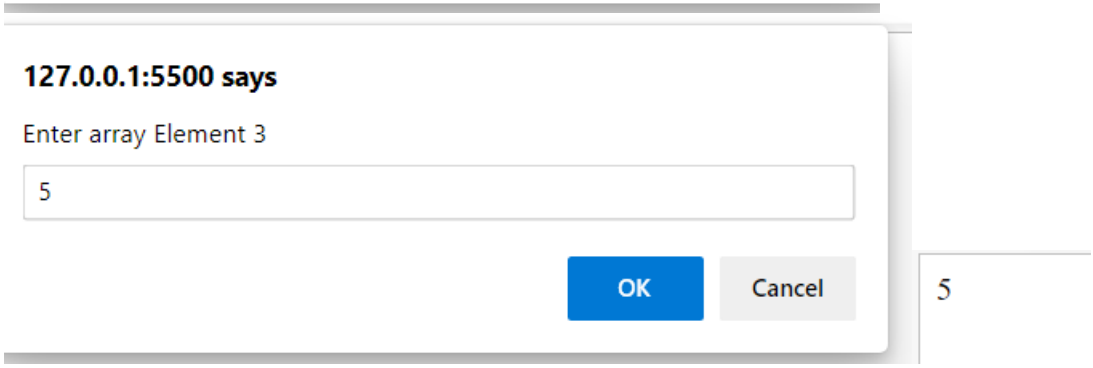


2.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        var myinputarr = [];

        var size = prompt("enter the size of array");

        for(var a=0; a<size; a++)
        {
             myinputarr[a] = prompt('Enter array Element ' + (a+1));
        }
        console.log(myinputarr);

        var max=0;
        var maxans=-1;
        var tempmax=0;

         for(var i=0;i<size;i++)
         {
             for(var j=0;j<size;j++)
             {
                 if(myinputarr[i]===myinputarr[j])
                 {
                     tempmax+=1
                 }
             }
             if(max<tempmax)
             {
                 max=tempmax
                 maxans=myinputarr[i];
                 console.log(maxans)
             }
         }

         document.write(maxans)

         </script>

</body>
</html>
```



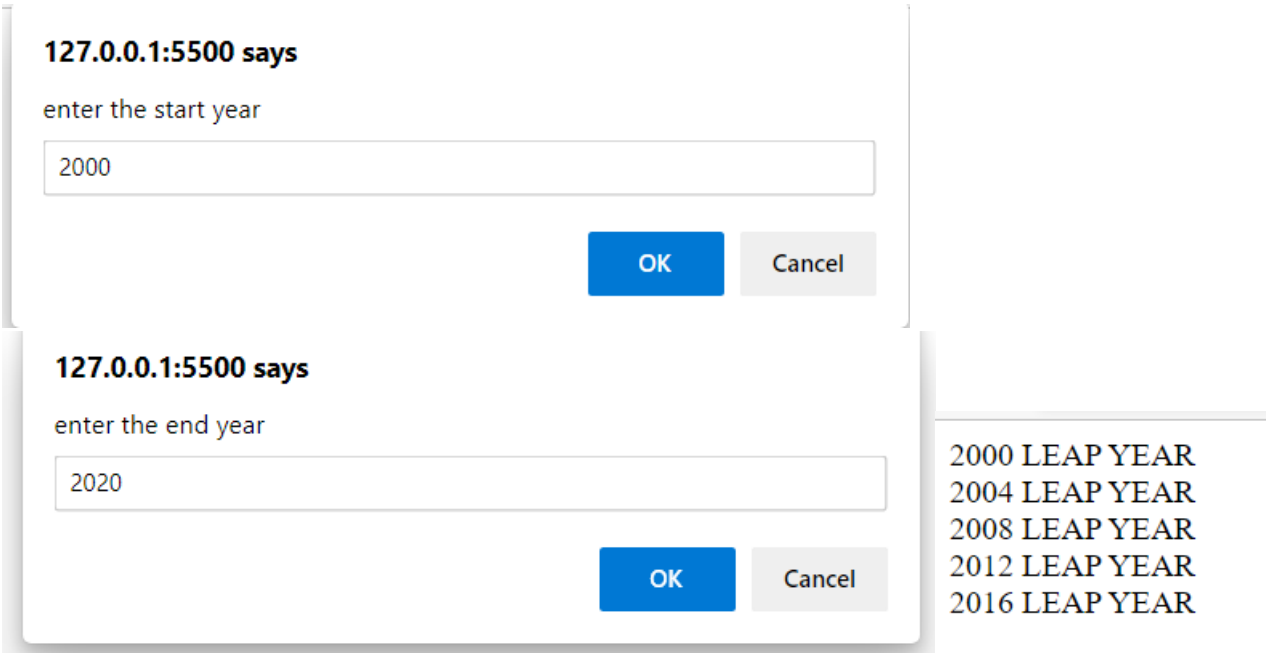




4a.

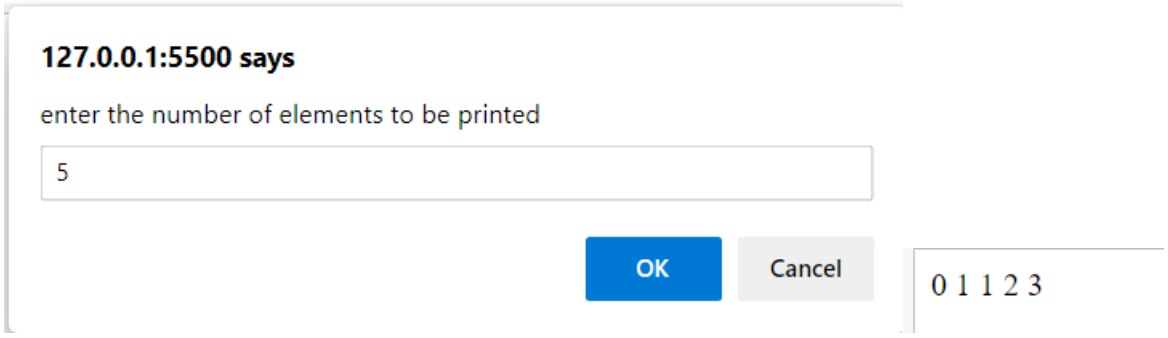
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
```

```
    <script>
        function checkleapyear( a)
    {
        if(a%400==0)
        {
          document.write(a+"  LEAP YEAR"+"<br/>");
          return;
        }
        else if(a%100==0)
        {
            document.write(a+" LEAP YEAR"+"<br/>");
            return;
        }
        else if(a%4==0)
        {
            document.write(a+" LEAP YEAR"+"<br/>");
            return;

        }
        else
        {

            return;

        }
    }
        var start=prompt("enter the start year");
        var end =prompt("enter the end year");
        for(var i=start;i<end;i++)
        {

            checkleapyear(i);
        }
    </script>
</body>
</html>
```

