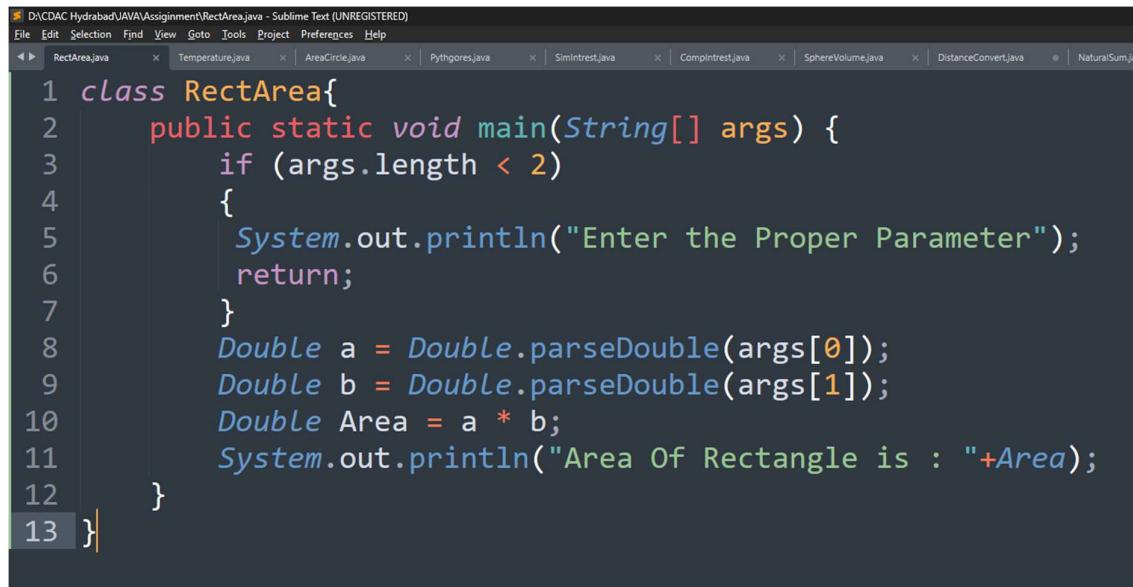


## Assignment – 01

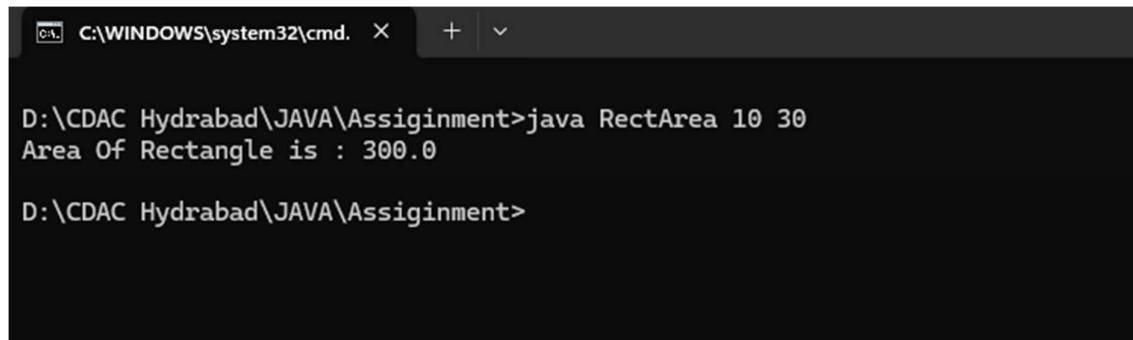
Q1) Calculate the area of a rectangle given its length and width.

