

Lab Program 4

Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method printArea() that prints the area of the given shape

Source Code:

```
import java.util.*;

abstract class Shape {
    int a, b;
    Shape(int x, int y) {
        a = x;
        b = y;
    }
    abstract void Printarea();
}

class Circle extends Shape {
    Circle(int a, int b) {
        super(a, b);
    }

    void Printarea() {
        System.out.println("area of circle is " + (3.14 * a * a));
    }
}
```

```
    }  
}
```

```
class Rectangle extends Shape {  
    Rectangle(int a, int b) {  
        super(a, b);  
    }  
}
```

```
void Printarea()  
{  
    System.out.println("area of rectangle is " + (a * b));  
}  
}
```

```
class Triangle extends Shape {  
    public Triangle(int a, int b) {  
        super(a, b);  
    }  
}
```

```
void Printarea()  
{  
    System.out.println("area of triangle is " + (0.5 * a * b));  
}  
}
```

```
class Main {
```

```
public static void main(String args[]) {  
  
    Scanner in = new Scanner(System.in);  
  
    System.out.println("Enter dimension 1: ");  
    int x = in.nextInt();  
    System.out.println("Enter dimension 2: ");  
    int y = in.nextInt();  
  
    Shape b;  
    b = new Circle(x, y);  
    b.Printarea();  
  
    b = new Rectangle(x, y);  
    b.Printarea();  
  
    b = new Triangle(x, y);  
    b.Printarea();  
}  
}
```

Output:

```
C:\Windows\System32\cmd.e  X  +  v
Microsoft Windows [Version 10.0.22621.1105]
(c) Microsoft Corporation. All rights reserved.

C:\Javaprogram>javac Bank.java

C:\Javaprogram>java Bank
1. Savings or    2. Current?
1
Enter the choice:
1 .Set the values for savings acc
2. display
3. deposit
4. Interest
5. Withdraw
6. exit
1
Enter customer name: Krishn
Enter account number: 34533
Enter bank balance: 10000
Enter the choice:
1 .Set the values for savings acc
2. display
3. deposit
4. Interest
5. Withdraw
6. exit
2
Customer name is: Krishn
Customer account type is: Savings
Customer account number is: 34533
Current balance is: 10000.0
Enter the choice:
1 .Set the values for savings acc
2. display
3. deposit
4. Interest
5. Withdraw
6. exit
|
```