**TASK 3**

**1.print odd numbers in an array?**

**function:**

**var odd=function(){**

**var array=[]**

**for(i=0;i<15;i++){**

**array.push(i);**

**if(i%2!==0){**

**console.log(i)**

**}**

**}**

**}**

**odd()**

**iife function:**

**(function(){**

**var array=[]**

**for(i=0;i<15;i++){**

**array.push(i);**

**if(i%2!==0){**

**console.log(i)**

**}**

**}**

**})**

**(15)**

**Output:**

**1**

**3**

**5**

**7**

**9**

**11**

**13**

**2.Sum of all numbers in an array ?**

**function:**

var anonymous = function (arr) {

let sum=0;

for(let i=0;i<arr.length;i++){

sum+=arr[i];

}

return sum;

};

let arr=[1,2,3,4,5];

let s=anonymous(arr);

console.log(s);

**iife function**

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

var sum=0;

(function(a){

for(var i in a){

sum+=a[i];

}

console.log(sum);

})(arr);

**Output :**

**15**

**3.ALL prime numbers in the array?**

**anonymous function:**

**var prime=function(input){**

**var num = []**

**for (var i in input) {**

**var count = 0;**

**for (var j = 2; j<=input[i]; j++){**

**if(input[i] % j === 0) {**

**count = count + 1;**

**}**

**}**

**if (count === 1){**

**num.push(input[i]);**

**}**

**}**

**return console.log(num)**

**}**

**prime([1,2,3,4,5,6,7,8,9,10]);**

**iife function:**

**(function(input){**

**var num = []**

**for (var i in input) {**

**var count = 0;**

**for (var j = 2; j<=input[i]; j++){**

**if(input[i] % j === 0) {**

**count = count + 1;**

**}**

**}**

**if (count === 1){**

**num.push(input[i]);**

**}**

**}**

**return console.log(num)**

**})**

**([1,2,3,4,5,6,7,8,9,10]);**

**Output:**

**[ 2, 3, 5, 7 ]**

**4.return all the palindromes in an array?**

**function:**

**var palindrome = function(array){**

**var str = "";**

**var rev = "";**

**for(var i in array){**

**rev = array[i].split("").reverse().join("");**

**if(rev===array[i]){**

**str = str + " " + array[i];**

**}**

**}**

**console.log(str);**

**}**

**palindrome(["hello", "madam"]);**

**iife function:**

**var arr=['hello','madam'];**

**(function(a){**

**for(var i in a){**

**var n=a[i].length-1;**

**var c=0;**

**for(var j=0;j<=(a[i].length-1)/2;j++){**

**if(a[i][j]!=a[i][n--])**

**c=1;**

**}**

**if(c===0)**

**console.log(a[i]);**

**}**

**})(arr);**

##### **Output:**

**madam**

**5.Convert all the strings to title caps in a string array ?**

**function:**

**var titleCase = function (string) {**

**var sentence = string.toLowerCase().split();**

**for(var i = 0; i< sentence.length; i++){**

**sentence[i] = sentence[i][0].toUpperCase()+sentence[i].slice(1);**

**}**

**console.log(sentence);**

**}**

**titleCase("this is task");**

**iife function:**

**var arr = ["this is task"]**

**arr=arr.map(function(e){**

**return e.toLowerCase();**

**});**

**(function(arr){**

**for(var i in arr){**

**arr[i]=arr[i].charAt(0).toUpperCase()+arr[i].slice(1);**

**console.log(arr[i]);**

**}**

**})(arr);**

##### **Output:**

**This is task**

**6.Remove duplicates from an array ?**

**function:**

**var a=[2,3,3,4,5,5,6,6,7,77,7,8,99,9];**

**var result=function(a){**

**a=a.sort((a,b)=>a-b);**

**var res=[];**

**for(var i=0;i<a.length-1;i++){**

**if(a[i]!==a[i+1])**

**res.push(a[i]);**

**}**

**res.push(a[a.length-1]);**

**for(var i in res)**

**console.log(res[i]);**

**}**

**result(a);**

**iife function:**

**(function(a){**

**a=a.sort((a,b)=>a-b);**

**var res=[];**

**for(var i=0;i<a.length-1;i++){**

**if(a[i]!==a[i+1])**

**res.push(a[i]);**

**}**

**res.push(a[a.length-1]);**

**for(var i in res)**

**console.log(res[i]);**

**})([2,3,3,4,5,5,6,6,7,77,7,8,99,9]);**

##### **Output:**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**77**

**99**

**7.Rotate an array by k times and return the rotated array?**

**function:**

var a=[2,3,4,5,6,7,8,9];

var k=5;

var result=function(a,k){

var t=[];

for(var i=0;i<a.length;i++)

t[(i+k)%a.length]=a[i];

for(var i in t)

console.log(t[i]);

}

result(a,k);

**iife function:**

var a=[2,3,4,5,6,7,8,9];

var k=5;

(function(a,k){

var t=[];

for(var i=0;i<a.length;i++)

t[(i+k)%a.length]=a[i];

for(var i in t)

console.log(t[i]);

})(a,k);

##### **Output:**

**5**

**6**

**7**

**8**

**9**

**2**

**3**

**4**

**8.Return median of two sorted arrays of same size ?**

**var arr=[2,3,4,5,6,7,8];**

**var arr1=[3,4,5,6,7,8,9];**

**var result=function(arr,arr1){**

**var newarray=arr.concat(arr1);**

**newarray=newarray.sort((a,b)=>a-b);**

**var median;**

**//since length will be even**

**median=(newarray[(newarray.length)/2]+newarray[(newarray.length/2)-1])/2;**

**console.log(median);**

**}**

**result(arr,arr1)**

**iife function:**

var arr=[2,3,4,5,6,7,8];

var arr1=[3,4,5,6,7,8,9];

(function(arr,arr1){

var newarray=arr.concat(arr1);

newarray=newarray.sort((a,b)=>a-b);

var median;

median=(newarray[(newarray.length)/2]+newarray[(newarray.length/2)-1])/2;

console.log(median);

})(arr,arr1);

##### **Output:**

**5.5**