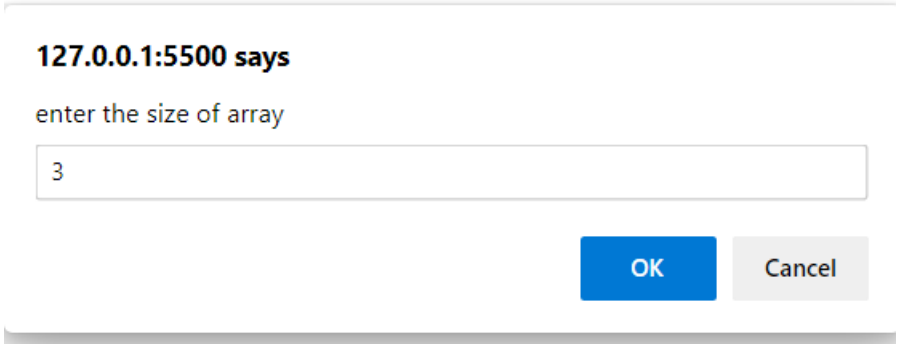


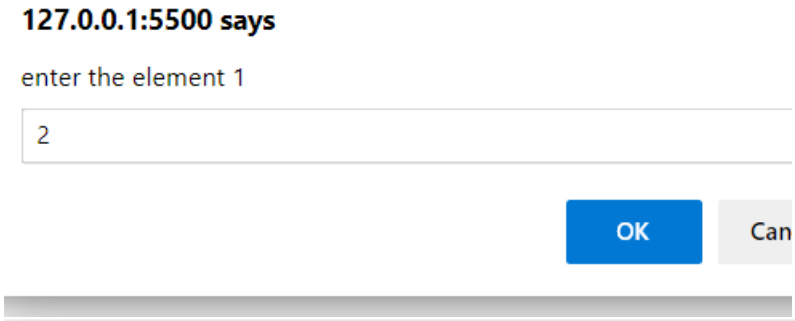
4b.

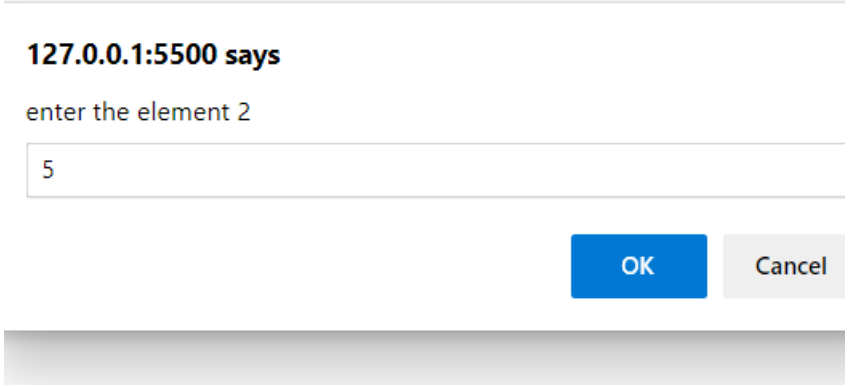
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        var n1=0,n2=1,n3=0;
        var num=prompt("enter the number of elements to be printed");
        for(var i=0;i<num;i++)
        {
            document.write(" "+n1);
            n3=n1+n2;
            n1=n2;
            n2=n3;

