Abstract class Activity

1. Create **abstract** class **Shape**

Datatype – **int** , field name: **value**

Use getter and setter methods

Create abstract method name **calculateArea(int value)**.

Create the class **“Circle”** extends the **Shape**. Use **calculateArea(int value)**. Find area of circle

Create the class **“Square”** extends the Shape. Use **calculateArea(int value)**. Find area of rectangle.

Create a **ShapeMain** class to access the Square and Circle class and test in main method.

Sample Input

Circle

Square

Enter the shape

**Circle**

Enter the radius

**25**

Sample output

**Area of circle is: 1962.50**

Sample Input

Circle

Square

Enter the shape

**Square**

Enter the side

**23**

Sample output

**Area of Square is: 529.00**

1. Create abstract class as **“Match”**.

Add the following private members.

|  |  |
| --- | --- |
| Data type | Field name |
| Int | currentscore |
| Float | currentover |
| Int | target |

Use getter and setter methods.

Create another class ODIMatch that extends the Match. (50 overs)

Create another class TestMatch that extends the Match. Consider test match is in the last day. (90 Overs)

Create another class T20Match that extends the Match. (20 Overs)

Create the following abstract methods in the Match Class. Implement it in other respective class.

1. float calculateRunRate()
2. int calculateBalls()
3. void display(double reqRunrate, int balls)

Create the MatchMain class and the inherited class using main method. Calculate the required runrate and number of balls for each derived class.

Sample Input and Output:

Enter the match format

1. ODI
2. T20
3. Test

**1**

Enter the Current score

**256**

Enter the current Over

**30**

Enter the Target Score

**400**

Requirements:

**Need 144 runs in 120 balls**

**Required Runrate: 7.20**

2nd Sample Input and Output:

Enter the match format

1. ODI
2. T20
3. Test

2

Enter the Current score

**120**

Enter the current Over

**15**

Enter the Target Score

**170**

Requirements:

**Need 50 runs in 30 balls**

**Required Runrate: 10.00**