Q1. Write a Java program using Lambda Expression to calculate the following:
   a. **Circumference of Circle**
   b. **Perimeter of rectangle**
   c. **Area of triangle**

A.

<u>**Code:**</u>

```java
package pracs;
import java.util.Scanner;

@FunctionalInterface

interface Calculation {   float Area();      }

public class lamabda {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the Height of the Triangle: ");

int height = sc.nextInt();

System.out.println("Enter the Base of the Triangle: ");

int base = sc.nextInt();

Calculation area = () -> {

return (float) (0.5 * base * height); };

System.out.println("Area of the Triangle whose base is " + base + "Height is " + height + " : " +
area.Area());

System.out.println("Enter the Length of Rectangle: ");

int length = sc.nextInt();

System.out.println("Enter the Width of Rectangle: ");

int width = sc.nextInt();

Calculation area1 = () -> {

return (2 * (length + width)); };

System.out.println("Perimeter of the Rectangle whose length is " + length + " & width is " + width + " :
" + area1.Area());

System.out.println("Enter the Radius of Circle: ");

int radius = sc.nextInt();

Calculation area2 = () -> {

return (float) (2 * (3.14) * (radius)); };     System.out.println("Perimeter of the Circle whose radius is "
+ radius + " : " + area2.Area());                    sc.close(); }      }
```
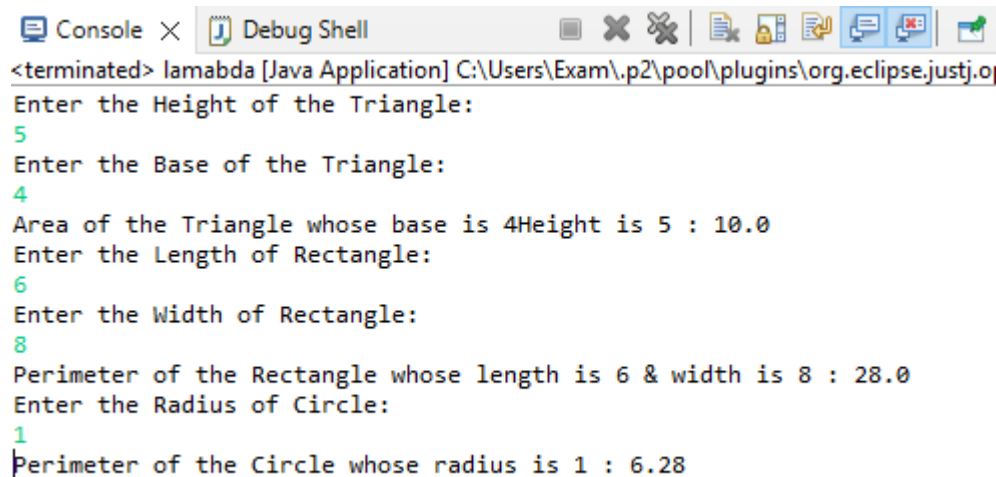
Output:

```
Console ×  [J] Debug Shell                   ■ ✖ ✖ | ▣ ▣ ▣ ▣ ▣ | ▣
<terminated> lamabda [Java Application] C:\Users\Exam\.p2\pool\plugins\org.eclipse.justj.o
Enter the Height of the Triangle:
5
Enter the Base of the Triangle:
4
Area of the Triangle whose base is 4Height is 5 : 10.0
Enter the Length of Rectangle:
6
Enter the Width of Rectangle:
8
Perimeter of the Rectangle whose length is 6 & width is 8 : 28.0
Enter the Radius of Circle:
1
Perimeter of the Circle whose radius is 1 : 6.28
```

Q2. Write a program to create a simple Spring Boot application that prints a country name.

A.

App.java Code:

```java
package mavens.maven;

public class App
{        public static void main( String[] args )
{        System.out.println( "Country Name: INDIA" );    }        }
```

Pom.xml Code:

```xml
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>mavens</groupId>

<artifactId>maven</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>maven</name>

<url>http://maven.apache.org</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
```

```xml
</properties>    <dependencies>          <dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>3.8.1</version>

<scope>test</scope>    </dependency> </dependencies>          </project>
```

OUTPUT:


```
Console  X    Debug Shell
<terminated> App [Java Application] C:\Users\Exam\.p2\pool\plugins\org.eclipse.justj.c
Country Name: INDIA
```