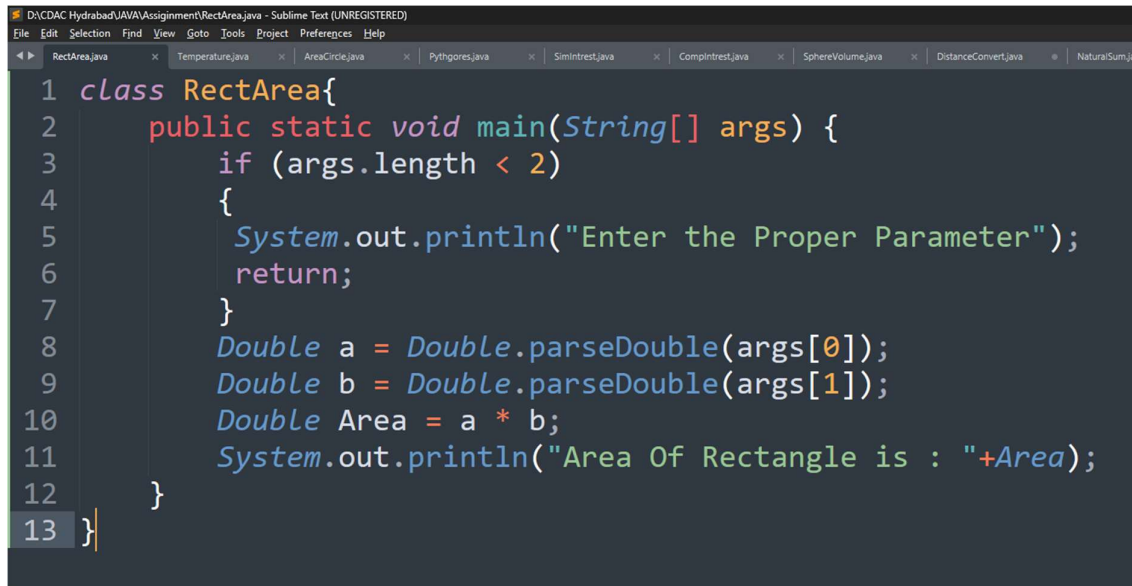


Assignment – 01

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

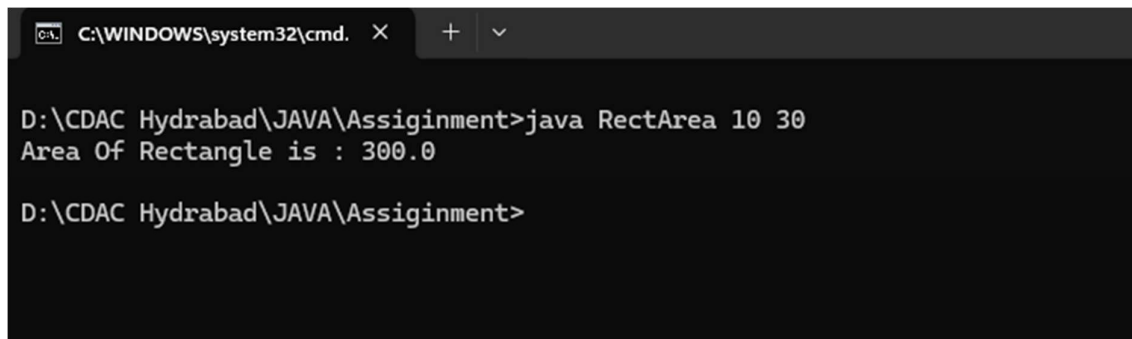
Code:-



```
D:\CDAC Hyderabad\JAVA\Assignment\RectArea.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java Temperature.java AreaCircle.java Pythagoras.java SimIntrest.java Complintrest.java SphereVolume.java DistanceConvert.java NaturalSum.java

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:-



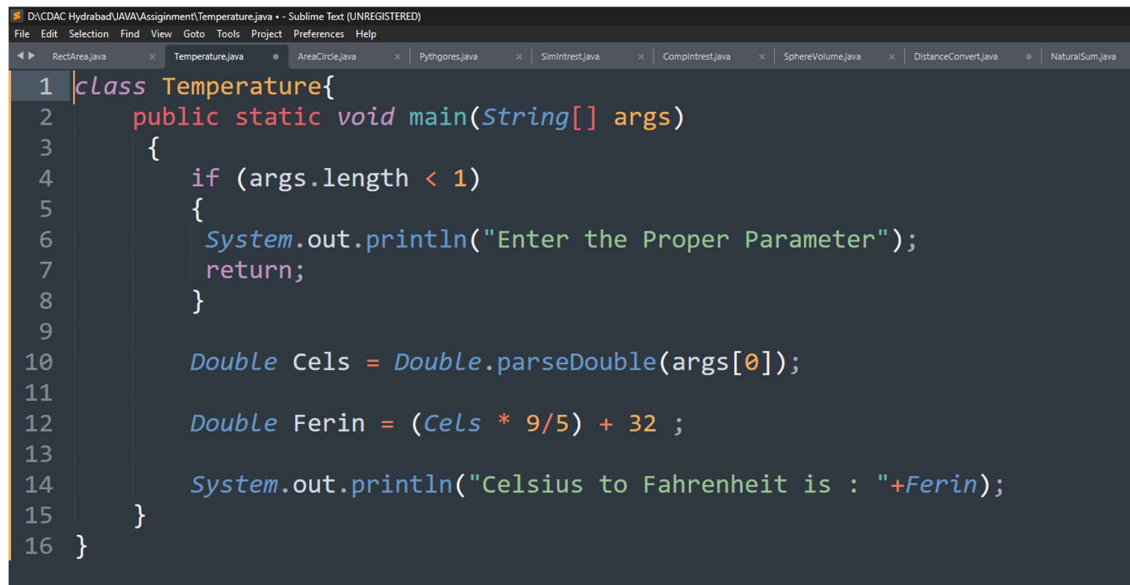
```
C:\WINDOWS\system32\cmd. X + v

