Exercise:Introduction to javascript

1. Prompt for amount, interest rate and no. of years and calculate simple interest.

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Assignment</title>

    <script src="app.js"></script>
</head>
<body>
    <button onclick="simple_interset()">CLICK</button>
</body>

</html>
```

```javascript
function simple_interset()
{
var amt=prompt("Enter amount");
var r=prompt("Enter rate");
var t=prompt("Enter time");
var p=(amt/(1+(r*t)));
var si=(p*r*t)/100;
document.write("Simple Interest:"+si);
}
```

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Simple Interest:0.9411764705882354

2. is palindrome string

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Assignment</title>

    <script src="app.js"></script>
</head>
<body>
    <button onclick="palindrome()">CLICK</button>
</body>

</html>
```

```javascript
function palindrome() {
    var str = prompt("Enter String");
    var len = str.length;
    var mid = Math.floor(len/2);

    for ( var i = 0; i < mid; i++ ) {
        if (str[i] !== str[len-1-i]) {
            document.write("FALSE");
            return false;
        }
    }
    document.write("TRUE");
    return true;
}
```

TRUE

3. Area of circle
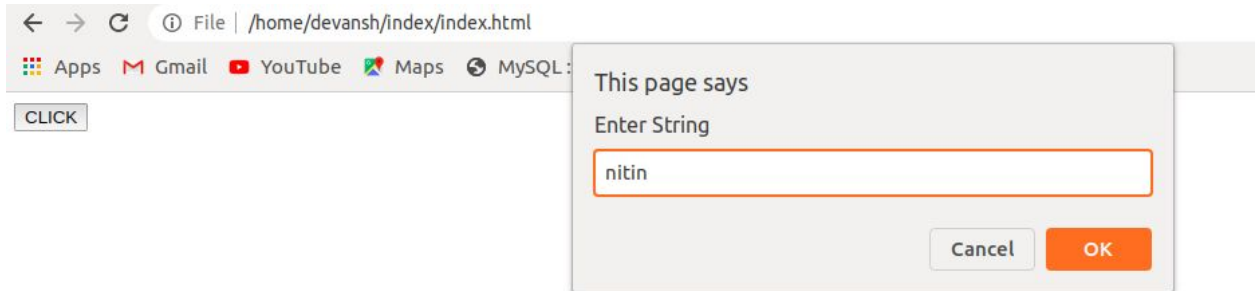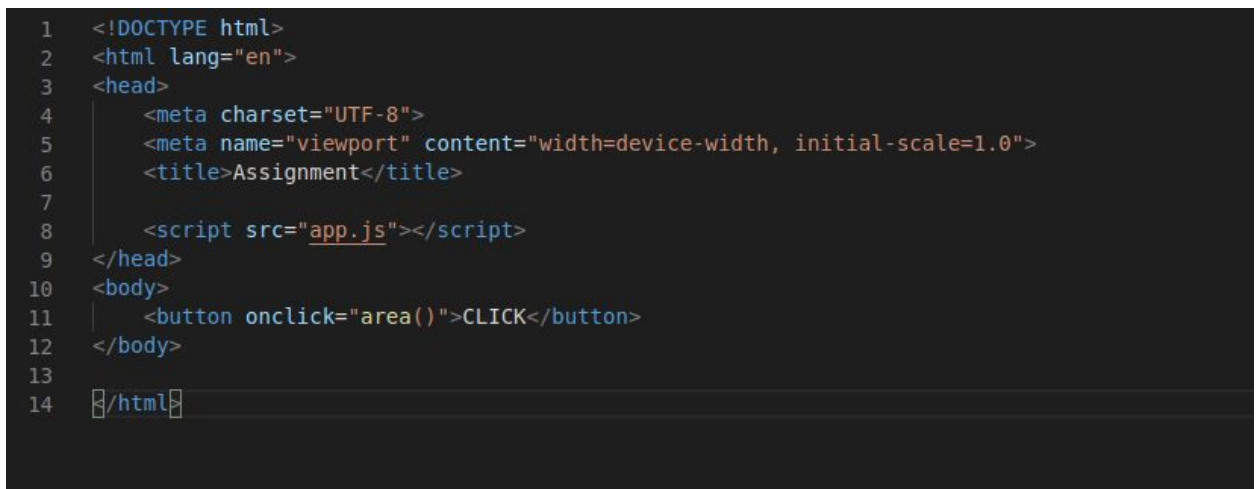
```
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <title>Assignment</title>
7
8       <script src="app.js"></script>
9   </head>
10  <body>
11      <button onclick="area()">CLICK</button>
12  </body>
13
14  </html>
```
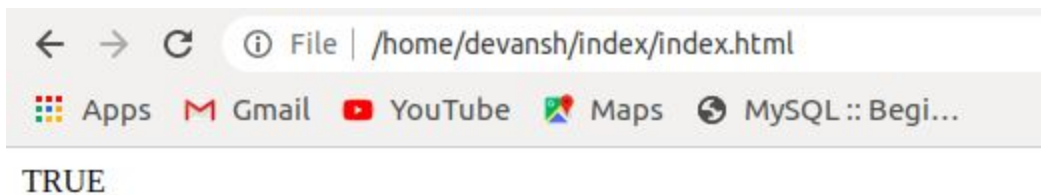
```
function area()
{
    var r=prompt("Enter radius");
    var a=3.14*r*r;
    document.write("Area of Circle: "+a);

function copy_q()
{
    const obj1={a:1,b:2};
    const obj2={c:4,d:5};
    const output=Object.assign(obj1,obj2);
    console.log(output);

}
```

