**Javascript Assignment 1**

1. Write a program to find whether a given year is a leap year or not.

function leap(year) {

    if (year % 400 == 0  && year%100 != 0 || year%4 == 0) {

        console.log("leap year")

    }

    else {

        console.log("not leap year");

    }

}

leap(2018)

leap(1900)

Output

[Running] node "c:\Users\ADMIN\Documents\c\JS\_CODE\leap\_year.js"

not leap year

leap year

2. Write a JavaScript program to convert temperatures to and from Celsius, Fahrenheit.

[ Formula : c/5 = (f-32)/9 [ where c = temperature in Celsius and f = temperature in Fahrenheit ]

*Expected Output* :

60°C is 140 °F

45°F is 7.222222222222222°C

function tempFahreniteToCelsius(fahrenheit ) {

    var celsius = 0;

    celsius = 5 \* ((fahrenheit - 32) / 9);

    return celsius;

}

function tempCelsiusToFahrenheit(celsius) {

    var fahrenheit = 0;

    fahrenheit = ((celsius / 5 ) \* 9 ) + 32;

    return fahrenheit;

}

let cel = 60;

let b = tempCelsiusToFahrenheit(cel);

console.log(cel + " °C is " +b + " °F");

let fah = 45;

let a = tempFahreniteToCelsius(fah);

console.log(fah + " °F is " + a + " °C");

[Running] node "c:\Users\ADMIN\Documents\c\JS\_CODE\temp\_celcius\_fahr"

60 °C is 140 °F

45 °F is 7.222222222222222 °C

[Done] exited with code=0 in 0.294 seconds

3. Write a program to find the factorial of a number.

/\*Using Iterative method \*/

function factorial(num) {

    let res =1;

    if (num == 1 || num == 0) {

        return 1;

    }

    else {

        for(var i = 1; i<= num ;i++) {

            res = res \* (i);

        }

        return res;

    }

}

var a = factorial(5);

console.log(a);

/\* Using Recursion \*/

function factorial(num) {

    let res =1;

    if (num == 1 || num == 0) {

        return 1;

    }

    else {

        return num \* factorial(num-1);

    }

}

var a = factorial(6);

console.log(a);

[Running] node "c:\Users\ADMIN\Documents\c\JS\_CODE\index.js"

120

[Done] exited with code=0 in 0.205 seconds

/\* 0utput of recursion method \*/

[Running] node "c:\Users\ADMIN\Documents\c\JS\_CODE\index.js"

720

[Done] exited with code=0 in 0.19 seconds