        }
    </script>
</body>
</html>
```

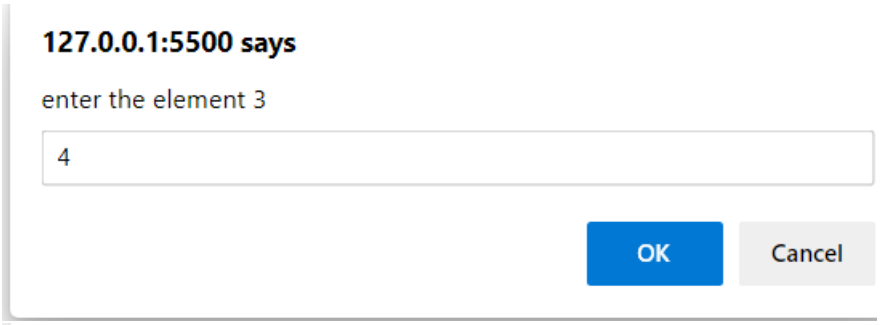

127.0.0.1:5500 says
enter the number of elements to be printed
5
OK
Cancel
0 1 1 2 3

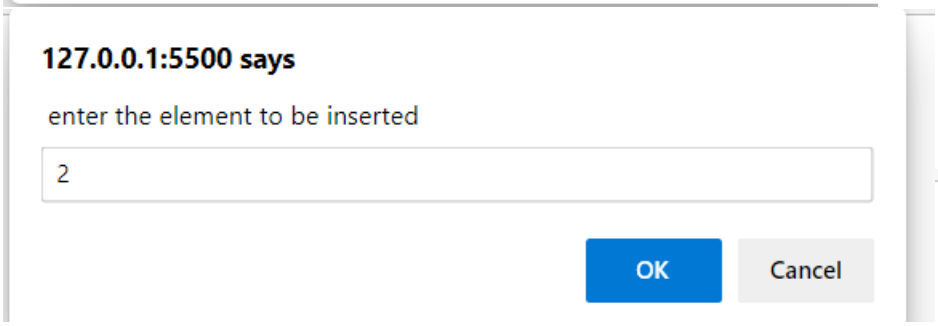
4c.

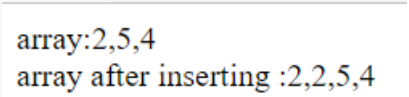

127.0.0.1:5500 says
enter the size of array
3
OK
Cancel

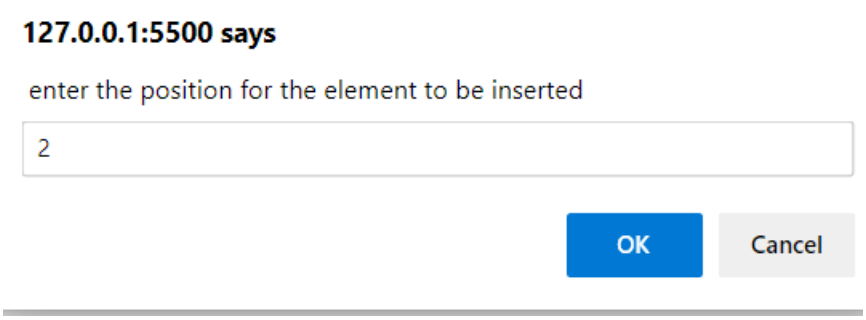

127.0.0.1:5500 says
enter the element 1
2
OK
Can


127.0.0.1:5500 says
enter the element 2
5
OK
Cancel





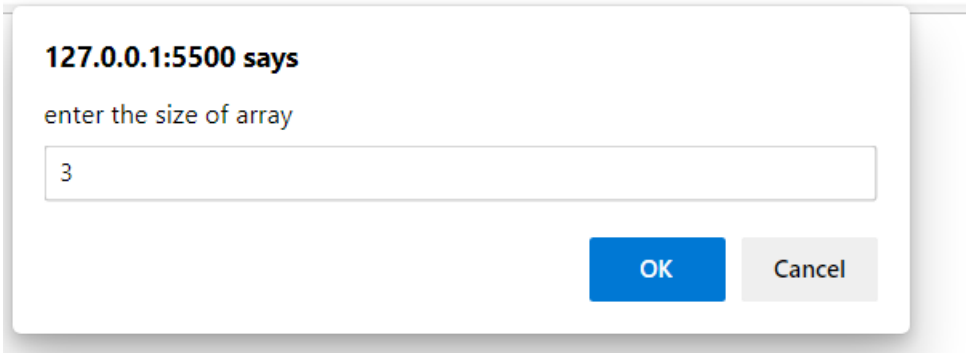


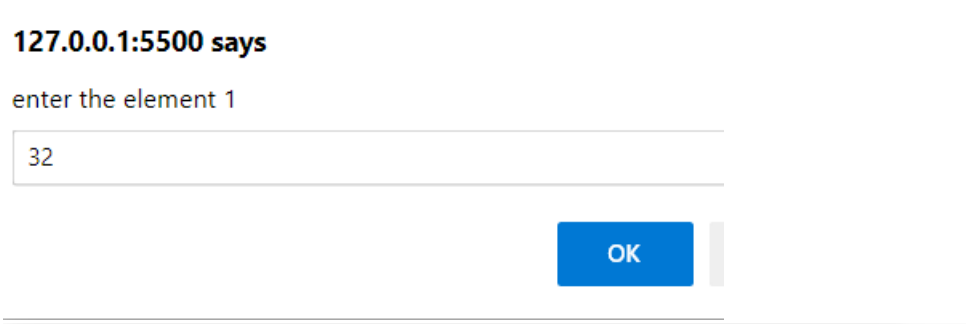


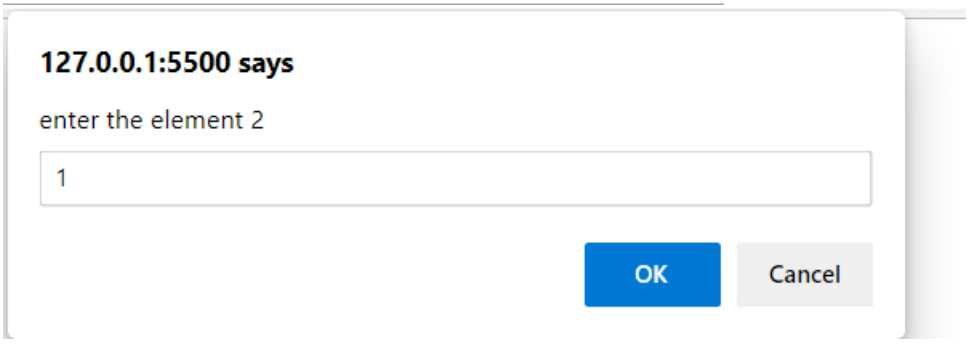
4d.

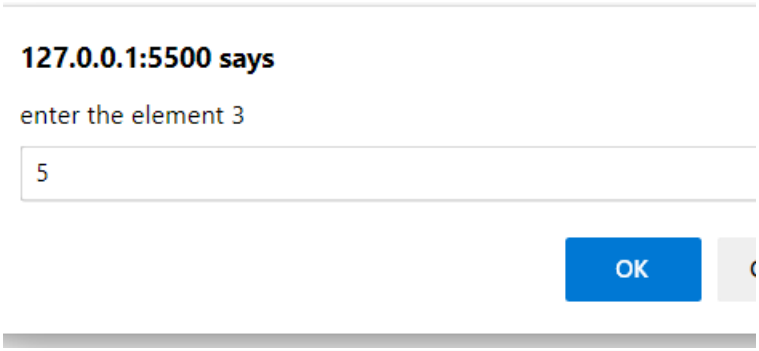
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
    var a=[];
        var size=prompt("enter the size of array");
        for(var i=0;i<size;i++)
        {
            a[i]=prompt("enter the element "+(i+1));
        }

        document.write("array:"+a+"<br/>");
        var num=prompt(" enter the element to be deleted");
        for(i=0;i<size;i++)
        {
```

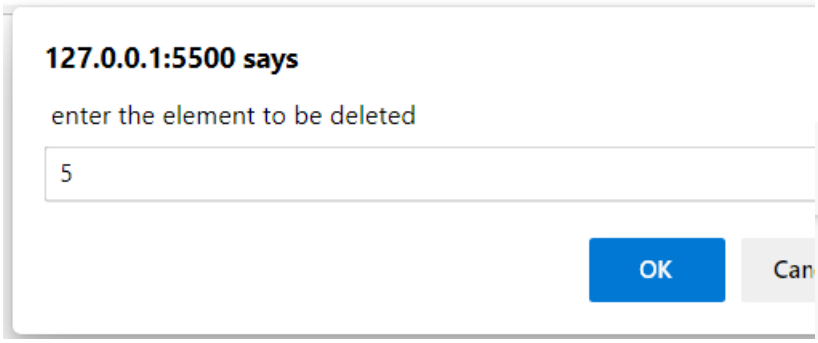
```
            if(a[i]==num)
            {
                var pos=a[i];
            }
        }
        for(i=pos-1;i<size;i++)
        {
            a[i]=a[i+1];
        }
        a.length=size-1;
        document.write("array after deleting :"+a+"<br/>");
    </script>
</body>
</html>
```











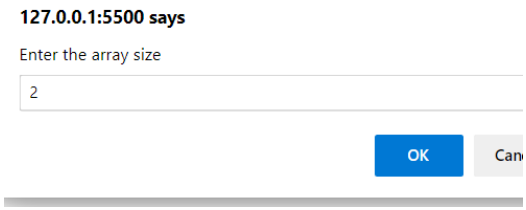
array:32,1,5
array after deleting :32,1

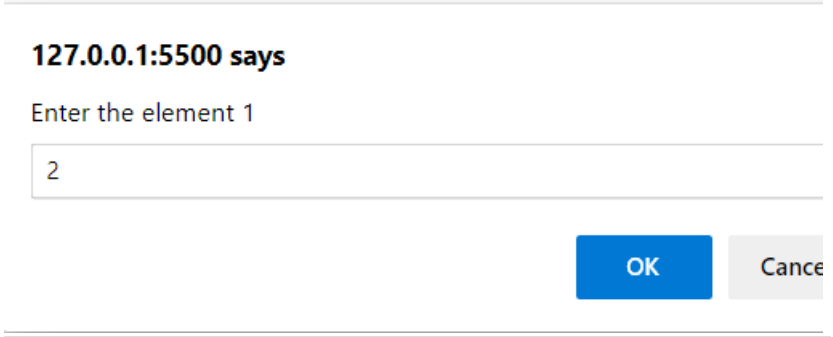
1	Write an arrow function that accepts an array of numbers as input and returns the average of those numbers.
2	Write an arrow function that accepts an array of numbers as input and returns the sum of the even numbers in the array.
3	Write a JavaScript code to multiply each number in the array by 10 and return the result using the map() function with arrow notation.
4	Write an arrow function that will take one parameter weight in Kg. This arrow function will convert Kg to Lbs. Formula is kg*2.2 If LBS is > 150, then the function should return "obese" If LBS is between 100 to 150, the function should return "you are ok" If LBS is < 100, then the function should return "underweight"
5	Demonstrate the concepts of pass by value and pass by reference using Arrow Functions.
6	Write a JavaScript function.

