ARRAYS AND LOOP

1. Declare and initialize an empty multidimensional array. (Array of arrays)
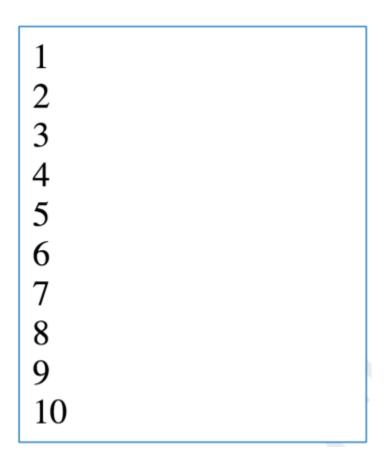
```javascript
// ASSIGNMENT
let multiArray=[[]]
|
```

2. Declare and initialize a multidimensional array representing the following matrix:

```javascript
// ASSIGNMENT
let multiArray=[[0,1,2,3],
[1,0,1,2],
[2,1,0,1]]
console.log(multiArray.length);
for (let i = 0; i < multiArray.length; i++) {
for (let j = 0; j < multiArray[i].length; j++) {
    document.write(multiArray[i][j]+" ")
}
document.write("<br>")
}
```
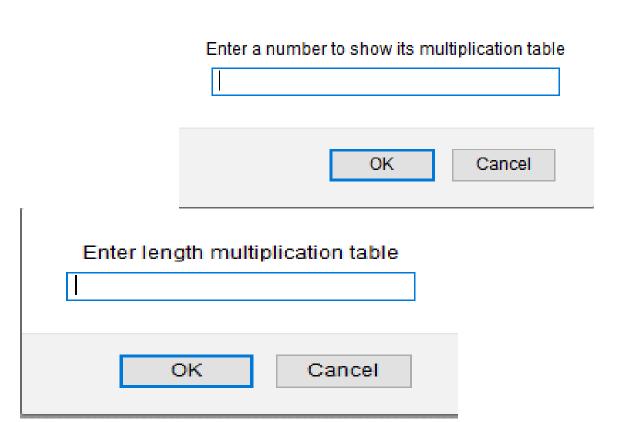
```
0 1 2 3
1 0 1 2
2 1 0 1
```

3. Write a program to print numeric counting from 1 to 10.

```
// ASSIGNMENT
for (let index = 1; index <=10; index++) {
document.write(index+"<br>")
}
```

1
2
3
4
5
6
7
8
9
10

4. Write a program to print multiplication table of any number using for loop. Table number & length should be taken as an input from user.

```javascript
// ASSIGNMENT
let tableno=+prompt("Enter the number whose table you want to print:")
let length=+prompt("Enter the length upto whichh you want the table:")
for (let index = 1; index <=length; index++) {
document.write(tableno+" * "+index+" = "+tableno*index+"<br>")
}
```

Enter a number to show its multiplication table

| |

OK   Cancel

Enter length multiplication table

| |

OK   Cancel

Multiplication table of 2
Length 15

2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20
2 x 11 = 22
2 x 12 = 24
2 x 13 = 26
2 x 14 = 28
2 x 15 = 30

5. Write a program to print items of the following array using for loop:
fruits = ["apple", "banana", "mango", "orange", "strawberry"]

```javascript
// ASSIGNMENT
fruits = ["apple", "banana", "mango", "orange", "strawberry"]
for (let index = 0; index <fruits.length; index++) {
document.write("Element at index ",index," is : ",fruits[index],"<br>")
}
```

```
apple
banana
mango
orange
strawberry

Element at index 0 is apple
Element at index 1 is banana
Element at index 2 is mango
Element at index 3 is orange
Element at index 4 is strawberry
```

6. Generate the following series in your browser. See example output.
   a. Counting: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
   b. Reverse counting: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
   c. Even: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20
   d. Odd: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19
   e. Series: 2k, 4k, 6k, 8k, 10k, 12k, 14k, 16k, 18k, 20k

```javascript
// ASSIGNMENT
for (let i = 1; i <=15; i++) {
document.write(i+",");
}
document.write("<br>")
for (let i = 10; i >=1; i--) {
    document.write(i+",");
}
document.write("<br>")
for (let i = 0; i <=20; i=i+2) {
 document.write(i+",");
}
document.write("<br>")

for (let i = 1; i <=20; i=i+2) {
    document.write(i+",");
   }
   document.write("<br>")
for (let i = 2; i <=20; i=i+2) {
 document.write(i+"k,");
}
```

Counting:

$1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,$

Reverse counting:

$10, 9, 8, 7, 6, 5, 4, 3, 2, 1,$

Even:

$0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20,$

Odd:

$1, 3, 5, 7, 9, 11, 13, 15, 17, 19,$

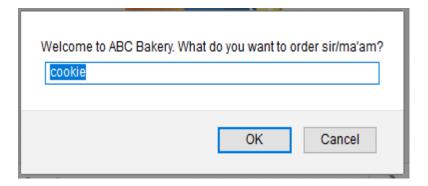**Series:**

$2k, 4k, 6k, 8k, 10k, 12k, 14k, 16k, 18k, 20k,$

7. You have an array
A = ["cake", "apple pie", "cookie", "chips", "patties"]
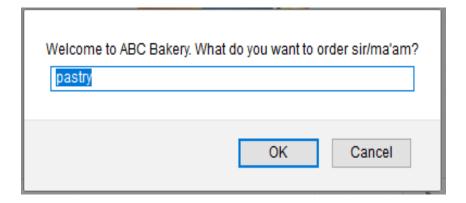Write a program to enable "search by user input" in an array.
After searching, prompt the user whether the given item is found in the list or not. Example:

```javascript
// ASSIGNMENT
let array= ["cake", "apple pie", "cookie", "chips", "patties"]
let userInput=prompt("Enter the item you want:").toLowerCase();
let flag=false
for (let index = 0; index < array.length; index++) {
if (array[index]===userInput) {
    flag=true
}
}
if (flag===true) {
    alert("item exist")
}
else{
    alert("item does not exixt")
}
```

Welcome to ABC Bakery. What do you want to order sir/ma'am?

cookie

OK   Cancel

cookie is **available** at index 2 in our bakery

Welcome to ABC Bakery. What do you want to order sir/ma'am?

pastry

OK   Cancel

We are sorry. pastry is **not available** in our bakery

8. Write a program to identify the largest number in the given array.
   A = [24, 53, 78, 91, 12].

```javascript
// ASSIGNMENT
let A = [24, 53, 78, 91, 12]
let large=A[0]
for (let index = 0; index < A.length; index++) {
if (A[index]>large) {
    large=A[index]
}
}
console.log(large);
// OR
let b=A.reduce(function(prev,curr){
if (curr>prev) {
    prev=curr
}
return prev;
},A[0])
console.log(b);
```

Array items: 24,53,78,91,12
The largest number is 91

9. Write a program to identify the smallest number in the given array.
A = [24, 53, 78, 91, 12]

```javascript
// ASSIGNMENT
let A = [24, 53, 78, 91, 12]
let small=A[0]
for (let index = 0; index < A.length; index++) {
if (A[index]<small) {
    small=A[index]
}
}
console.log(small);
// OR
let b=A.reduce(function(prev,curr){
if (curr<prev) {
    prev=curr
}
return prev;
},A[0])
console.log(b);
```

Array items: 24,53,78,91,12
The smallest number is 12

10. Write a program to print multiples of 5 ranging 1 to 100.

```javascript
// ASSIGNMENT
for (let index = 5; index <=100; index=index+5){
    document.write(index+",");
}
```

5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100,