

Day 4:

1. Anonymous Function:

a. Print odd numbers in an array

```
//Print odd numbers in an array
```

```
let oddeven=function (number) {  
    let odd=[];  
  
    for(let i=0;i<number.length;i++){  
        if(number[i]%2!==0){  
            odd.push(number[i]);  
        }  
    }  
    return odd  
}
```

```
n=[1,2,3,4,5,6,7,8]  
console.log(oddeven(n));
```

```
//IIFE:
```

```
((n)=>{  
    let odd=[];  
  
    for(let i=0;i<number.length;i++){  
        if(number[i]%2!==0){  
  
            odd.push(number[i]);  
        }  
    }  
    console.log(odd);  
  
}) [1,2,3,4,5,6,7,8];
```

Output:



The screenshot shows a code editor with two tabs: 'JS t1.js' and 'JS day4.js'. The active tab is 'JS day4.js', which contains the following code:

```
1 //Anonymous Function
2 //Print odd numbers in an array
3
4 let oddeven=function (number){
5     let odd=[];
6
7     for(let i=0;i<number.length;i++){
8         if(number[i]%2!==0){
9             odd.push(number[i]);
10        }
11    }
12    return odd
13 }
14
15
16
17
18 n=[1,2,3,4,5,6,7,8]
19
20 console.log(oddeven(n));
21
22
```

Below the code editor is a terminal window. The output shows the function being executed successfully, returning the array [1, 3, 5, 7].

```
OUTPUT  TERMINAL
[Running] node "c:\Users\PRAKASH T\OneDrive\Documents\JS\day4.js"
[ 1, 3, 5, 7 ]

[Done] exited with code=0 in 4.446 seconds
```

// b.Convert all the strings to title caps in a string array

```
let capitalize=function (str){
    let capital_str=[];
    for(let i=0;i<str.length;i++){
        capital_str[i]=str[i].charAt(0).toUpperCase()+str[i].slice(1);
    }
}
```

```
console.log(capital_str);
```

```
}
```

```
let str=['android','browser','connection','data','Ethernet'];
```

```
capitalize(str);
```

```
//IIFE:
((str)=>{
    let capital_str=[];
    for(let i=0;i<str.length;i++){
        capital_str[i]=str[i].charAt(0).toUpperCase()+str[i].slice(1);
    }

    console.log(capital_str);

})(['android','browser','connection','data','Ethernet']);
```

Output:

```
24 // b.Convert all the strings to title caps in a string array
25
26 let capitalize=function (str){
27     let capital_str=[];
28     for(let i=0;i<str.length;i++){
29         capital_str[i]=str[i].charAt(0).toUpperCase()+str[i].slice(1);
30     }
31
32     console.log(capital_str);
33
34 }
35
36 let str=['android','browser','connection','data','Ethernet'];
37
38 capitalize(str);
```

OUTPUT TERMINAL

[Running] node "c:\Users\PRAKASH T\OneDrive\Documents\JS\day4.js"
['Android', 'Browser', 'Connection', 'Data', 'Ethernet']

[Done] exited with code=0 in 0.656 seconds

```
//c.Sum of all numbers in an array
```

```
let sum=function (arr){  
  let total=0;  
  for(let i=0;i<arr.length;i++){  
    total=total+arr[i];  
  }  
  console.log(total);  
}
```

```
let arr=[6,5,4,3,2,1]
```

```
sum(arr)
```

```
//IIFE:
```

```
((arr)=>{  
  let total=0;  
  for(let i=0;i<arr.length;i++){  
    total=total+arr[i];  
  }  
  console.log(total);  
})([6,5,4,3,2,1]);
```

```
42 //Sum of all numbers in an array  
43  
44 let sum=function (arr){  
45   let total=0;  
46   for(let i=0;i<arr.length;i++){  
47     total=total+arr[i];  
48   }  
49   console.log(total);  
50 }  
51  
52  
53 let arr=[6,5,4,3,2,1]  
54  
55 sum(arr)  
56  
57
```

OUTPUT TERMINAL

[Running] node "c:\Users\PRAKASH T\OneDrive\Documents\JS\day4.js"
21

[Done] exited with code=0 in 0.631 seconds

Code

≡ 🔒 ... ^ ×

//d.Return all the prime numbers in an array

```
let prime=function (num) {
    if(num<=1) {
        return false;
    }

    for(let j=2;j<=Math.sqrt(num);j++){
        if(num%j==0) {
            return false;
        }
    }
    return true;
}

const arr=[9,8,7,6,5,4,3,2,1];
let primearr=[];
for(let num of arr){
    if(prime(num)){
        primearr.push(num);
    }
}
console.log(primearr);
```

IIFE:

```
((arr)=>{
    function isprime(num) {
        if(num<=1) {
            return false;
        }

        for(let j=2;j<=Math.sqrt(num);j++){
            if(num%j==0) {
                return false;
            }
        }
        return true;
    }
    let primearr=[];
```

```

    for(let num of arr){
        if(isprime(num)){
            primearr.push(num);
        }
    }
    console.log(primearr);
}) ([9,8,7,6,5,4,3,2,1]);