Code:-



```
D:\CDAC Hyderabad\JAVA\Assignment\RectArea.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java x Temperature.java x AreaCircle.java x Pythagoras.java x SimIntrest.java x CompIntrest.java x SphereVolume.java x DistanceConvert.java x NaturalSum.java x
1 class RectArea{
2     public static void main(String[] args) {
3         if (args.length < 2)
4             {
5                 System.out.println("Enter the Proper Parameter");
6                 return;
7             }
8         Double a = Double.parseDouble(args[0]);
9         Double b = Double.parseDouble(args[1]);
10        Double Area = a * b;
11        System.out.println("Area Of Rectangle is : "+Area);
12    }
13 }
```

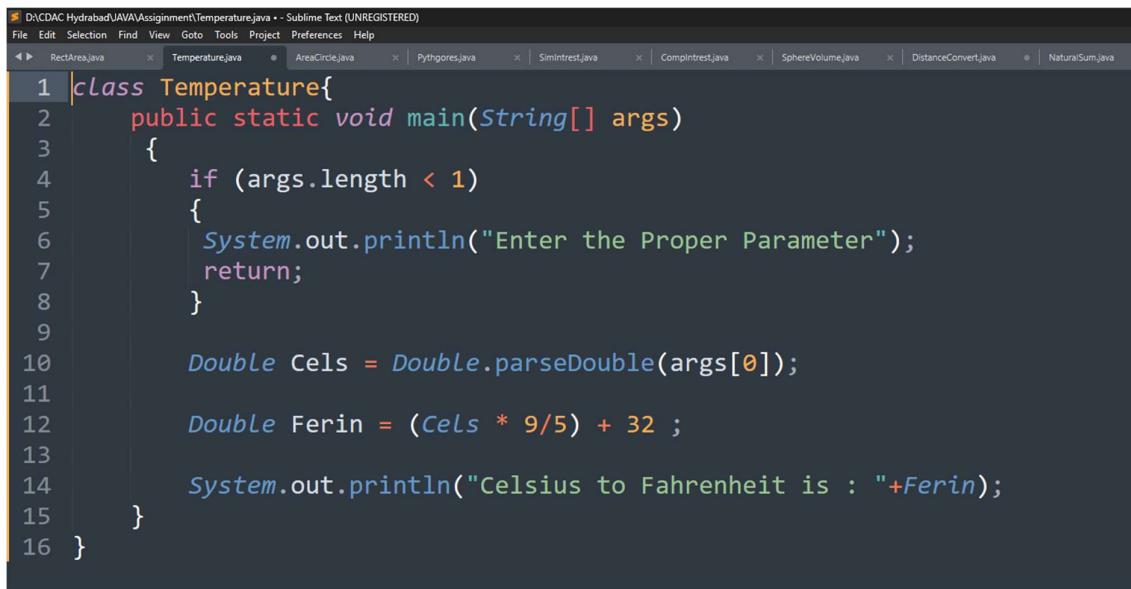
Output:-



```
C:\WINDOWS\system32\cmd. x + v
D:\CDAC Hyderabad\JAVA\Assignment>java RectArea 10 30
Area Of Rectangle is : 300.0
D:\CDAC Hyderabad\JAVA\Assignment>
```

Q2) Convert a temperature from Celsius to Fahrenheit

Code:-



The screenshot shows a Sublime Text window with multiple tabs open at the top, including RectArea.java, Temperature.java, AreaCircle.java, Pythagores.java, Simintrest.java, Compintrest.java, SphereVolume.java, DistanceConvert.java, and NaturalSum.java. The Temperature.java tab is active and contains the following Java code:

```
1 class Temperature{
2     public static void main(String[] args)
3     {
4         if (args.length < 1)
5         {
6             System.out.println("Enter the Proper Parameter");
7             return;
8         }
9
10        Double Cels = Double.parseDouble(args[0]);
11
12        Double Ferin = (Cels * 9/5) + 32 ;
13
14        System.out.println("Celsius to Fahrenheit is : "+Ferin);
15    }
16 }
```

Output:-

```
D:\CDAC Hyderabad\JAVA\Assiginnment>java Temperature 45
Celsius to Fahrenheit is : 113.0
```

```
D:\CDAC Hyderabad\JAVA\Assiginnment>
```

Q3) Calculate the area of a circle given its radius using the formula:

Code :-

```
D:\CDAC Hyderabad\JAVA\Assignment\AreaCircle.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java | Temperature.java | AreaCircle.java | Pythagoras.java | Simintrest.java | Compintrest.java | SphereVolume.java | DistanceConvert.java | Na
1 class AreaCircle{
2     public static void main(String[] args) {
3         if (args.length < 1) {
4             System.out.println("Enter Radius only");
5         }
6         Double r = Double.parseDouble(args[0]);
7         Double Area = 2 * 3.14 * r * r;
8         System.out.println("Area of Circle is :" + Area);
9     }
10 }
```

Output:-

```
D:\CDAC Hyderabad\JAVA\Assignment>java AreaCircle 25
Area Of Circle is :3925.0
D:\CDAC Hyderabad\JAVA\Assignment>
```

Q4) Compute the Hypotenuse of a right triangle using the Pythagorean theorem.

