March 7 Assignment

Write a Function that takes an array of numbers and returns a new array with each number doubled.

```
function double(n)
{
    return 2*n;
}

arr = new Array(1,2,3,4,5);
var new_arr = arr.map(double);
console.log(new_arr);
```

Implement a function that accept an array of number and return a new array with each number squared.

```
function square(n)
{
    return n*n;
}

arr = new Array(2,3,4);
var new_arr = arr.map(square);
console.log(new_arr);
```

Create a function that takes an array of object representing people that name and age propertis and return a new array with just the name.

```
function findAge(cals){
    return cals.age;
};

let student = [
```

```
    {
        name:"Abhishek",
        age:21
    },
    {
        name:"Shivam",
        age:23
    },
    {
       name:"Prakhar",
       age:24
    },
  ];
var new_arr=student.map(findAge);
console.log(new_arr);
```

Write a function that filters an array of numbers and return only the even numbers

```
function EvenNo(check)
{
    if(check%2===0)
    {
        return check;
    }
}
arr = new Array(1,2,3,4,5,6);
console.log(arr.filter(EvenNo));
```

Implement a function that filters an array of numbers and return only the number greater than 10

```
function check(val)
{
    if(val>10){
        return val;
    }
```

```
}


arr = new Array(8,2,12,34,8,6,65,45,2,67);
let data = arr.filter(check);
console.log(data);
```

Create a function that filters an array of object representing books with title and pages properties and return only the books with more than 300pages

```
let book = [
    {
      title:"Book 1",
      pages:200,
    },
    {
        title:"Book 2",
        pages:350,
    },
    {
        title:"Book 3",
        pages:400
    },
    ];

function checkBook(cal)
{
    if(cal.pages>300){
        return cal;
    }
}

let val = book.filter(checkBook);
console.log(val);
```

Write a function that takes an array of numbers , square each number , and return the sum of the squared numbers

```
function squareSum(num){
    let t_sum=0;
    for(let i=0;i<num.length;i++)
    {
        t_sum+=num[i]*num[i];
    }
    return t_sum;
}

arr = new Array(1,2,3,4,5;
console.log(squareSum(arr));
```

Implement the function that takes an array of string , filters out string longer than 5 characters and return a new array with remaining string capitalized

```
function checkLength(val){
         //let newArr=[];
         let ans=[];
            if(val.length<=5)
              {
                 ans.push(val.toUpperCase());
              }
        for(let i=0;i<ans.length;i++)
        {
            console.log(ans[i]);
        }
}
arr = new Array('apple','bnana','orange','strawberry');
let ans = arr.filter(checkLength);
```

Write a function that takes an array of numbers and return a new array with each number raised to the power of its index

```
function check(val,index)
{
    return Math.pow(index+1,val)
}
let i=0;
arr = new Array(2,3,4);
let ans = arr.map(check,i+1);
console.log(ans);
```

Implement a function that accepts an array of numbers and return a new array with each number incremented by its index

```
function check(val,index)
{
    return val+index;
}
let i;
arr = new Array(1,2,3,4);
let ans = arr.map(check,i);
console.log(ans)
```

Implement a function that filters an array of strings and return only the string starting with vowels

```
function check(val){
    let Narr=[];
    if(val[0]=='a'||val[0]=='e'||val[0]=='o'||val[0]=='u')
    {
        Narr.push(val.toUpperCase());
    }
    for(let i=0;i<Narr.length;i++)
    {
        console.log(Narr[i]);
    }
}
```

```
arr = new Array("abhi","shek","shyam","ram","rohit","virat","ut
let ans = arr.filter(check)
```

Create function that flattens an arrays into single array

```
function fun(arr){
    return arr.reduce((acc,cur)=>acc.concat(cur),[]);
}
const arr = [[1,2],[3,4],[5,6]];

console.log(fun(arr))
```

Implement a function that finds the largest string in an array of strings

```
function check(val)
{
   return val.reduce((a,b)=>a.length>=b.length?a:b,"");
}
arr = ["abhishek","Mishra","ram","shivam","Prakhar"];

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