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// Do the below programs in anonymous function and IIFE
//1. Print odd numbers in an array
// anonymous function
let num=function(){
    let arr =[1,2,3,4,5,6]
    let odd=[]
    for(let i in arr )
    {
        if(i%2!==0)
        {
            odd.push(i)
        }
    }
    console.log(odd.toString())
}
num();

// IIFE

(function(){
    let arr =[1,2,3,4,5,6];
    let odd=[]
    for(let i in arr )
    {
        if(i%2!==0)
        {
            odd.push(i)
        }
    }
    console.log(odd.toString())
})();

// 2.Convert all the strings to title caps in a string array
// anonymous function
let oldstr="hello world"
let str=function(){
    let split=oldstr.split("")[0].toUpperCase()
    for(let i=1;i<parseInt(oldstr.length);i++)
    {

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        split=split+oldstr[i];
    }
    console.log(split);
}
str();
// IIFE
let oldstr="hello world";
( function(){
    let split=oldstr.split("")[0].toUpperCase()
    for(let i=1;i<parseInt(oldstr.length);i++)
    {
        split=split+oldstr[i];
    }
    console.log(split);
}) ();

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*//3. Sum of all numbers in an array*

*// anonymous function*

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let num=[1,2,3,4,5];
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let add=0;
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*// console.log(num.length)*

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let sum=function(){
```

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for( let i in num ){
```

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    add=add+num[i]
```

```
}
```

```
return add
```

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}
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```
console.log(sum());
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```
let num2=[1,2,3,4,5];
```

```
let add2=0;
```

*// IIFE*

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(function(){
```

```
    for( let i in num2 )
```

```
    {
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```
        add2=add2+num2[i]
```

```
    }
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console.log(add2)
}) ();

//4. Return all the prime numbers in an array
// anonymous function
let primenum=function (){
    let a=[8,2,3,4,5,6,19];
    let arr=[];
    for(j=0;j<a.length;j++)
    {
        val="prime"
        for(i=2;i<a[j];i++)
        {
            if(a[j]%i===0)
            {
                val="not prime"
                break;
            }
        }
        if (val=="prime")
        {
            arr.push(a[j])
        }
    }
    console.log(arr)
}
primenum();

// IIFE
(function (){
    let a=[8,2,3,4,5,6,19];
    let arr=[];
    for(j=0;j<a.length;j++)
    {
        val="prime"
        for(i=2;i<a[j];i++)
        {
            if(a[j]%i===0)
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        {
            val="not prime"
            break;
        }
    }
    if (val=="prime")
    {
        arr.push(a[j])
    }

}
console.log(arr)
}) ();

// 5.Return all the palindromes in an array
// anonymous function
let arrayfunct=function(){

let arr=["asd","ala","prso"];
let str="",lstr="",newarr=[]
for(let i=0;i<arr.length;i++)
{
    str=arr[i].split("");
    lstr=str.reverse();
    if(str.toString()==(str.reverse().toString())){
        newarr.push(arr[i]);
    }
}
console.log(newarr)
}
arrayfunct();
// IIFE
(function(){

    let arr=["asd","ala","prso"];
    let str="",lstr="",newarr=[]
    for(let i=0;i<arr.length;i++)
    {
        str=arr[i].split("");

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        lstr=str.reverse();
        if(str.toString()==(str.reverse().toString())){
            newarr.push(arr[i]);
        }
    }
    console.log(newarr)
}) ();

//6. Return median of two sorted arrays of same size
// anonymous function
let func=function(){
    let a=[8,100,3,4,10,6];
    let b=[3,4,6,8,9]
    let arrconcat =a.concat(b)
    let ans=0
    let sortedarray=arrconcat.sort(function(x, y){return x - y});
    if(arrconcat.length%2!==0)
    {
        let mid=(sortedarray.length)/2;
        ans=Math.round(mid);
    }
    console.log(arrconcat[ans-1])
}
func();
// IIFE
(function(){
    let a=[8,100,3,4,10,6];
    let b=[3,4,6,8,9]
    let arrconcat =a.concat(b)
    let ans=0
    let sortedarray=arrconcat.sort(function(x, y){return x - y});
    if(arrconcat.length%2!==0)
    {
        let mid=(sortedarray.length)/2;
        ans=Math.round(mid);
    }
    console.log(arrconcat[ans-1])
}) ();

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//7.Remove duplicates from an array
// anonymous function
let dup=function(){
    let a=[1,2,3,4,1,1,2,3]
    let uniqueChars = [...new Set(a)];
    console.log(uniqueChars)}
    dup();
    // IIFE
(function(){
    let a=[1,2,3,4,1,1,2,3]
    let uniqueChars = [...new Set(a)];
    console.log(uniqueChars)}}());

//8. Rotate an array by k times and return the rotated array
// anonymous function
let rot=function(){let a=[1,2,3,4],b=[]
    let times=3
    for (let i = 0; i < times; i++) {
        a.unshift(a.pop());
        console.log(a);
    }
}
rot()
// IIFE
(function(){let a=[1,2,3,4],b=[]
    let times=3
    for (let i = 0; i < times; i++) {
        a.unshift(a.pop());
        console.log(a);
    }
})();

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