```

OUTPUT:

```

JS day4.js
C: > Users > PRAKASH T > OneDrive > Documents > JS > JS day4.js > ...

2 > /*...
57
58 //d.Return all the prime numbers in an array
59
60 let prime=function (num){
61     if(num<=1){
62         return false;
63     }
64
65     for(let j=2;j<=Math.sqrt(num);j++){
66         if(num%j==0){
67             return false;
68         }
69     }
70     return true;
71 }
72
73
74 }
75
76 const arr=[9,8,7,6,5,4,3,2,1];
77 let primearr=[];
78 for(let num of arr){
79     if(prime(num)){
80         primearr.push(num);
81     }
82 }
83
84 console.log(primearr);
85
86

```

OUTPUT TERMINAL Code

[Running] node "c:\Users\PRAKASH T\OneDrive\Documents\JS\day4.js"

[7, 5, 3, 2]

[Done] exited with code=0 in 0.381 seconds

//e.Return all the palindromes in an array

```

let palindrome=function (word){
    let temp='';

    temp=word.split('').reverse().join('');

    if(temp===word){
        return true;
    }else{
        return false;
    }
}

```

```

let str=['madam','class','malayalam','one','rupees','level'];

let palindromearr=[];

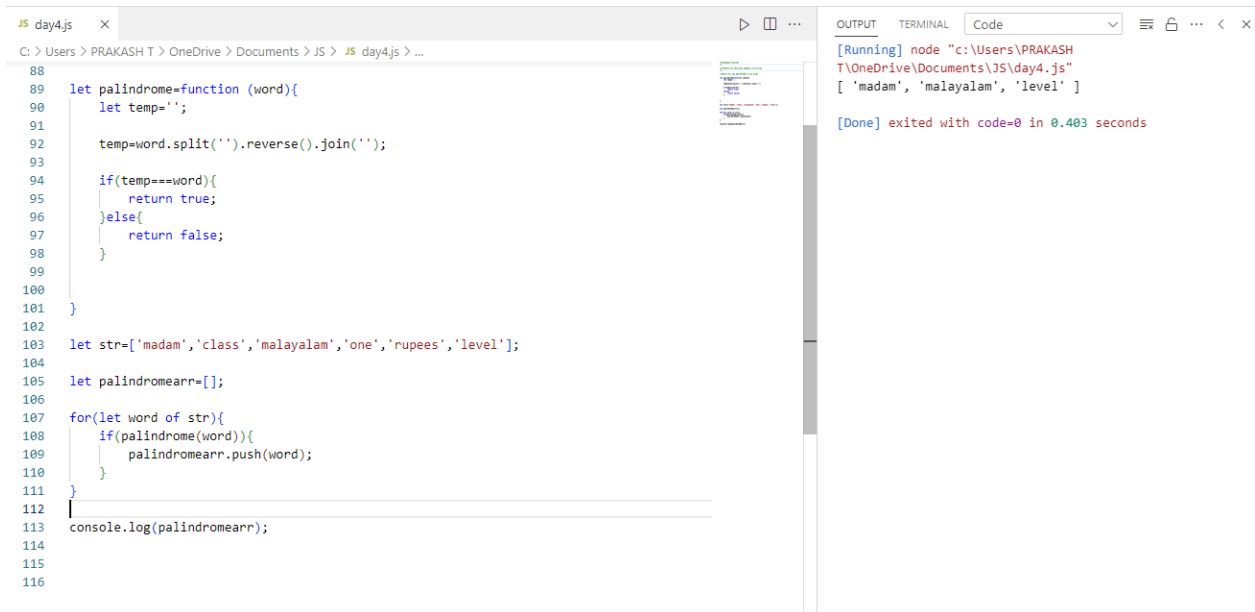
for(let word of str){
    if(palindrome(word)){
        palindromearr.push(word);
    }
}
console.log(palindromearr);
IIFE:
((wordarr)=>{
    function ispalindrome(word){
        let temp='';

        temp=word.split('').reverse().join('');

        if(temp===word){
            return true;
        }else{
            return false;
        }
    }
    let palindromearr=[];
    for(let word of wordarr){
        if(ispalindrome(word)){
            palindromearr.push(word);
        }
    }
    console.log(palindromearr);
})(['madam','class','malayalam','one','rupees','level']);

```

output:



The screenshot shows a VS Code editor window with a file named `day4.js` open. The file contains a JavaScript function `palindrome` that checks if a word is a palindrome. It also includes an array `str` with words: `'madam', 'class', 'malayalam', 'one', 'rupees', 'level'`. A loop iterates over each word in `str`, and if it is a palindrome, it is pushed into an array `palindromearr`. The final output of the program is `['madam', 'malayalam', 'level']`.

```
88
89 let palindrome=function (word){
90   let temp='';
91
92   temp=word.split('').reverse().join('');
93
94   if(temp===word){
95     return true;
96   }else{
97     return false;
98   }
99
100 }
101
102
103 let str=['madam','class','malayalam','one','rupees','level'];
104
105 let palindromearr=[];
106
107 for(let word of str){
108   if(palindrome(word)){
109     palindromearr.push(word);
110   }
111 }
112
113 console.log(palindromearr);
114
115
116
```