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CLICK

This page says

Enter radius

5

Cancel   OK

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Area of Circle: 78.5
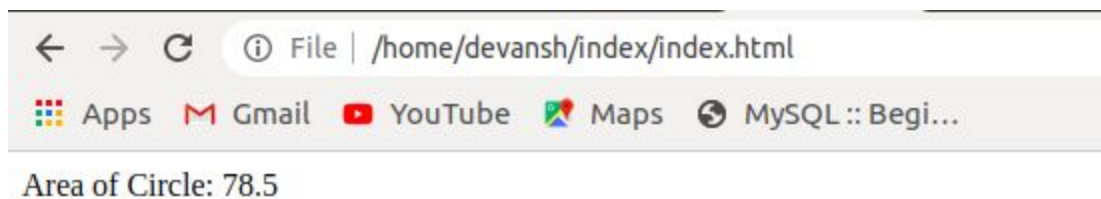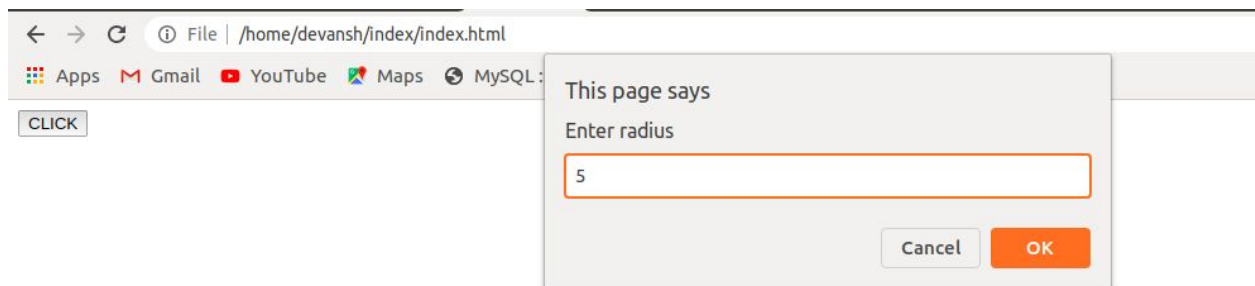
4. Copy information of one object to another and log it to console.

```html
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Assignment</title>
7
8      <script src="app.js"></script>
9  </head>
10 <body>
11     <button onclick="copy_q()">CLICK</button>
12 </body>
13
14 </html>
```

```javascript
function copy_q()
{
    const obj1={a:1,b:2};
    const obj2={c:4,d:5};
    const output=Object.assign(obj1,obj2);
    console.log(output);

}
```

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▶ {a: 1, b: 2, c: 4, d: 5}   app.js:41

5. create a list of objects of Employee with info as follow :
   ○ Name, age, salary ,DOB

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Assignment</title>

    <script src="app.js"></script>
</head>
<body>
</body>

</html>
```
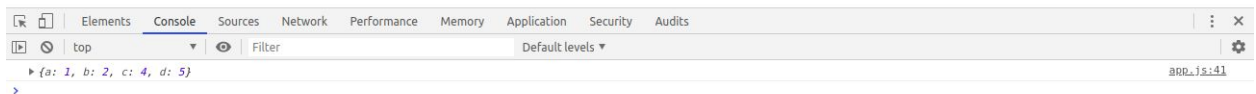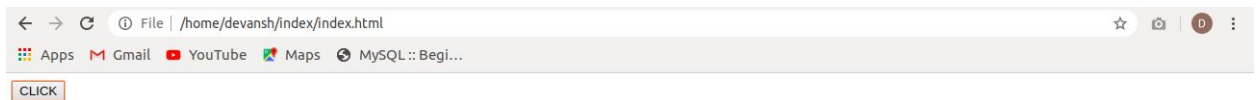
```
var list=[
    {name:"Devansh",age:22,salary:500,DOB:'09/09/1997'},
    {name:"Rishi",age:20,salary:200,DOB:'04/09/1997'},
    {name:"Samar",age:20,salary:3000,DOB:'13/09/1997'},
    {name:"Suraj",age:23,salary:4000,DOB:'02/09/1997'},
    {name:"Chirag",age:25,salary:5000,DOB:'18/09/1997'},
    {name:"Henry",age:25,salary:600,DOB:'25/09/1997'},
    {name:"Ben",age:18,salary:7000,DOB:'30/09/1997'}
];

