

Java1 – Pretest2

Write a Java application to manage the list of Circles with the specification as follows:

1	<p>Creates an interface named IGeometry in package data.</p> <ul style="list-style-type: none">- Field PI = 3.1415- Method- public double area() : calculate area of any shape.- public double peripheral() : calculate peripheral of any shape.- public double volume() : calculate volume of any shape.
	<p>Creates an abstract class named Shape in package data.</p> <ul style="list-style-type: none">- Method- public abstract void accept() : allow user input data into data fields.- public abstract void printInfo() : print detailed information of any shape.
2	<p>Create class Cylinder derives from Shape, implements IGeometry in package data, consists of:</p> <ul style="list-style-type: none">- Fields : radius, height- Constructors to initialize the all fields- Override methods of Shape and IGeometry:<ul style="list-style-type: none">- accept() : using try-catch exception for validation: radius, height must be greater than zero.- printInfo() : display detailed information of a cylinder including radius, height, peripheral, area, volume- toString() : return a string presenting all the details of a cylinder
3	<p>Create java main class Test in package app for managing a collection of Cylinders:</p> <ul style="list-style-type: none">- Fields: max, next – cList (array of cylinders)- Methods:- void add() - add a new cylinder- void display() - display all cylinders.- void display(float v) - display cylinder having volume greater than v.- void menu() - allows to manage the list of cylinders through the menu system as follows.<ol style="list-style-type: none">1. Add a new cylinder2. Display all cylinders3. Display all cylinders having required volume4. Exit