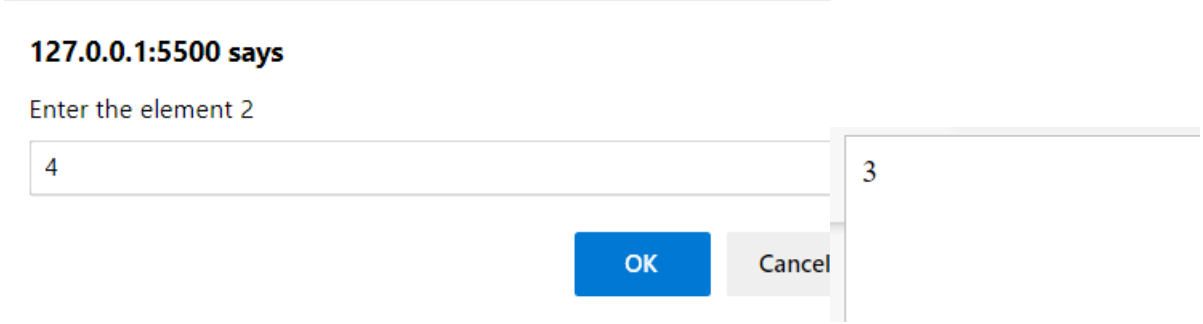
1.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Average of numbers</title>
</head>
<body>
    <script>
```

```
        var a=[];
        var sum=0;
        var size=(Number(prompt("Enter the array size")));
        for(var i=0;i<size;i++)
        {
            a[i]=(Number(prompt("Enter the element "+(i+1))));
        }

        const average=(arr) =>{
            for(var i=0;i<size;i++){
                sum+=a[i];
            }
            return sum/size;
        }
            document.write(average(a));


        </script>
</body>
</html>
```

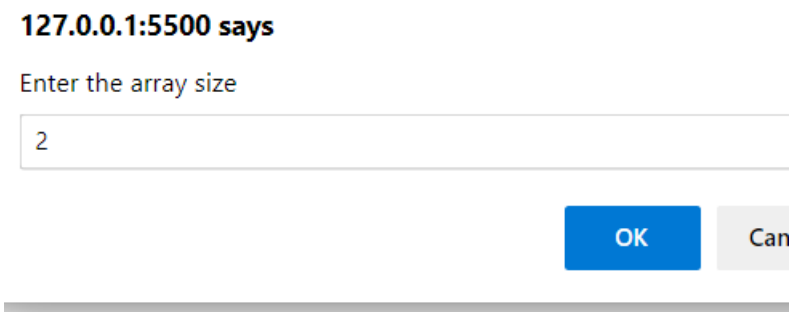


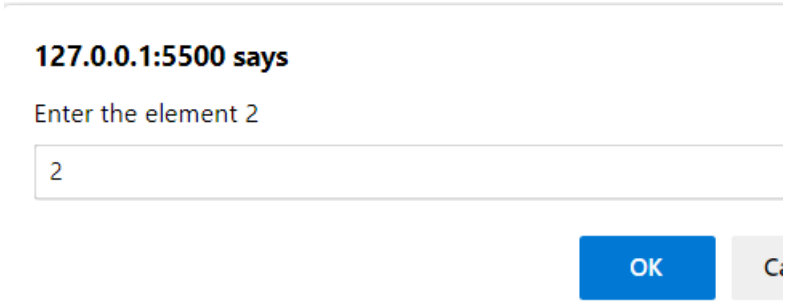




2.

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Average of numbers</title>
</head>
<body>
    <script>
        var a=[];
        var sum=0;
        var size=(Number(prompt("Enter the array size")));
        for(var i=0;i<size;i++)
        {
            a[i]=(Number(prompt("Enter the element "+(i+1))));
        }

        const sumEvens = (arr) => {
            let sum=0;
            for(let number of arr)
            {
                if(number%2 === 0)
                {
                    sum += number;
                }
            }
            return sum;}

            document.write(sumEvens(a));


        </script>
</body>
</html>
```



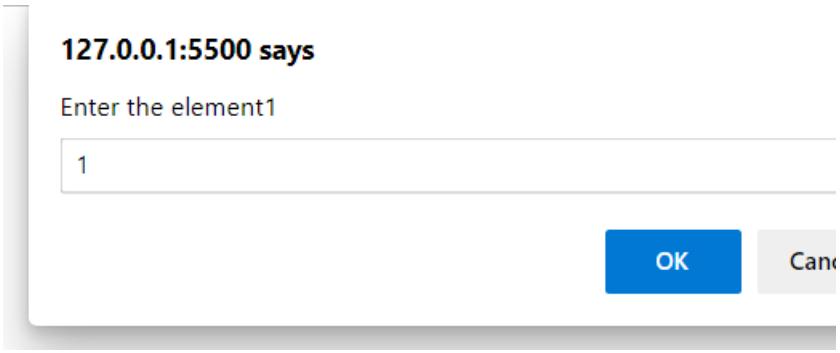


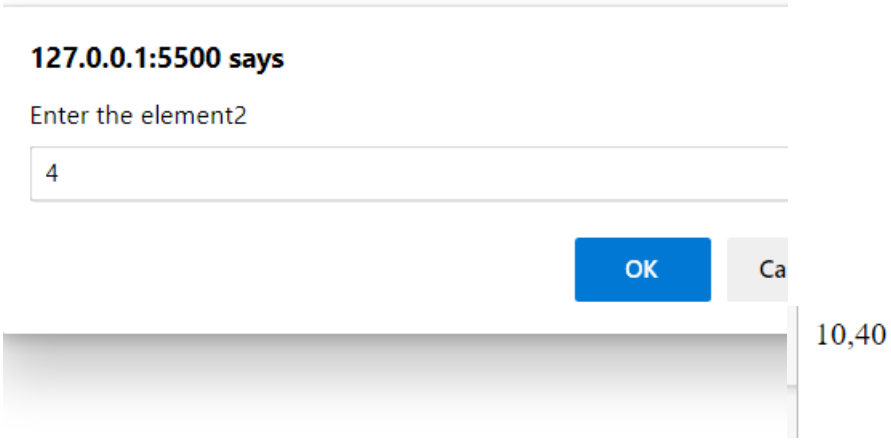
2

3.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Function3</title>
</head>
<body>
    <script>
        const myFunction=(num) =>{
            return num*10;

