

## TASKS:

1) Add elements to an array and iterate using for loop and for in loop and for of loop  
Create an array of your favorite movies and iterate an array to the console.

The screenshot shows a VS Code editor with a file named `iterating_array.html`. The code defines an array `arr` with values `[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]` and iterates over it using three different loops: a standard `for` loop, a `for...in` loop, and a `for...of` loop. The browser console on the right shows the output of these iterations, displaying the array and its elements.

```
2 <html lang="en">
8 <body>
9 <!--
10 1) Add elements to an array and iterate using for loop
11 Create an array of your favorite movies and iterate
12 -->
13
14 <script>
15   var arr=[1,2,3,4,5,6,7,8,9,10]
16   for(i=0;i<arr.length; i++){
17   }
18   console.log(arr);
19
20   for(i in arr){
21     // console.log(i);
22     console.log(arr[i]);
23   }
24
25   for(i of arr){
26     console.log(i);
27   }
28 </script>
29
```

2) Remove elements from an array  
Remove the first and last elements from the array.

The screenshot shows a VS Code editor with a file named `removing_elements_from_array.html`. The code defines an array `arr` with values `[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]`, logs it, and then removes the first element using `arr.shift()` and the last element using `arr.pop()`. The browser console on the right shows the output, displaying the array before and after each removal operation.

```
12 <!--
13
14
15 <script>
16   var arr=[1,2,3,4,5,6,7,8,9,10]
17   console.log("given array "+arr);
18
19   arr.shift();
20   console.log("removed first element "+arr);
21   arr.pop();
22   console.log("removed last element "+arr);
23
24
```

3) Reverse an array using for loop  
Hints: use push method

The screenshot shows a VS Code editor with a file named `reverse_array.html`. The code defines an array `arr` with values `['html', 'css', 'js', 'react', 'git']` and iterates over it in reverse order using a `for` loop, pushing each element into a new array `rev`. The browser console on the right shows the output, displaying the reversed array.

```
2 <html lang="en">
3 <head>
4   <meta name="viewport" content="width=device-width, initial-scale=1">
5   <title>Document</title>
6 </head>
7 <body>
8 <!--
9 3) Reverse an array using for loop
10 hints
11 use push method
12 -->
13
14 <script>
15   var arr=['html','css','js','react','git']
16   var rev=[]
17   for(i=arr.length-1;i>=0;i--){
18     rev.push(arr[i]);
19   }
20   console.log(rev);
21
22
```

4) find the even and odd numbers in an array [12,3,5,6,22,56,29]  
and print the even numbers array and the sum of add and odd numbers array and the sum of even

The screenshot shows a web browser with a JavaScript program running. The program iterates through an array [12, 3, 5, 6, 22, 56, 29] and identifies even and odd numbers. The console output is as follows:

```

12 is even number
6 is even number
22 is even number
56 is even number
96 is the total count of even numbers
3 is odd number
5 is odd number
29 is odd number
37 is the total count of odd numbers

```

5) Take a heterogeneous array and separate each data type into new array  
hints : use loop, typeof and push method  
inp: let arr = ["apple", "banana", "mango", "banana", 3, 4, 5, 6, true, {name: "object"}];  
out :  
num=[3,4,5,6]  
str=["apple","banana","mango","banana"]  
bool=[true]  
obj=[{name: "object"}]

The screenshot shows a web browser with a JavaScript program running. The program takes a heterogeneous array and separates its elements into four new arrays based on their data type. The console output is as follows:

```

[3, 4, 5, 6]
["apple", "banana", "mango", "banana"]
[true]
[{name: "object"}]

```