Assignment : Functions In Javascript

/*Q1. Create an arrow function called square that takes a number as an argument and returns its square. Use the arrow function to calculate the square of a given number and display the result.*/

```
//* Ans :
let MySqr = function(a){return a*a};

console.log(MySqr(25));
```

/*Q2. Create a JavaScript function called generateGreeting that takes a name as an argument and returns a personalized greeting message. Use this function to greet three different people.
*/

```
//Ans:
function generateGreeting(a){
    return "Hello "+a+"! ";
}
console.log(generateGreeting("Ronney"),generateGreeting("Radha"),
generateGreeting("Danny"));
```

/*Q3. Create an IIFE (Immediately Invoked Function Expression) that calculates the square of a number and immediately displays the result.*/

```
//* Ans:
(function(a){
    console.log(a*a);
})(12);
```

/*Q4. Write a JavaScript function called calculateTax that takes an income as an argument and returns the amount of tax to be paid. Use a closure to handle different tax rates based on income ranges. Test the function with various incomes.*/

```
//* Ans:
function CalcTax(i){
    if(i<1200000){
        return 0;
    }else{
        //* Tax upto 4 lakh is 0 and tax from 4-8 lakh is 5% so tax on first 4 lakhs is 5% and 8-12 is 10% so 10% on next 4 lakh.
        let first = 400000*5/100;
        let second = 400000/10;
        let third = 400000*15/100;

        if(i>2400001){
            return (i-2400001)*3/10 + 400000*20/100 + 400000*1/4 + third + second + first;
        }else if(i>2000000 && i<=2400000){
            return (i-2000000)*1/4 +400000*20/100 + third + second + first;

        }else if(i>1600000 && i<=2000000){
            return (i-1600000)*1/5 + third + second + first;
        }else{
            return (i-1200000)*10/100 + second +first;
        }

    }
}
console.log(CalcTax(1300000));

/*Q5. Write a JavaScript function called factorial that calculates the factorial of a non-negative integer using recursion. Test the function with different inputs.
*/

function factu(n){
    if(n<0){
        console.log("Enter Positive number please.");

    }else{
        if(n===1){
            return 1;
        }else{
            return n*factu(n-1);
        }
    }
}
```

```
let g = factu(-8);
console.log(g);



/*Q6. Write a JavaScript function called curry that takes a function as an argument and
returns a curried version of that function. The curried function should accept arguments
one at a time and return a new function until all arguments are provided. Then, it should
execute the original function with all arguments. Test the curry function with a function
that adds two numbers.*/
//* Ans:
function AddT(a){
    return function addon(b){
        return a +b;
    }
}
let sum = AddT(9);
console.log(sum(6));
```