        }
        const num=[];
        var size=(Number(prompt("Enter the array size")));
        for(var i=0;i<size;i++)
        {
            num.push(Number(prompt("Enter the element"+(i+1))));
        }
        const a=num.map(myFunction);
        document.write(a);

        </script>
```

```
</body>
</html>
```





4.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=<device-width>, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        let weightInLbs = (weightInKg) => {
  let lbs = weightInKg * 2.2;
  if(lbs > 150){
    return "obese";
  }else if(lbs >= 100 && lbs <= 150){
    return "you are ok";
  }else{
    return "underweight";
  }
}
document.write(weightInLbs(100));
    </script>
```

```
</body>
</html>
```

obese

5.

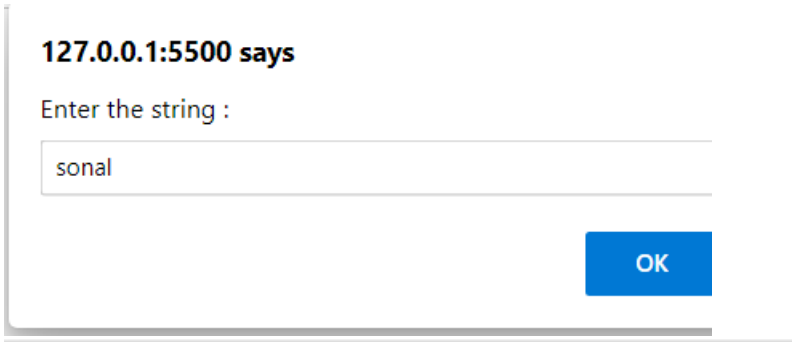
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        function swap(x, y){
  let temp = x;
  x = y;
  y = temp;
}
let a=10, b=20;
swap(a, b);
document.write(a);
document.write(b);
    </script>
</body>
</html>
```

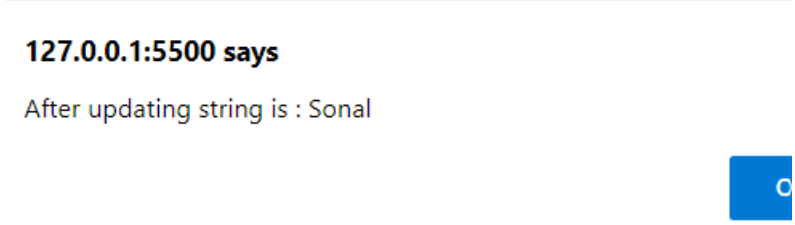
1020

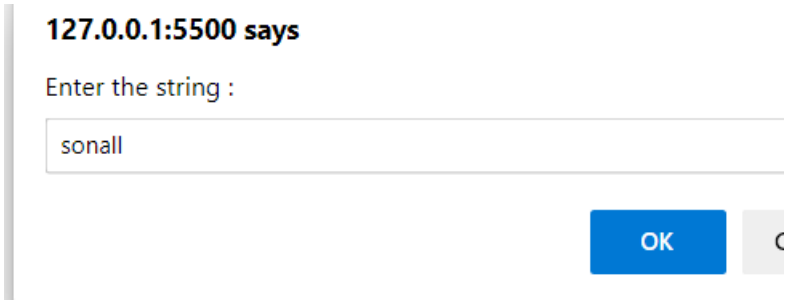
6.

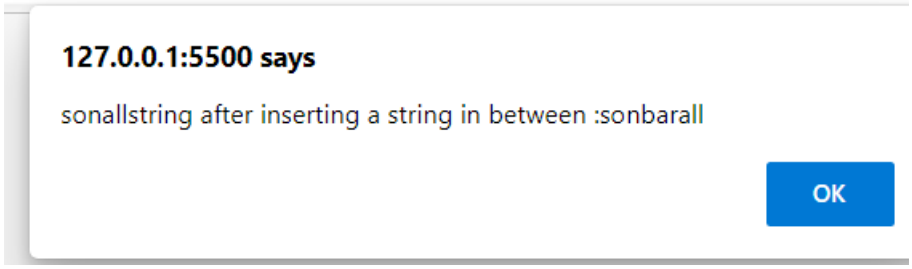
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
let f1 = () => {
            let s = prompt("Enter the string : ");
```

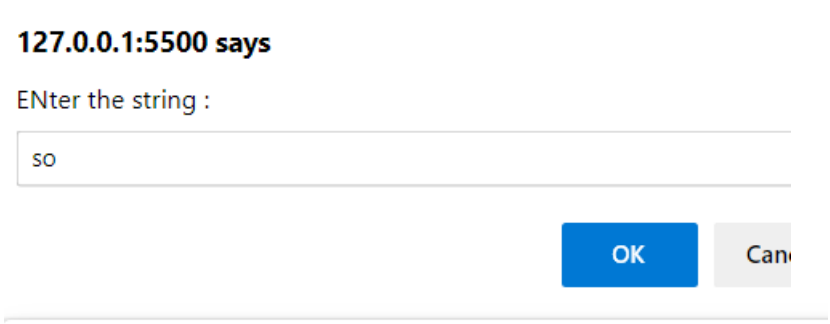
```
            if (s[0] >= "a" && s[0] <= "z") {
                let r = s.charCodeAt(s[0]) - 97;
                alert("After updating string is : " + String.fromCharCode(65 +
r) + s.slice(1));
            }
            else alert("After updating string is :" + s);

        }
        let f2 = () => {
            let s = prompt("Enter the string :");
            alert(s + "string after inserting a string in between :" +
s.slice(0, 3) + "bar" + s.slice(3));
        };

        let f3 = () => {let s = prompt("ENter the string :");
            for (let i = 0; i < s.length; i++) {
                if (!(s[i] >= "A" && s[i] <= "Z") && !(s[i] >= "a" && s[i] <=
"z")) {
                    alert("Not a string");
                    return;
                }
            }
            alert("Is a string");
        };
        let f4 = () => {
            let s = prompt("Enter the string :");
            let array = s.split("");
            alert(s + "after splitting : " + array);
        };
        f1();
        f2();
        f3();
        f4();
 </script>
</body>
</html>
```

