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Exercise 5

Introduction to JavaScript

Question 1. Prompt for amount, interest rate(in %) and no. of years and calculate simple interest.

Answer: Simple interest for Amount 56874, for rate 6.7777 and time 4 is 15418.996392000001

Question 2. is palindrome string

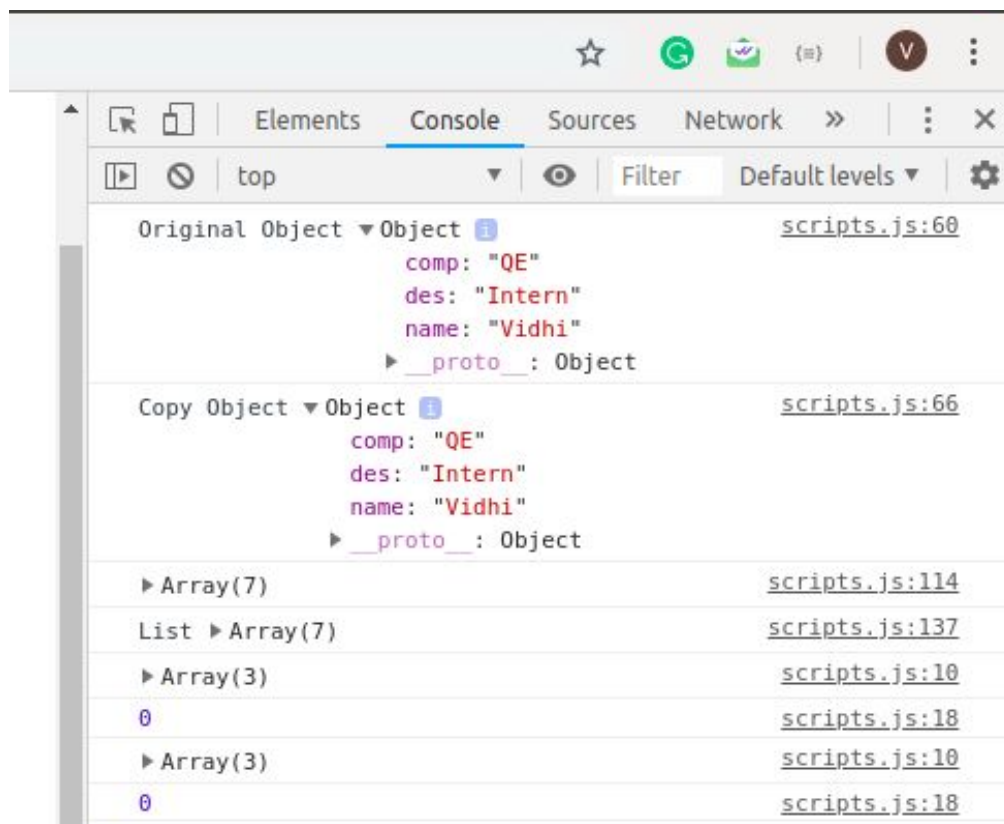
Answer: nit=tin is a Palindrome

Question 3. Area of circle

Answer: Area of Circle with radius 7 is 153.93804002589985

Question 4. Copy information of one object to another and log it to console.

Answer: In console



Question 5. create a list of objects of Employee with info as follow :

- Name, age, salary ,DOB

Answer:

```
[{"name":"ABC","age":24,"salary":40000,"dob":"01/01/1994"},  
{"name":"DEF","age":23,"salary":5000,"dob":"02/02/1995"},  
{"name":"IJK","age":24,"salary":4000,"dob":"03/03/1994"},  
{"name":"LMN","age":22,"salary":30000,"dob":"04/04/1996"},  
{"name":"OPQ","age":21,"salary":20000,"dob":"05/05/1997"},  
{"name":"RST","age":20,"salary":10000,"dob":"06/06/1998"},  
{"name":"UVW","age":23,"salary":900,"dob":"06/06/1995"}]
```

- filter all employees with salary greater than 5000

Answer:

```
[{"name":"ABC","age":24,"salary":40000,"dob":"01/01/1994"},  
{"name":"LMN","age":22,"salary":30000,"dob":"04/04/1996"},  
{"name":"OPQ","age":21,"salary":20000,"dob":"05/05/1997"},  
{"name":"RST","age":20,"salary":10000,"dob":"06/06/1998"}]
```

- group employee on the basis of their age

Answer:

```
[["For Age: 24","ABC","IJK"],["For Age: 23","DEF","UVW"],["For Age: 22","LMN"],  
["For Age: 21","OPQ"],["For Age: 20","RST"]]
```

