Java programs

Day-1

1. Input a year and find whether it is a leap year or not

```java
import java.util.Scanner;
public class Leap {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        // year to be checked
        int year = sc.nextInt();
        boolean leap = false;

        // if the year is divided by 4
        if (year % 4 == 0) {

            // if the year is century
            if (year % 100 == 0) {

                // if year is divided by 400
                // then it is a leap year
                if (year % 400 == 0)
                    leap = true;
                else
                    leap = false;
            }

            // if the year is not century
            else
                leap = true;
        }

        else
            leap = false;

        if (leap)
            System.out.println(year + " is a leap year.");
        else
            System.out.println(year + " is not a leap year.");
    }
}
```

2. Take two numbers and print the sum of both.

```java
import java.util.Scanner;

public class Sum {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("enter the numbers: ");
        int n1 = sc.nextInt();
        int n2 = sc.nextInt();
        int sum = n1+n2;
        System.out.println("sum of two numbers : " + sum);
    }
}
```

3. Take a number as input and print the multiplication table for it.

```java
import java.util.Scanner;
public class Multiplication {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int k = sc.nextInt();
        for(int i=0;i<=k;i++){
            System.out.printf("%d * %d = %d \n",n,i,n*i);
        }
    }
}
```

4. Take 2 numbers as inputs and find their HCF and LCM.

```java
import java.util.Scanner;
public class HcfLcm {
    public static void main(String[] args) {
        int temp1,temp2,num1,num2,temp,hcf,lcm;
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter First Number: ");
        num1 = sc.nextInt();
        System.out.print("Enter Second Number: ");
        num2 = sc.nextInt();

        //assigning num1 ,num2 value to temp1,temp2
        temp1 = num1;
        temp2 = num2;

        while(temp2 != 0){
            temp = temp2;
            temp2 = temp1%temp2;
            temp1 = temp;
        }

        hcf = temp1;
        lcm = (num1*num2)/hcf;

        System.out.println("hcf: "+hcf);
        System.out.println("lcm: "+lcm);

    }
}
```

5. Keep taking numbers as inputs till the user enters 'x', after that print sum of all.

```java
import java.util.Scanner;

public class Calculator {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int ans = 0;
        while(true){
            System.out.println("enter the operator: ");
            char op = sc.next().trim().charAt(0);
            System.out.println( );
            if(op == '+' || op == '-' || op == '*' || op == '/' || op == '%'){
                System.out.print("enter the numbers: ");
                int num1  = sc.nextInt();
                int num2 = sc.nextInt();

                if(op == '+'){
                    ans = num1+num2;
                }
                if(op == '-'){
                    ans = num1-num2;
                }
                if(op == '*'){
                    ans = num1*num2;
                }
                if(op == '/'){
                    if(num2 != 0) {
                        ans = num1 / num2;
                    }
                }
                if(op == '%'){
                    if(num2 != 0) {
                        ans = num1 % num2;
                    }
            } else if (op == 'x'||op == 'X') {
                break;
            }else{
                System.out.println("enter correct character");
            }
            System.out.println(ans);
        }
    }
}
```