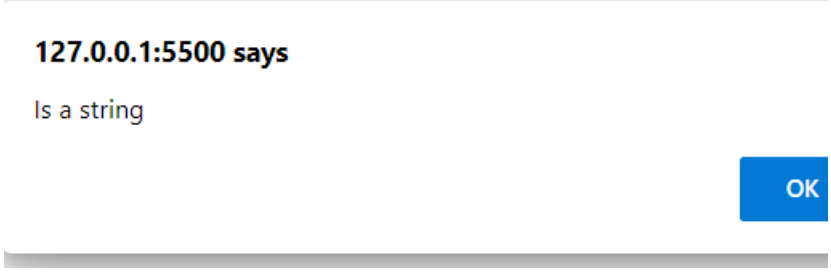

127.0.0.1:5500 says
Enter the string :
sonal
OK

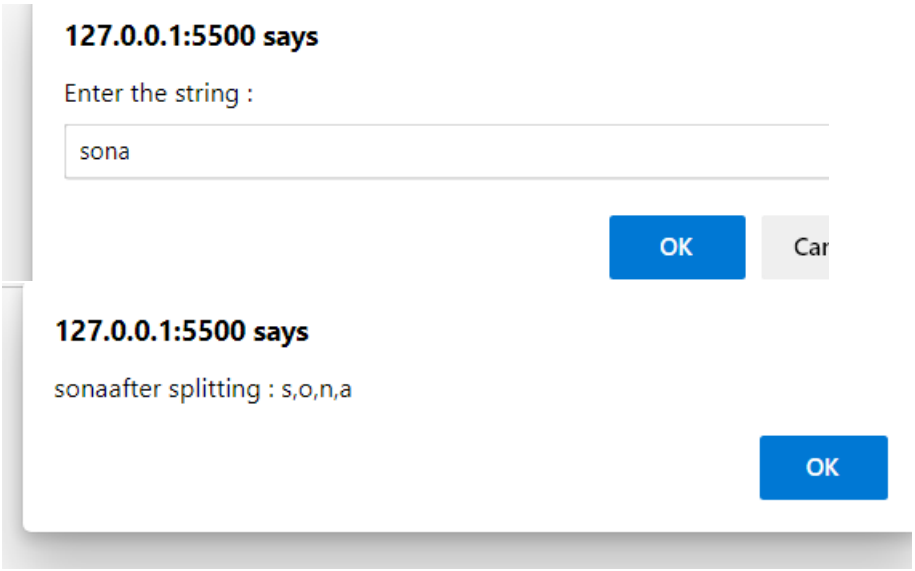

127.0.0.1:5500 says
After updating string is : Sonal
O


127.0.0.1:5500 says
Enter the string :
sonall
OK
C


127.0.0.1:5500 says
sonallstring after inserting a string in between :sonbarall
OK

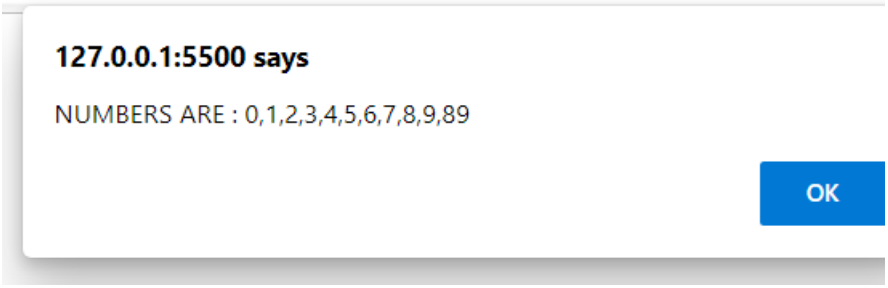

127.0.0.1:5500 says
ENter the string :
so
OK
Can


127.0.0.1:5500 says
Is a string
OK



7.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
let dis_check = (num) => {
            let arr = num.split("");
            //alert(arr);
            let sum = 0;
            for (let i = 0; i < arr.length; i++) {
                let d = parseInt(arr[i]);
sum = sum + Math.pow(d, i + 1);
                //alert(sum)
            }
            let ans = sum.toString();
            if (ans == num) return 1;
            else return 0;
        };
        let dis = new Array();
        for (let i = 0; i <= 100; i++) {
            if (dis_check(i.toString()) == 1) dis.push(i);
        }
        alert("NUMBERS ARE : " + dis);
 </script>
</body>
</html>
```



8.

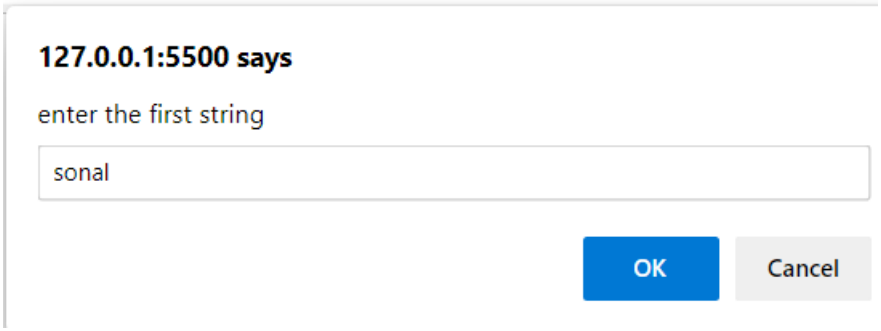
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
let encrypt = (text, s) => {
            let result = ""
            for (let i = 0; i < text.length; i++) {
                let char = text[i];
                if (char.toUpperCase(text[i])) {
                    let ch = String.fromCharCode((char.fromCharCode(0) + s -
65) % 26 + 65);
                    result += ch;
                }
                else {
                    let ch = String.fromCharCode((char.fromCharCode(0) + s -
97) % 26 + 65);
                }
            }
            return result;
        }

        let text = "ATTACKATONCE";
        let s = 4;
        document.write("Text : " + text + " <br>")
        document.write("Shift : " + s + " <br>")
        document.write("Cipher : " + encrypt(text, s) + " <br>")
 </script>
</body>
</html>
```

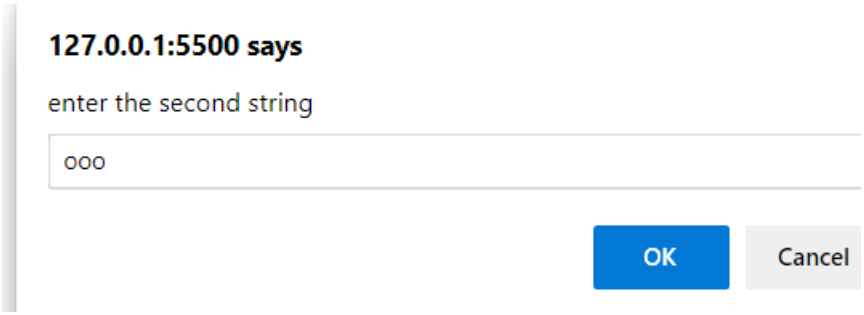
Text : ATTACKATONCE
Shift : 4

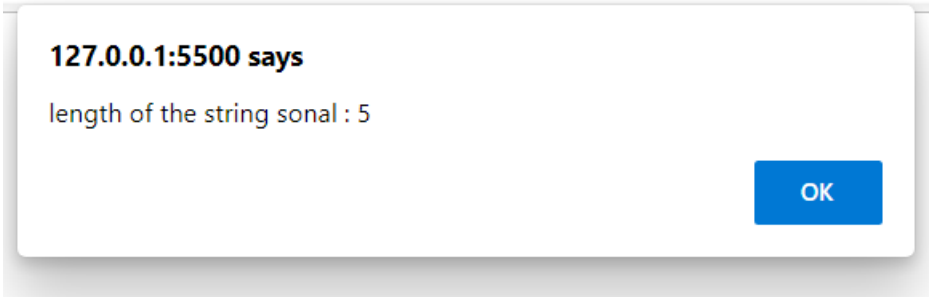
9.