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

Answer:

```
[{"name":"UVW","age":23,"salary":4500,"dob":"06/06/1995"}]
```

Please refer to index.html to see the actual output

Code for the following:

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

```
function interest(){  
    var a1 = document.getElementById('a1');  
    var str = prompt("Enter amount,rate and time.(format  
amount,rate,time)","a,r,t");  
  
    var arr = str.split(',');  
    console.log(arr);  
    var flag = 0;  
    for(var i = 0 ; i < arr.length ;i++){
```

```

        if(isNaN(arr[i])){
            flag = 1;
        }
        arr[i] = parseFloat(arr[i]);
    }
    console.log(flag);
    if(flag===1){
        a1.textContent = "Wrong Input";
    }
    else{
        var si = arr[0]*arr[1]*arr[2]/100;
        a1.textContent = "Simple interest for Amount "+arr[0]+", for rate
"+arr[1]+" and time "+arr[2]+" is "+si;
    }
}

```

=====

2. is palindrome string

```

function isPalindrome(){
    var q2 = document.getElementById('q2');
    q2 = q2.value;
    var a2 = document.getElementById('a2');
    var str = "";
    for(var i = q2.length - 1 ; i > -1 ; i-- ){
        str = str + q2[i];
    }
    if(q2 === str){
        a2.textContent = "" + q2 + " is a Palindrome";
    }else{
        a2.textContent = "" + q2 + " is not a Palindrome";
    }
}

```

=====

3. Area of circle

```
function areaCircle(){  
    var q3 = document.getElementById('q3');  
    q3 = q3.value;  
    var a3 = document.getElementById('a3');  
    var area = q3*q3*Math.PI;  
    a3.textContent = "Area of Circle with radius " + q3 + " is " + area;  
}
```

=====

4. Copy information of one object to another and log it to console.

```
function copyObj(){  
    var obj = {  
        name : "Vidhi",  
        comp : "QE",  
        des : "Intern"  
    }  
    console.log("Original Object",obj);  
    var newobj = {};  
    var k ;  
    for(k in obj){  
        newobj[k] = obj[k];  
    }  
    console.log("Copy Object",newobj);  
}
```

=====

5. create a list of objects of Employee with info as follow :

a. Name, age, salary ,DOB

```
function createList(){  
    var li = [  
        {name:"ABC",age: 24,salary : 40000,dob: "01/01/1994"},  
        {name: "DEF",age:23,salary: 5000,dob: "02/02/1995"},  
        {name: "IJK",age: 24,salary: 4000,dob:"03/03/1994"},  
        {name:"LMN",age: 22,salary: 30000,dob:"04/04/1996"},  
        {name:"OPQ",age: 21,salary: 20000,dob:"05/05/1997"},  
        {name:"RST",age: 20,salary: 10000,dob:"06/06/1998"},  
        {name:"UVW",age: 23,salary: 900,dob:"06/06/1995"}  
    ];  
    console.log(li);  
    var a41 = document.getElementById('a41');  
    var a42 = document.getElementById('a42');  
    var a43 = document.getElementById('a43');  
    var a44 = document.getElementById('a44');  
    a41.textContent = JSON.stringify(li);  
    a42.textContent = JSON.stringify(filterSalary(li));  
    a44.textContent = JSON.stringify(filterSalaryAndAge(li));  
    //console.log(li);  
    a43.textContent = JSON.stringify(groupByAge(li));  
}
```

b. filter all employees with salary greater than 5000

```
function filterSalary(list){  
    var arr=[];  
    for(var i = 0 ; i < list.length ; i++){  
        if(list[i]["salary"]>5000){
```

```

        arr.push(list[i]);
    }
}
return arr;
}

```

c. group employee on the basis of their age

```

function groupByAge(list) {
    console.log("List", list);
    var arr = [];
    var arr1 = list;
    for (var i = 0 ; i < arr1.length ; i++) {
        if (arr1[i]["age"] !== 0) {
            var arr2 = [];
            arr2.push("For Age: " + arr1[i]["age"]);
            arr2.push(arr1[i]["name"]);
            for (var j = i + 1 ; j < arr1.length; j++) {
                if (arr1[i]["age"] === arr1[j]["age"]) {
                    arr2.push(list[j]["name"]);
                    arr1[j]["age"] = 0;
                }
            }
            arr.push(arr2);
        }
    }
    return arr;
}

```

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

```
function filterSalaryAndAge(list){  
    var arr=[];  
    for(var i = 0 ; i < list.length ; i++){  
        if(list[i]["salary"]<1000 && list[i]["age"]>20){  
            list[i]["salary"] = list[i]["salary"] * 5;  
            arr.push(list[i]);  
        }  
    }  
    return arr;  
}
```

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