D:\CDAC Hyderabad\JAVA\Assignment>java RectArea 10 30
Area Of Rectangle is : 300.0

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

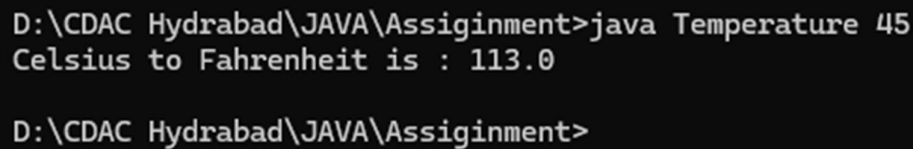
Q2) Convert a temperature from Celsius to Fahrenheit

Code:-

A screenshot of a Sublime Text editor window. The title bar shows the file path 'D:\CDAC Hyderabad\JAVA\Assignment\Temperature.java' and the text 'Sublime Text (UNREGISTERED)'. The menu bar includes 'File', 'Edit', 'Selection', 'Find', 'View', 'Goto', 'Tools', 'Project', 'Preferences', and 'Help'. The tab bar shows several open files: 'RectArea.java', 'Temperature.java' (active), 'AreaCircle.java', 'Pythogores.java', 'Simintrest.java', 'Complintrest.java', 'SphereVolume.java', 'DistanceConver.java', and 'NaturaSum.java'. The editor area 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:-

A screenshot of a Windows command prompt window. The text shows the execution of a Java program. The first line is 'D:\CDAC Hyderabad\JAVA\Assignment>java Temperature 45'. The second line is the output 'Celsius to Fahrenheit is : 113.0'. The third line is the prompt 'D:\CDAC Hyderabad\JAVA\Assignment>'.