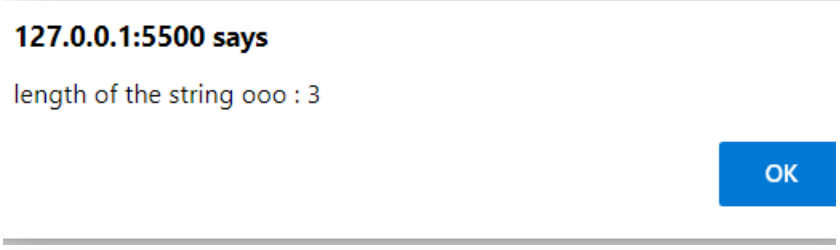
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
let one = prompt("enter the first string");
        let two = prompt("enter the second string");
        alert("length of the string " + one + " : " + one.length);
        alert("length of the string " + two + " : " + two.length);
        alert("using slice : print one.slice(0,5) -> " + one.slice(0, 5));

        alert(
            "using slice with negative index : print one.slice(-5,-2) -> " +
            one.slice(-5, -2)
        );
        alert("using substring : print one.substring(0,5) -> " +
one.substring(0,
            5));
        alert("using substr : print one.substr(2,4) -> " + one.substr(2, 4));
        alert(
            "using substr with negative index : print one.substr(-5,3) -> " +
            one.substr(-5, 3)
        );
        alert(
            "using replace : one.replace('nice' , 'last name') -> " +
            one.replace("nice", "last name")
        );
        alert("using padding : one.padStart(19, 'nice') -> " +
one.padStart(19, "nice"))

        alert(
            "using concatenation : on one->" +
            one +
            " and two->" +
            two +
            " using one.concat(two) ->" +
```

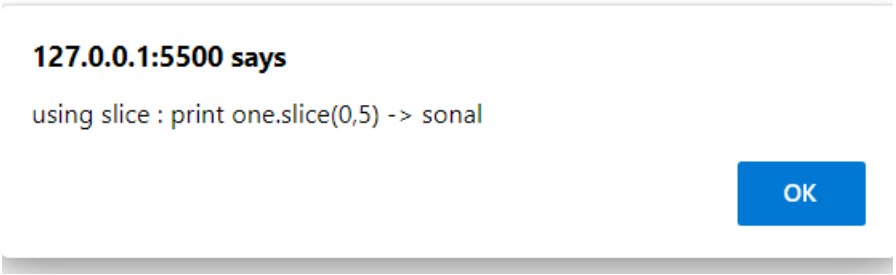
```
            one.concat(two)
        );
 </script>
</body>
</html>
```

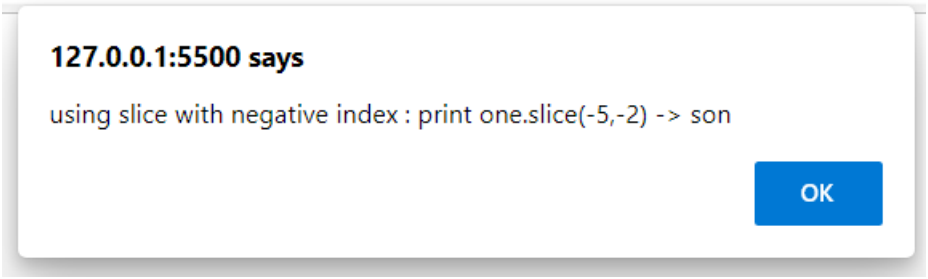


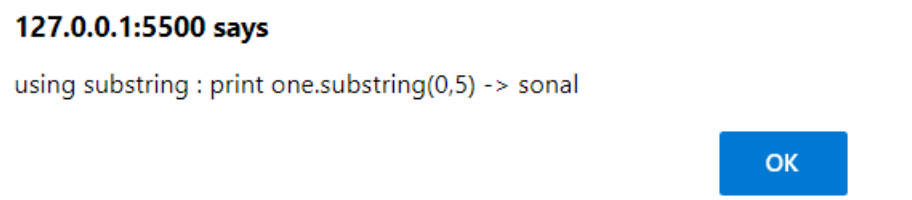


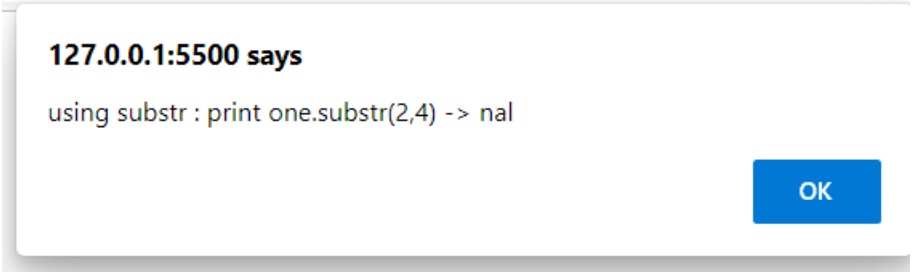


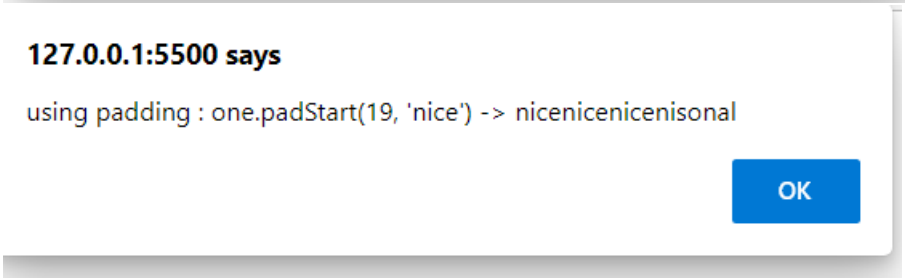


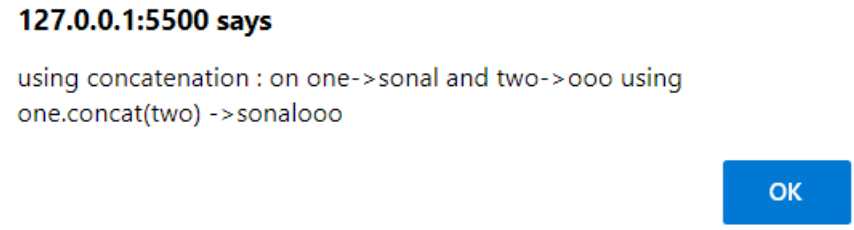












10.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
let jumpSearch = (arr, x, n) => {
```