function employee()
{
    console.log(list);
}
employee();
```


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```
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▶ ⊘  top            ▼ ◎  Filter                              Default levels ▼                                          ⚙
▼ (7) [{…}, {…}, {…}, {…}, {…}, {…}, {…}] ⓘ                                                                  app.js:57
  ▶ 0: {name: "Devansh", age: 22, salary: 500, DOB: "09/09/1997"}
  ▶ 1: {name: "Rishi", age: 20, salary: 200, DOB: "04/09/1997"}
  ▶ 2: {name: "Samar", age: 20, salary: 3000, DOB: "13/09/1997"}
  ▶ 3: {name: "Suraj", age: 23, salary: 4000, DOB: "02/09/1997"}
  ▶ 4: {name: "Chirag", age: 25, salary: 5000, DOB: "18/09/1997"}
  ▶ 5: {name: "Henry", age: 25, salary: 600, DOB: "25/09/1997"}
  ▶ 6: {name: "Ben", age: 18, salary: 7000, DOB: "30/09/1997"}
    length: 7
  ▶ __proto__: Array(0)
>
```
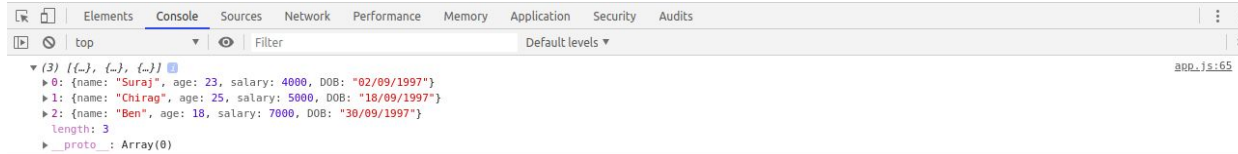
- ○ filter all employees with salary greater than 5000

```
function salary()
{
    var filterx=list.filter(list => list.salary>3000);
    console.log(filterx);
}
salary();
```

```
▼ (3) [{…}, {…}, {…}]                                                                                    app.js:65
  ▶ 0: {name: "Suraj", age: 23, salary: 4000, DOB: "02/09/1997"}
  ▶ 1: {name: "Chirag", age: 25, salary: 5000, DOB: "18/09/1997"}
  ▶ 2: {name: "Ben", age: 18, salary: 7000, DOB: "30/09/1997"}
    length: 3
  ▶ __proto__: Array(0)
```

○ group employee on the basis of their age

```javascript
function groupEmployee()
{
    var group=list.reduce((r,a)=>
    {
        console.log(r);
        r[a.age]=[...r[a.age] || [],a];
        return r;
    }

    )}
    (groupEmployee())();
```

```
▶ {name: "Devansh", age: 22, salary: 500, DOB: "09/09/1997"}                                            app.js:88
▶ {20: Array(1), name: "Devansh", age: 22, salary: 500, DOB: "09/09/1997"}                              app.js:88
▶ {20: Array(2), name: "Devansh", age: 22, salary: 500, DOB: "09/09/1997"}                              app.js:88
▶ {20: Array(2), 23: Array(1), name: "Devansh", age: 22, salary: 500, DOB: "09/09/1997"}                app.js:88
▶ {20: Array(2), 23: Array(1), 25: Array(1), name: "Devansh", age: 22, salary: 500, DOB: "09/09/1997"}  app.js:88
▶ {20: Array(2), 23: Array(1), 25: Array(2), name: "Devansh", age: 22, salary: 500, DOB: "09/09/1997"}  app.js:88
```

○ fetch employees with salary less than 1000 and age greater than 20. Then give them an increment 5 times their salary.

```
function abcz()
{

    var xy=list.filter(list =>
        {
        if(list.salary<1000 && list.age>20)
        {

            list.salary=list.salary*5;
            return true;
        }
        })
        console.log(xy);
    };
(abcz())();
```

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▼ (2) [{…}, {…}] 🔵   app.js:80
  ▶ 0: {name: "Devansh", age: 22, salary: 2500, DOB: "09/09/1997"}
  ▶ 1: {name: "Henry", age: 25, salary: 3000, DOB: "25/09/1997"}
    length: 2
  ▶ __proto__: Array(0)
❌ ▶Uncaught TypeError: abcz(...) is not a function   app.js:82
       at app.js:82
>