TASK-3(11-02-2021)

1.Print odd numbers in an array

```
//Anonymous Fn.
console.log("Anonymous Fnc.");
var arr=[1,2,3,4,5];
var odd=function (arr){
    for(let i in arr){
      if(arr[i]%2!==0)
      {
          console.log(arr[i]);
      }
    }
}
odd(arr);

console.log("-------------------");
console.log("IIFE fnc.");

//IIFE fn.
var arr=[1,2,3,4,5];
(function (arr)
{
   for(let i in arr){
      if(arr[i]%2!==0)
      {
          console.log(arr[i]);
      }
    }
})(arr);
```

Output:

```
Anonymous Fnc.
1
3
5
-------------------
IIFE fnc.
1
3
5
```

Execution Time:

```
0.066s
```

Memory Used:

```
8112kb
```

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

```
console.log("Anonymous Fnc.");

var str=['im a good developer'];
var titleCaps=function (str){
   str = str.toString().toLowerCase();
    str=str.split(' ');
    for(let i in str){
           str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);
    }
    return str;
}
console.log(titleCaps(str));

console.log("-------------------");
console.log("IIFE fnc.");

//IIFE fn.

var str=['im a good developer'];
(function (str){
   str = str.toString().toLowerCase();
    str=str.split(' ');
    for(let i in str){
           str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);
    }
    console.log(str);
})(str);
```

Output:

```
Anonymous Fnc.
[ 'Im', 'A', 'Good', 'Developer' ]
-------------------
IIFE fnc.
[ 'Im', 'A', 'Good', 'Developer' ]
```

Execution Time:

```
0.067s
```

Memory Used:

```
8140kb
```

3.Sum of all numbers in an array

```
console.log("Anonymous Fnc.");

var arr=[1,2,3,4,5];
var sumArray=function (arr){
  let sum=0;
  for(let i in arr){
    sum=sum+arr[i]
  }
  console.log(sum);
}
sumArray(arr);

console.log("-------------------");
console.log("IIFE fnc.");

//IIFE fn.

var arr=[1,2,3,4,5];
(function (arr){
  let sum=0;
  for(let i in arr){
    sum=sum+arr[i]
  }
  console.log(sum);
})(arr);
```

Output:

```
Anonymous Fnc.
15
-------------------
IIFE fnc.
15
```

Execution Time:

```
0.067s
```

Memory Used:

```
8156kb
```

4.Return all the prime numbers in an array

```
console.log("Anonymous Fnc.");

var arr=[1,2,3,4,5,6,7,8,9,10];
var primearr=function (arr){
    let c=[];
    for(let i in arr){
        if(isPrime(arr[i])===true){
            c.push(arr[i]);
        }
    }
     console.log(c);
     function isPrime(num) {
      for ( var i = 2; i < num; i++ ) {
        if ( num % i === 0 ) {
            return false;
        }
      }
      return true;
   }
}
primearr(arr);

console.log("-------------------");
console.log("IIFE fnc.");

//IIFE fn.

var arr=[1,2,3,4,5,6,7,8,9,10];
(function (arr){
    let c=[];
    for(let i in arr){
        if(isPrime(arr[i])===true){
            c.push(arr[i]);
        }
    }
     console.log(c);
     function isPrime(num) {
      for ( var i = 2; i < num; i++ ) {
        if ( num % i === 0 ) {
            return false;
        }
      }
      return true;
   }
})(arr);
```

Output:

```
Anonymous Fnc.
```

```
[ 1, 2, 3, 5, 7 ]
-------------------
IIFE fnc.
[ 1, 2, 3, 5, 7 ]
```

Execution Time:

```
0.067s
```

Memory Used:

```
8048kb
```

5.Return all the palindromes in an array

```
console.log("Anonymous Fnc.");

var str=['eye','box','mom','malayalam'];
var palindrome=function (str){
    let pstr=[];
    for(let i in str){
        if(isPalindrome(str[i])===true){
          pstr.push(str[i]);
        }
    }
    console.log(pstr);
   function isPalindrome(s){
    let strrev="";
    for(let i=s.length-1;i>=0;i--){
        strrev=strrev+s[i];
    }
    if(strrev===s){
       return true;
    }
    else
      return false;
  }
}
palindrome(str);

console.log("--------------------------------");
console.log("IIFE fnc.");

//IIFE fn.
var str=['eye','box','mom','malayalam'];
(function (str){
    let pstr=[];
    for(let i in str){
        if(isPalindrome(str[i])===true){
          pstr.push(str[i]);
        }
    }
    console.log(pstr);
   function isPalindrome(s){
    let strrev="";
    for(let i=s.length-1;i>=0;i--){
        strrev=strrev+s[i];
    }
    if(strrev===s){
       return true;
    }
    else
      return false;
  }
})(str);
```

Output:

```
Anonymous Fnc.
[ 'eye', 'mom', 'malayalam' ]
--------------------------------
IIFE fnc.
[ 'eye', 'mom', 'malayalam' ]
```

Execution Time:

```
0.068s
```

Memory Used:

```
8072kb
```

6.Remove duplicates from an array

```
console.log("Anonymous Function");
let arr=[1,2,5,2,1,8];
let removeDuplicates=function (arr){
    console.log([...new Set(arr)]);
}
removeDuplicates(arr);
console.log("--------------------");
console.log("IIFE function");

(function (arr){
    console.log([...new Set(arr)]);
})(arr);
```

Output:

```
Anonymous Function
[ 1, 2, 5, 8 ]
--------------------
IIFE function
[ 1, 2, 5, 8 ]
```

Execution Time:

```
0.068s
```

Memory Used:

```
8160kb
```

7.Median of two sorted arrays of same size

```
console.log("Anonymous Function");
let arr1=[10,20,30,40,50];
let arr2=[15,25,35,45,55];
var merge=function (arr1,arr2){
var mergearr=arr1.concat(arr2);
mergearr.sort();
var len=arr1.length;
var median=(mergearr[len]+mergearr[len-1])/2;
return median;
}
console.log(merge(arr1,arr2));

console.log("--------------------");
console.log("IIFE function");


(function(arr1,arr2){
var mergearr=arr1.concat(arr2);
mergearr.sort();
var len=arr1.length;
var median=(mergearr[len]+mergearr[len-1])/2;
console.log(median);
})(arr1,arr2);
```

Output:

```
Anonymous Function
32.5
--------------------
```

```
IIFE function
32.5
```

Execution Time:

```
0.068s
```

Memory Used:

```
8116kb
```

8.Rotate an array by k times and return the rotated array

```
console.log("Anonymous Function");
let arr=[1,2,3,8,9,10];
let k=3;
var arrayRotation=function (arr,num){
  let i=0;
   while(k>0){
   let len=arr.length;
   let temp=arr[len-1];
     for(let i=len-1;i>0;i--){
        arr[i]=arr[i-1];
     }
   arr[i]=temp;
   k--;
   }
   console.log(arr);

}
arrayRotation(arr,k);
console.log("--------------------");
console.log("IIFE function");

(function (arr,num){
  let i=0;
   while(k>0){
   let len=arr.length;
   let temp=arr[len-1];
     for(let i=len-1;i>0;i--){
        arr[i]=arr[i-1];
     }
   arr[i]=temp;
   k--;
   }
   console.log(arr);

})(arr,k);
```

Output:

```
Anonymous Function
[ 8, 9, 10, 1, 2, 3 ]
--------------------
IIFE function
[ 8, 9, 10, 1, 2, 3 ]
```

Execution Time:

```
0.068s
```

Memory Used:

```
8128kb
```