Code:-

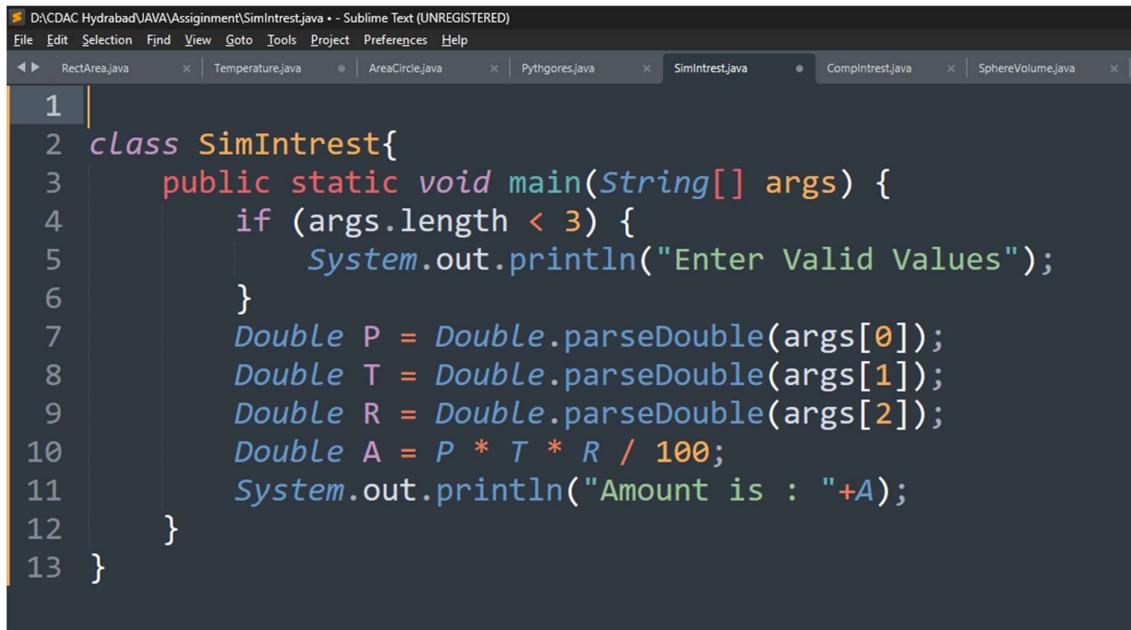
```
D:\CDAC Hyderabad\JAVA\Assignment\Pythagoras.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java | Temperature.java | AreaCircle.java | Pythagoras.java | Simintrest.java | Compintrest.java | SphereVolume.java | DistanceConvert.java | Na
1 class Pythagoras{
2     public static void main(String[] args) {
3         if (args.length<2) {
4             System.out.println("Enter Valide Parameter");
5         }
6         Double s1 = Double.parseDouble(args[0]);
7         Double s2 = Double.parseDouble(args[1]);
8         Double Hypo = Math.sqrt((s1*s1) + (s2*s2));
9         System.out.println("Hypotanoues is : " + Hypo);
10    }
11 }
```

Output:

```
D:\CDAC Hyderabad\JAVA\Assignment> java Pythagoras 5 5
Hypotanoues is : 7.0710678118654755
D:\CDAC Hyderabad\JAVA\Assignment>
```

## Q5) Calculate the Simple Interest

Code:-



The screenshot shows a Sublime Text window with multiple tabs at the top: RectArea.java, Temperature.java, AreaCircle.java, Pythagores.java, SimIntrest.java (which is the active tab), CompIntrest.java, and SphereVolume.java. The code in the SimIntrest.java tab is as follows:

```
1
2 class SimIntrest{
3     public static void main(String[] args) {
4         if (args.length < 3) {
5             System.out.println("Enter Valid Values");
6         }
7         Double P = Double.parseDouble(args[0]);
8         Double T = Double.parseDouble(args[1]);
9         Double R = Double.parseDouble(args[2]);
10        Double A = P * T * R / 100;
11        System.out.println("Amount is : "+A);
12    }
13 }
```