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 x Temperature.java x AreaCircle.java x Pythagores.java x SimIntrest.java x ComplIntrest.java x SphereVolume.java x DistanceConvert.java x
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\Pythagores.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java x Temperature.java x AreaCircle.java x Pythagores.java x SimIntrest.java x ComplIntrest.java x SphereVolume.java x DistanceConvert.java x
1 class Pythagores{
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 }
```

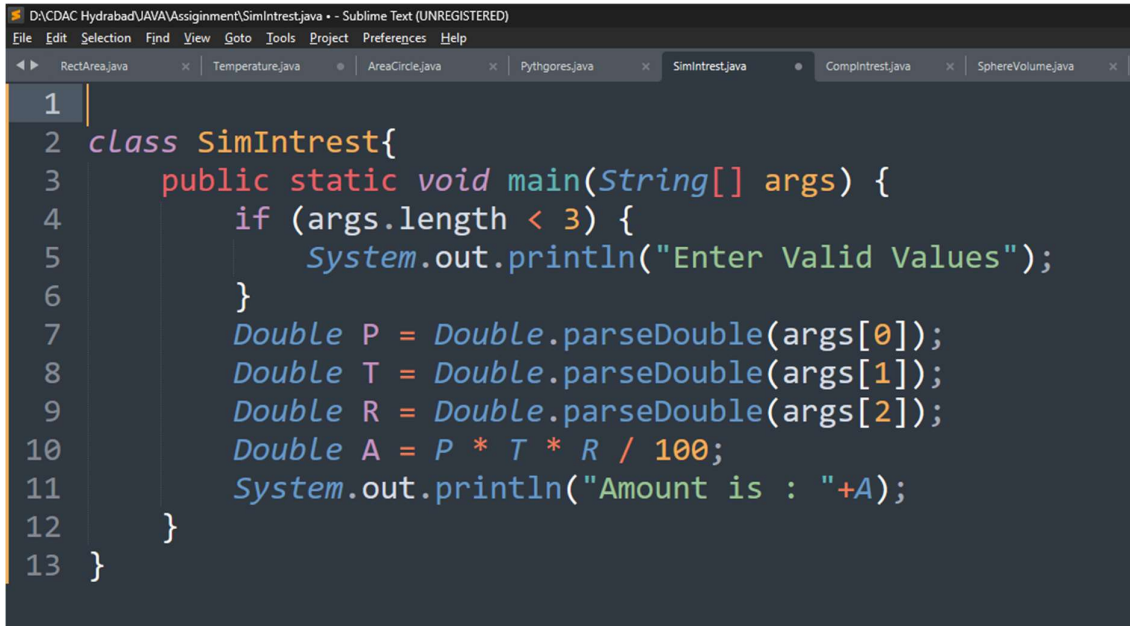
Output:

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

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

Q5) Calculate the Simple Interest

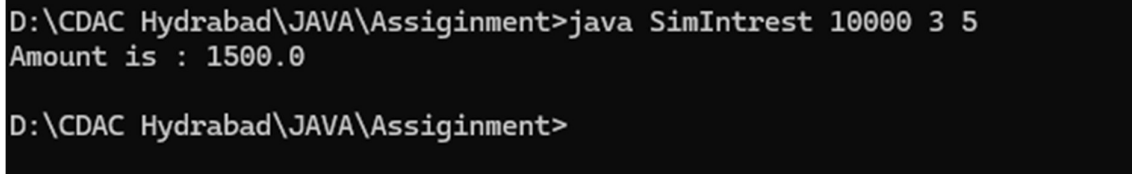
Code:-



```
D:\CDAC Hyderabad\JAVA\Assignment\SimIntrest.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java x Temperature.java x AreaCircle.java x Pythagores.java x SimIntrest.java x ComplIntrest.java x SphereVolume.java x

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:-

```
D:\CDAC Hyderabad\JAVA\Assignment\CompIntrest.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
<< RectArea.java x Temperature.java x AreaCircle.java x Pythogres.java x SimIntrest.java x CompIntrest.java x SphereVolume.java x DistanceConvert.java x NaturaSum.java x HeronFor
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\Assiginment>java CompIntrest 10000 5 8 1
Compound Intrest is : 4693.280768000006
The Total Amount is :14693.280768000006

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

Q7) The volume of a sphere

Code:-

```
D:\CDAC Hyderabad\JAVA\Assignment\SphereVolume.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
<< RectArea.java x Temperature.java x AreaCircle.java x Pythogres.java x SimIntrest.java x CompIntrest.java x SphereVolume.java x DistanceConvert.java x NaturaSum
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\Assiginment>java SphereVolume 5
Volume Of Sphere is :523.333333333334

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

Q8) Convert a Distance from Kilometers to Miles

Code:-

```
D:\CDAC Hyderabad\JAVA\Assignment\DistanceConvert.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java x Temperature.java x AreaCircle.java x Pythagores.java x Simintrest.java x Complintrest.java x SphereVolume.java x DistanceConvert.java x NaturalSum.java x HeronFormula.java x
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\Assignment>javac DistanceConvert.java
D:\CDAC Hyderabad\JAVA\Assignment>java DistanceConvert 10
The Distance in miles is : 6.21371
D:\CDAC Hyderabad\JAVA\Assignment>
```

Q9) Sum of the first n natural numbers

Code:-

```
D:\CDAC Hyderabad\JAVA\Assignment\NaturalSum.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
RectArea.java x Temperature.java x AreaCircle.java x Pythagores.java x Simintrest.java x Complintrest.java x SphereVolume.java x DistanceConvert.java x NaturalSum.java x
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\Assignment>java NaturalSum 10
Sum of First 10 Natural Numbers: 55.0
D:\CDAC Hyderabad\JAVA\Assignment>
```

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 DistanceConvert.java N
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>
```