The output terminal shows the following text:

```
[Running] node "c:\Users\PRAKASH
T\OneDrive\Documents\JS\day4.js"
[ 'madam', 'malayalam', 'level' ]

[Done] exited with code=0 in 0.403 seconds
```

//f.Return median of two sorted arrays of the same size.

```
let median=function (arr1,arr2){

    mergearr=arr1.concat(arr2);
    sortedarr=mergearr.sort((a,b) => a-b);
    len=Math.floor(sortedarr.length);

    mid=Math.round(len/2);

    n1=sortedarr[mid];

    n2=sortedarr[mid-1];

    medianvalue=Math.floor((n1+n2)/2);

    console.log(medianvalue);

}

let arr1=[1,3,5];
let arr2=[2,4,6]
```



```

median(arr1,arr2);

//IIFE:
((arr1,arr2)=>{

    mergearr=arr1.concat(arr2);
    sortedarr=mergearr.sort((a,b) => a-b);
    len=Math.floor(sortedarr.length);

    mid=Math.round(len/2);
    n1=sortedarr[mid];
    n2=sortedarr[mid-1];

    medianvalue=Math.floor((n1+n2)/2);
    console.log(medianvalue);

}) ([1,3,5],[2,4,6]);

```

Output:

The screenshot shows a VS Code editor with a file named 'day4.js'. The code defines a function 'median' that takes two arrays, 'arr1' and 'arr2', and returns their median. The arrays are [1, 3, 5] and [2, 4, 6]. The function concatenates the arrays, sorts them, and then finds the median by averaging the two middle elements. The output in the terminal shows the median value 3.

```

JS day4.js
C: > Users > PRAKASH T > OneDrive > Documents > JS > JS day4.js > arr1
58 //d.Return all the prime numbers in an array
59 > /* ...
86 > /* ...
115
116 //f.Return median of two sorted arrays of the same size.
117
118 let median=function (){
119
120     mergearr=arr1.concat(arr2);
121     sortedarr=mergearr.sort((a,b) => a-b);
122     len=Math.floor(sortedarr.length);
123
124     mid=Math.round(len/2);
125
126     n1=sortedarr[mid];
127
128     n2=sortedarr[mid-1];
129
130     medianvalue=Math.floor((n1+n2)/2);
131
132     return medianvalue;
133 }
134
135
136 let arr1=[1,3,5];
137 let arr2=[2,4,6]
138
139 console.log(median(arr1,arr2));
140
141
142

```

OUTPUT TERMINAL Code

[Running] node "c:\Users\PRAKASH T\OneDrive\Documents\JS\day4.js"

3

[Done] exited with code=0 in 0.298 seconds

```
//g.Remove duplicate element in array
```

```
let removeduplicate=function(arr) {
```

```
    let uniquearr=[];
```

```
    uniquearr=[...new Set(arr)];
```

```
    return uniquearr;
```

```
}
```

```
let arr=[20,21,20,22,24,22,21]
```

```
console.log(removeduplicate(arr));
```

```
//IIFE
```

```
((arr)=>{
```

```
    let uniquearr=[];
```

```
    uniquearr=[...new Set(arr)];
```

```
    console.log(uniquearr);
```

```
}) ([20,21,20,22,24,22,21]);
```

```
JS day4.js JS r.js x
C: > Users > PRAKASH T > OneDrive > Documents > JS > JS r.js > <function>
1 //Remove duplicate element in array
2
3 let removeduplicate=function(arr){
4
5     let uniquearr=[];
6
7     uniquearr=[...new Set(arr)];
8
9     return uniquearr;
10
11 }
12
13 let arr=[20,21,20,22,24,22,21]
14
15 console.log(removeduplicate(arr));
16
17 //IIFE
18 ((arr)=>{
19     let uniquearr=[];
20
21     uniquearr=[...new Set(arr)];
22
23     console.log(uniquearr);
24 }) ([20,21,20,22,24,22,21]);
25
26
```

OUTPUT TERMINAL Code

[Running] node "c:\Users\PRAKASH T\OneDrive\Documents\JS\r.js"

[20, 21, 22, 24]

[20, 21, 22, 24]

[Done] exited with code=0 in 11.88 seconds

```

//h.Rotate an array by k times
let rotatearr=function (arr, k) {
    for (let i = 0; i < k; i++) {
        let temp = arr.shift();
        arr.push(temp);
    }
    return arr;
}

let array = [1, 2, 3, 4, 5];
let k = 2;
let rotatedArray = rotatearr(array, k);
console.log(rotatedArray);
//IIFE
((arr,k)=>{
    for (let i = 0; i < k; i++) {
        let temp = arr.shift();
        arr.push(temp);
    }
    console.log(arr);
})(array);

```

Output:

OUTPUT TERMINAL Code ▾ ☰ 🔒 ... ⚙

```

[Running] node "c:\Users\PRAKASH
T\OneDrive\Documents\JS\r.js"
[ 3, 4, 5, 1, 2 ]
[ 3, 4, 5, 1, 2 ]

[Done] exited with code=0 in 0.433 seconds

```