GUVI CLASSROOM ASSIGNMENT-3

Q.1 Print odd numbers in an array

Anonymous function:

```
var arr=[1,2,3,4,5,6,7];
  var isOdd =function (a){
          if(a%2!=0){
          return true;
          }
          else{
          return false;
          }
  }
  for(let i=0;i<arr.length;i++){
          if(isOdd(arr[i])){
          console.log(arr[i])
          }
  }
```

IFFE function:

```
var arr=[1,2,3,4];
 (function (arr){
 for(let i=0;i<arr.length;i++){
   if (arr[i]%2!=0){
          console.log(arr[i]);
  }
 }
}(arr));
```

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

Anonymous function:

```
let arr=["hi","hello","how","happy"]
  var titleCaps =function (arr){
          for(let i=0;i<arr.length;i++){
          //converting string to array
          let str=arr[i].split("");
          //converting first letter of string to uppercase
          str[0]=str[0].toUpperCase();
          arr[i]=str.join("");
  }
  return arr;
  }
```

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

IFFE function:

```
var arr=["hi","hello","how","happy"]
  (function (arr){
        for(let i=0;i<arr.length;i++){
        //converting string to array
        let str=arr[i].split("");
        //converting first letter of string to uppercase
        str[0]=str[0].toUpperCase();
        arr[i]=str.join("");
  }
  console.log(arr);
  }(arr));
```

Q.3 Sum of all numbers in an array

Anonymous function:

```
let arr=[1,2,3,5,64,9,8];
  var arrSum =function (arr){
        let sum=0
        for(let i=0;i<arr.length;i++){
        sum+=arr[i];
  }
  return sum;
  }
  console.log(arrSum(arr));
```

IFFE function:

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

Q.4.Return all the prime numbers in an array.

Anonymous function:

```
let arr=[1,2,3,5,64,9,8];
  var prime =function (num){
      if(num===1){
```

```
        return false;
    }
        for(let i=2;i<=Math.pow(num,0.5);i++){
            if(num%i===0){
                return false;
            }
        }
        return true;
}
for(let i=0;i<arr.length;i++){
    if(prime(arr[i])){
        console.log(arr[i])
    }
}
```

IFFE function:

```
var arr=[1,2,3,5,64,9,8];
  for(let i=0;i<arr.length;i++){
    if((function (num){
      if(num===1){
          return false;
      }
          for(let i=2;i<=Math.pow(num,0.5);i++){
              if(num%i===0){
                  return false;
              }
          }
          return true;

  }(arr[i]))){
        console.log(arr[i]);
    }
  }
```

Q.5 Return all the palindromes in an array.

Anonymous function:

```
var arr=[1,2,3,5,64,9,8,"peep"];
  var isPalindrome=function(item){
      item = String(item); //converting number into string
      for(let i=0;i<parseInt(item.length/2);i++){
        if(item[i]!=item[item.length-1-i]){
            return false;
        }
      }
      return true;
  }
  for (let i=0;i<arr.length;i++){
      if(isPalindrome(arr[i])){
```

```
        console.log(arr[i]);
    }
  }
});
```

IFFE function:

```
var arr=[1,2,3,5,64,9,8,"peep"];

  for (let i=0;i<arr.length;i++){
     if((function(item) {
        item = String(item);
     for(let i=0;i<+(item.length/2);i++){
       if(item[i]!=item[item.length-1-i]){
          return false;
       }
     }
     return true;
  }
        (arr[i]))){
        console.log(arr[i]);
     }
  }
```

Q.6.Return median of two sorted arrays of same size

Anonymous function:

```
var numarr1=[1,2,3,4,5,6];
  var numarr2=[7,8,9,10,11,12]

  var median=function(arr1,arr2){
     let newarr=arr1.concat(arr2);
     newarr=newarr.sort(function(a,b)return {b-a})
     let midIndex=parseInt(newarr.length/2);
     return(newarr[midIndex]+newarr[midIndex-1])/2;
  }
  console.log(median(numarr1,numarr2))
```

IFFE function:

```
var numarr1=[1,2,3,4,5,6];
  var numarr2=[7,8,9,10,11,12];

  (function (arr1,arr2){
     let newarr=arr1.concat(arr2);
     newarr=newarr.sort(function(a,b)return {b-a})
```

```
    let midIndex=parseInt(newarr.length/2);
    console.log((newarr[midIndex]+newarr[midIndex-1])/2);

}(numarr1,numarr2));
```

Q.7.Remove duplicates from an array

Anonymous function:

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

 var removeDuplicate=function(arr){
    for(i=0;i<arr.length-1;i++){
       for(j=i;j<arr.length;j++){
          if(arr[i]==arr[j]){
             arr.pop(arr[j]);
          }
       }
    }
    return arr;
 }
 console.log(removeDuplicate(arr))
```

IFFE function:

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

 (function(arr){
    for(i=0;i<arr.length-1;i++){
       for(j=i;j<arr.length;j++){
          if(arr[i]==arr[j]){
             arr.pop(arr[j]);
          }
       }
    }
    console.log(arr);
 }(arr));
```

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

Anonymous function:

```
var arr=[1,2,3,4,5,6,7];
 var shift=2;

 var rotateArray=function(arr,shift){
    //assuming shift<length of array
    let str=arr.join("");
    str=str.slice(arr.length-shift,arr.length)+str.slice(0,arr.length-shift);
```

```
    return(str.split("").map(Number));
  }
  console.log(rotateArray(arr,shift));
```

IFFE function:

```
var arr=[1,2,3,4,5,6,7];
  var shift=2;

  (function(arr,shift){
     //assuming shift<length of array
     let str=arr.join("");
     str=str.slice(arr.length-shift,arr.length)+str.slice(0,arr.length-shift)

     console.log(str.split("").map(Number));
  }(arr,shift));
```