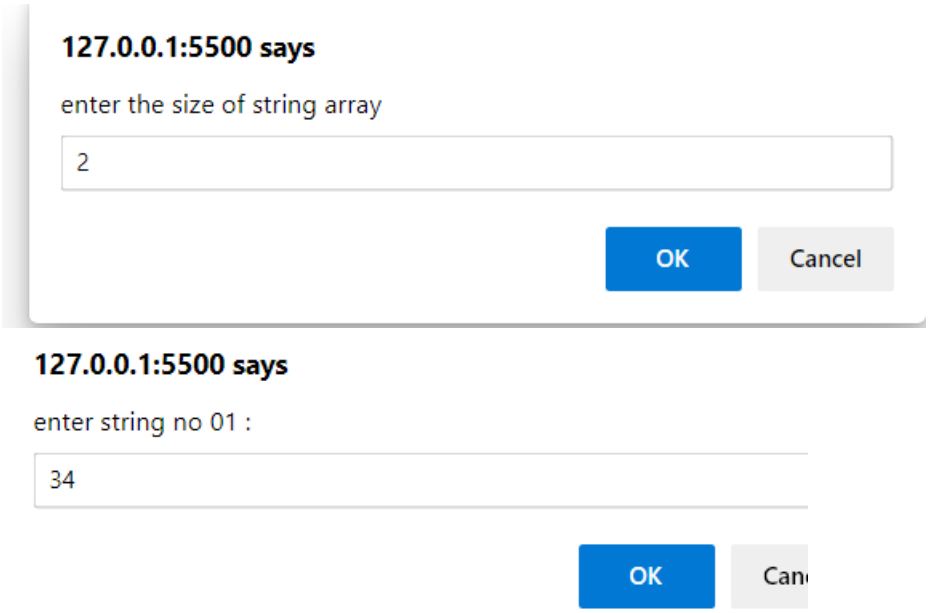
```
            // Finding block size to be jumped
            let step = Math.sqrt(n);
            // Finding the block where element is
            // present (if it is present)
            let prev = 0;
            while (arr[Math.min(step, n) - 1] < x) {
                prev = step;
                step += Math.sqrt(n);
                if (prev >= n)
                    return -1;
            }
            // Doing a linear search for x in block
            // beginning with prev.
            while (arr[prev] < x) {
                prev++;
                // If we reached next block or end of
                // array, element is not present.
                if (prev == Math.min(step, n))
                    return -1;
            }
            // If element is found
            if (arr[prev] == x)
                return prev;
            return -1;
        }
        // Driver program to test function
        let arr = [0, 1, 1, 2, 3, 5, 8, 13, 21,
            34, 55, 89, 144, 233, 377, 610];
        let x = 55;
        let n = arr.length;
        // Find the index of 'x' using Jump Search
        let index = jumpSearch(arr, x, n);
        // Print the index where 'x' is located
        document.write(`Number ${x} is at index ${index}`)
 </script>
</body>
</html>
```

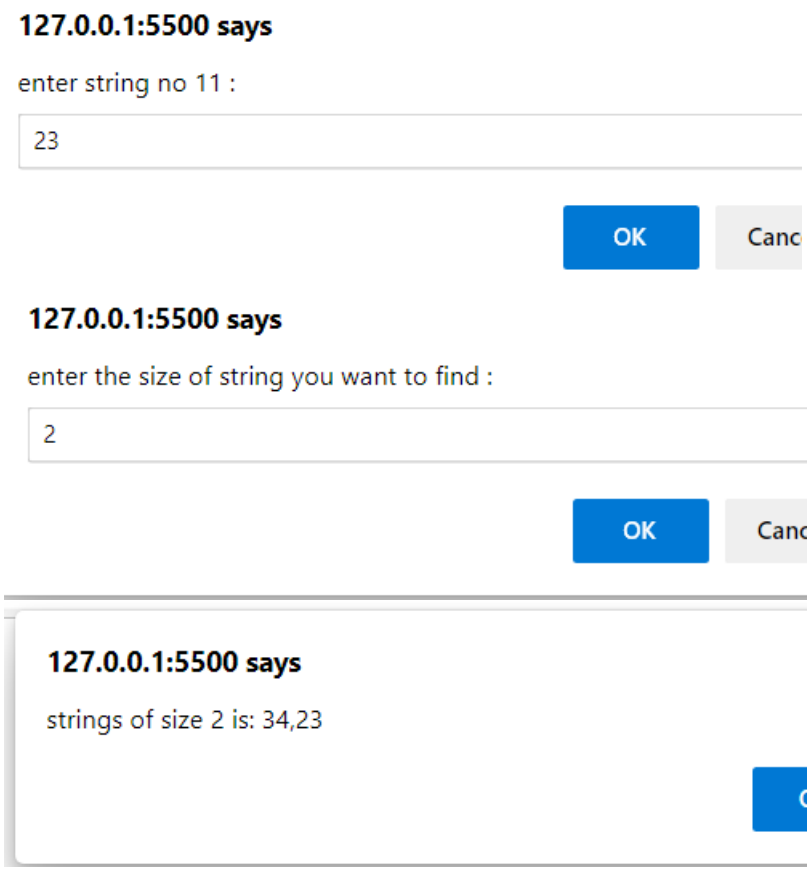
Number 55 is at index 10

11.

```
<!DOCTYPE html>
<html lang="en">
```

```
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
let find = (s, n) => {
            let ans = new Array();
            for (let i = 0; i < s.length; i++) {
                if (s[i].length == n)
                    ans.push(s[i]);
            }
            if (ans.length == 0)
                return ["none"];
            return ans;
        }
        let size = prompt("enter the size of string array")
        alert("enter the string array");
        let s = new Array();
        for (let i = 0; i < size; i++) {
            s[i] = prompt("enter string no " + i + 1 + " : ");
        }
        let n = parseInt(prompt("enter the size of string you want to find
:"));
        alert("strings of size " + n + " is: " + find(s, n))
 </script>
</body>
</html>
```




127.0.0.1:5500 says
enter string no 11 :
23
OK
Canc
127.0.0.1:5500 says
enter the size of string you want to find :
2
OK
Cancel
127.0.0.1:5500 says
strings of size 2 is: 34,23
OK