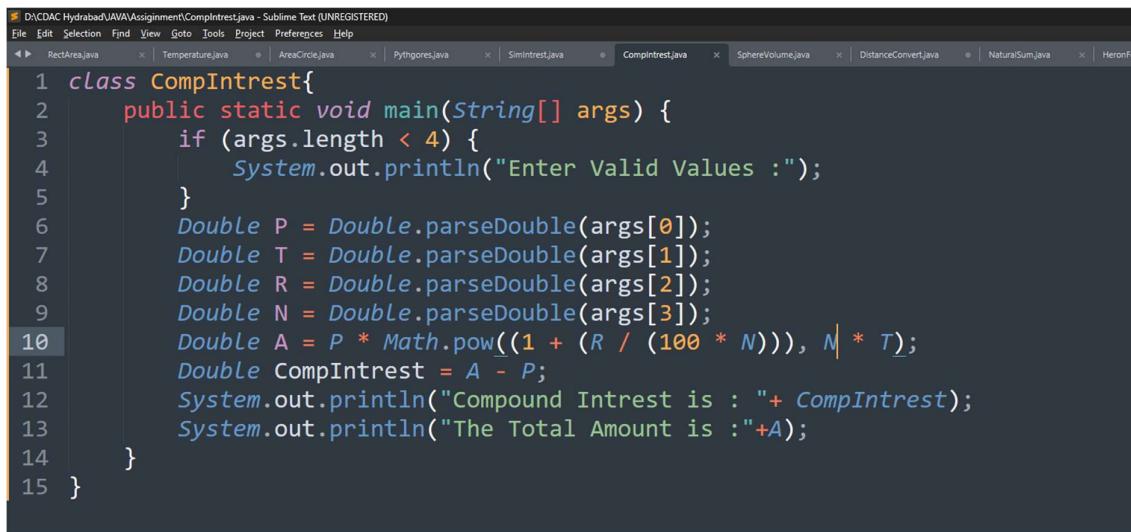
Output:-

```
D:\CDAC Hyderabad\JAVA\Assignment>java SimIntrest 10000 3 5
Amount is : 1500.0

D:\CDAC Hyderabad\JAVA\Assignment>
```

## Q6) Calculate the Compound Interest

Code:-



```
1 class CompIntrest{
2     public static void main(String[] args) {
3         if (args.length < 4) {
4             System.out.println("Enter Valid Values :");
5         }
6         Double P = Double.parseDouble(args[0]);
7         Double T = Double.parseDouble(args[1]);
8         Double R = Double.parseDouble(args[2]);
9         Double N = Double.parseDouble(args[3]);
10        Double A = P * Math.pow((1 + (R / (100 * N))), N * T);
11        Double CompIntrest = A - P;
12        System.out.println("Compound Intrest is :" + CompIntrest);
13        System.out.println("The Total Amount is :" + A);
14    }
15 }
```

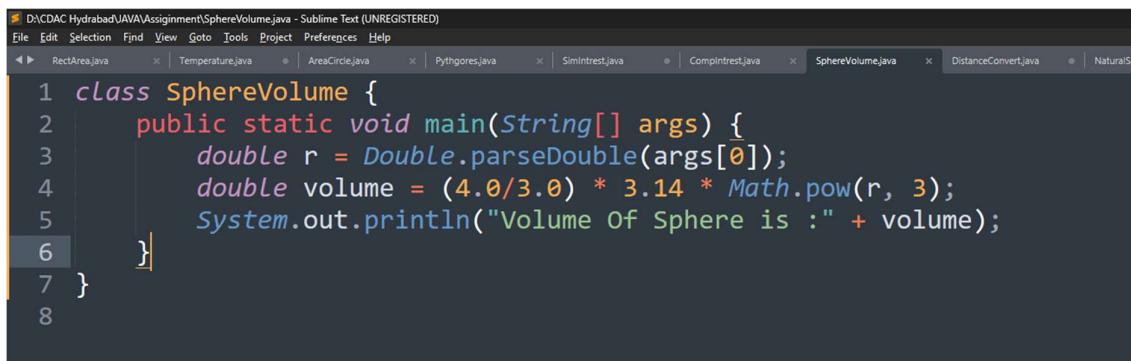
Output:-

```
D:\CDAC Hyderabad\JAVA\Assignment>java CompIntrest 10000 5 8 1
Compound Intrest is : 4693.280768000006
The Total Amount is :14693.280768000006

D:\CDAC Hyderabad\JAVA\Assignment>
```

