- Q: How does the `map` method work in JavaScript, and can you provide an example of when you might use it to manipulate an array of objects?

```javascript
const people=[
    {name:'Anwar',age:2},
    {name:'Asim',age:2},
    {name:'zul',age:2}
]

const Secondname=people.map(person =>({
    name:person.name,
    ag:person.age*2
}));

console.log(Secondname);
```

output:

```
PS E:\Learn JavaScript\Third-Task> node App.js
[
  { name: 'Anwar', ag: 4 },
  { name: 'Asim', ag: 4 },
  { name: 'zul', ag: 4 }
]
```

Q: Create Table with function whatever number push in function then this function created table

```javascript
function table(givemenumber){
    arr=[];
    for (let index = 0; index < 11; index++) {
        if(index !=0)
        {
        arr += givemenumber+' X '+index+' = ' + givemenumber*index+' '+'\n';
        }
    }
    return arr;
}
console.log(table(55));
```

output:

```
PS E:\Learn JavaScript\Third-Task> node App.js
55 X 1 = 55
55 X 2 = 110
55 X 3 = 165
55 X 4 = 220
55 X 5 = 275
55 X 6 = 330
55 X 7 = 385
55 X 8 = 440
55 X 9 = 495
```

Explain the purpose of the `filter` method. Provide an example where you use `filter` to extract elements from an array based on a specific condition?

```javascript
    const givemeArray=[1,2,3,4,5,6,7,8,9];
    const Secondname=givemeArray.filter(number => number % 2==0);

console.log(Secondname);
```

output:

```
PS E:\Learn JavaScript\Third-Task> node App.js
[ 2, 4, 6, 8 ]
```

- Q: Discuss the default behavior of the `sort` method for strings and numbers. How would you use a custom comparison function to sort an array of objects by a specific property?

```javascript
const obj=[
    {name:'Anwar',age:25},
    {name:'Asim',age:23},
    {name:'Zul',age:22},
];

obj.sort((a,b) => a.age-b.age);
console.log(obj);
```

output:
```
PS E:\Learn JavaScript\Third-Task> node App.js
[
  { name: 'Zul', age: 22 },
  { name: 'Asim', age: 23 },
  { name: 'Anwar', age: 25 }
]
```

- Q: How does the `find` method differ from `filter`? Give an example of a scenario where using `find` is more appropriate than `filter`

Ans :

find

method pehle Array me check karega agr is ko pehli value milte hi Array se bahir ajae ga or agr nahi mili to undefined show kare ga

find ka method element return karta he.

filter

method pehle Array me check karega pori value agr is ko value mil gayi to Array return kare ga or agr nahi mili to khali Array show kare ga

Explain the concept of callback functions in the context of array methods. Provide an example of using a callback function with the `map` method.

```
// Original array
const numbers = [1, 2, 3, 4, 5];

// Callback function for the map method
const square = (num) => num * num;

// Using map with the callback function
const squaredNumbers = numbers.map(square);

console.log(squaredNumbers);
// Output: [1, 4, 9, 16, 25]
```

Output:
```
PS E:\Learn JavaScript\Third-Task> node App.js
[ 1, 4, 9, 16, 25 ]
```

2. **Filter and Map Combination:**
- Q: Take an array of strings, filter out the ones with a length less than 5, and then capitalize the remaining strings using the `map` method.

```
let arr=['apple','mango','bana','kiwi'];

let name = arr.filter((Secondname)=>Secondname.length > 3);
name = arr.map((Secondname)=>Secondname.toUpperCase());

console.log(name);
```

output
```
PS E:\Learn JavaScript\Third-Task> node App.js
[ 'APPLE', 'MANGO', 'BANA', 'KIWI' ]
```