Data Structures and Algorithms
CSE2001
Lab - 1 - Assignment - 1

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Problem : Write a Program to find the "**factorial**" of a given Number

Time Complexity = O(N) or T(O) = 1

Codes

```java
import java.util.*;
class Factorial {
    public static int fact1(int n){
        int i =1, fact = 1;
        do
        {
            fact = fact * i;
            i++;
        }while (i<=n);

        return fact;
    }
    public static int fact2(int n){
        int i =1,fact = 1;
        for (i = 1; i<=n; i++)
```
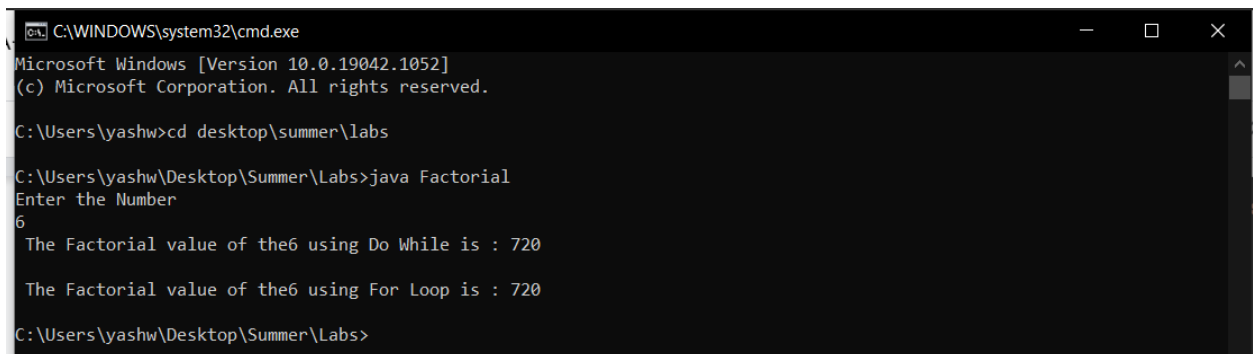
```java
        {
            fact = fact * i;
        }
        return fact;
    }
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the Number");
        int n = sc.nextInt();
        if (n==0){
            System.out.println("Number is 0");
        }
        else{
        System.out.println(" The Factorial value of the"+n+" using Do While is : " +
fact1(n));
        System.out.println(" ");
        System.out.println(" The Factorial value of the"+n+" using For Loop is : " +
fact2(n));
        }
    }
}
```

Output