## Q7) The volume of a sphere

Code:-



```
1 class SphereVolume {
2     public static void main(String[] args) {
3         double r = Double.parseDouble(args[0]);
4         double volume = (4.0/3.0) * 3.14 * Math.pow(r, 3);
5         System.out.println("Volume Of Sphere is :" + volume);
6     }
7 }
8
```

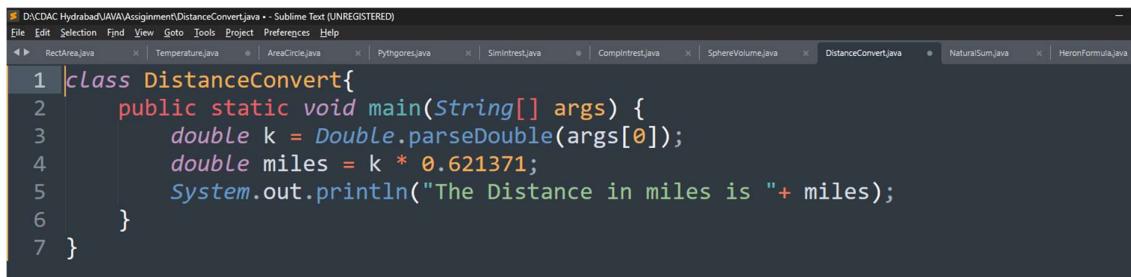
Output:-

```
D:\CDAC Hyderabad\JAVA\Assignment>java SphereVolume 5
Volume Of Sphere is :523.333333333334

D:\CDAC Hyderabad\JAVA\Assignment>
```

## Q8) Convert a Distance from Kilometers to Miles

Code:-



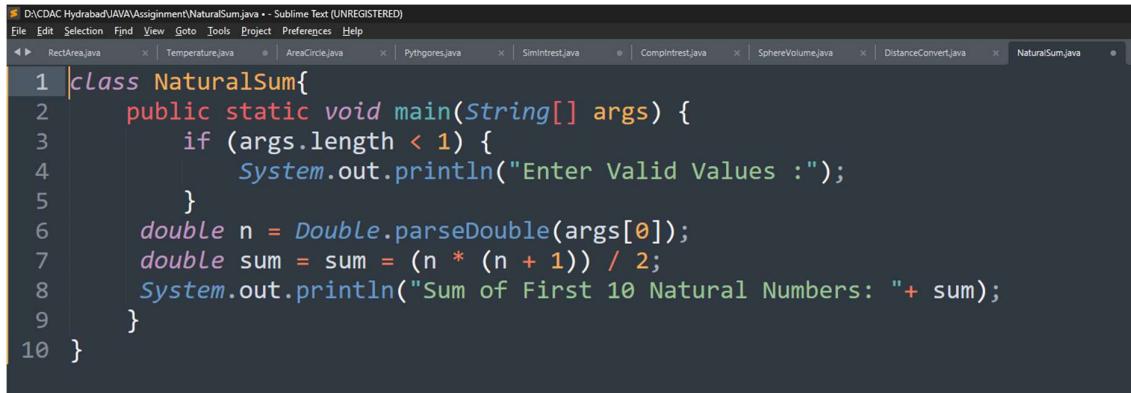
```
1 class DistanceConvert{
2     public static void main(String[] args) {
3         double k = Double.parseDouble(args[0]);
4         double miles = k * 0.621371;
5         System.out.println("The Distance in miles is "+ miles);
6     }
7 }
```

Output:

```
D:\CDAC Hyderabad\JAVA\Assigment>javac DistanceConvert.java
D:\CDAC Hyderabad\JAVA\Assigment>java DistanceConvert 10
The Distance in miles is : 6.21371
D:\CDAC Hyderabad\JAVA\Assigment>
```

## Q9) Sum of the first n natural numbers

Code:-



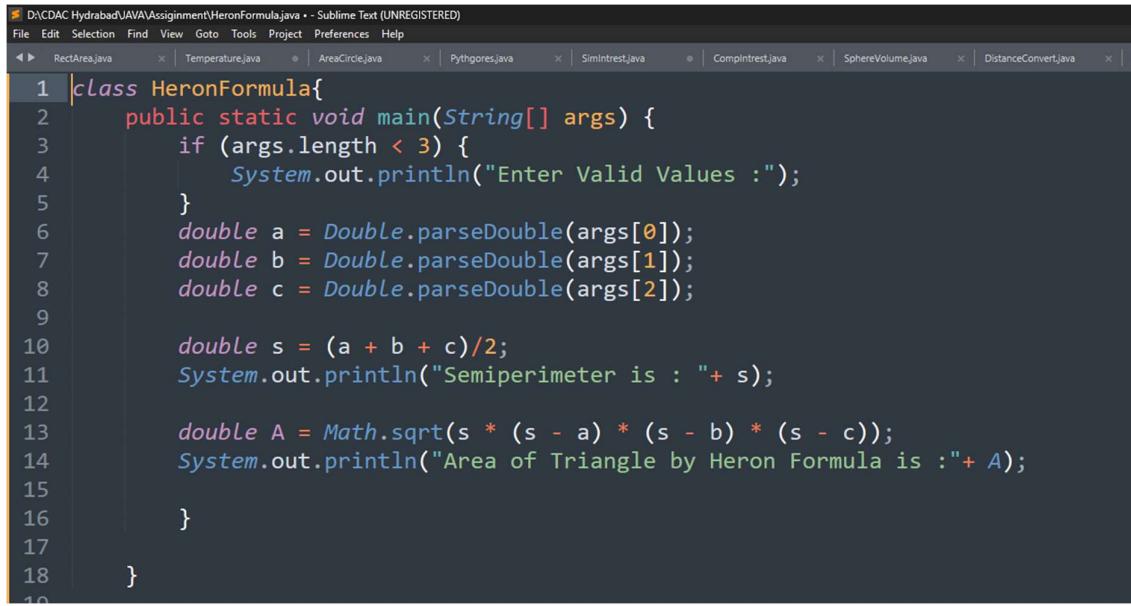
```
1 class NaturalSum{
2     public static void main(String[] args) {
3         if (args.length < 1) {
4             System.out.println("Enter Valid Values :");
5         }
6         double n = Double.parseDouble(args[0]);
7         double sum = sum = (n * (n + 1)) / 2;
8         System.out.println("Sum of First 10 Natural Numbers: "+ sum);
9     }
10 }
```

Output:-

```
D:\CDAC Hyderabad\JAVA\Assigment>java NaturalSum 10
Sum of First 10 Natural Numbers: 55.0
D:\CDAC Hyderabad\JAVA\Assigment>
```

Q10) Find Area of a Triangle given the lengths of its three sides using Heron's formula.

Code:-



```
D:\CDAC Hyderabad\JAVA\Assignment\HeronFormula.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java | Temperature.java | AreaCircle.java | Pythagoras.java | SimIntrest.java | CompIntrest.java | SphereVolume.java | DistanceConvertJava |
1 class HeronFormula{
2     public static void main(String[] args) {
3         if (args.length < 3) {
4             System.out.println("Enter Valid Values :");
5         }
6         double a = Double.parseDouble(args[0]);
7         double b = Double.parseDouble(args[1]);
8         double c = Double.parseDouble(args[2]);
9
10        double s = (a + b + c)/2;
11        System.out.println("Semiperimeter is : "+ s);
12
13        double A = Math.sqrt(s * (s - a) * (s - b) * (s - c));
14        System.out.println("Area of Triangle by Heron Formula is :"+ A);
15    }
16
17
18 }
```

Output:-

```
D:\CDAC Hyderabad\JAVA\Assignment>java HeronFormula 3 4 5
Semiperimeter is : 6.0
Area of Triangle by Heron Formula is :6.0
```

```
D:\CDAC Hyderabad\JAVA\Assignment>
```