Develop a Jave llogam to Oleta an abstract class named Shape that contains two integels and on snipty method named printAlea (). Provide three classes named Roctangles Thingle and Circle Such that each one of the classes extends the class shape. Each one of the classes contain Only the method plinthleads that plints the area of the given Shape.

Code: -

impolt java util Samer;

abstract class Shape &

double dimersion!

double dimension 2:

fublic abstract void plintflea ();

class Rectangle extends shape &

Public Rectangle (double length, double width) (this, dimesion 1 = length; this dimension 2 = width,

@ ouerride

Public void plintAleal) {

double alla = dimension 1 * dimension 2;

System. Out. printen ("Alea of fectongle:" + Olea);

3

class Thingle extends Shape ?

public Thiangle / double base, double height ? this. dimesion 1 = base;

this . dimension 2 = height;

@ Questide

Rubeir void plintAlea () &

double alea = 0.5 + dinersion1 + dinersion2; System at point ("Alea of Thingle: "+ area);

3

class circle extends Shape (). Public Circle (double Redins) { this dimension! = ledius; @ Duolaide fullic void plintAleals t double alea = Math.PI * dinorsion ! * dinorsion ! ; System. aut. painth ("Afree of Carle: " + alea); 3 public class areas & Scanner scanner = new scanner (System. in): System. at. plinth ("Choose a Snape to Calculate Area : "); System. out. plinth ("1. Rectangles: System out . plinth [" 2. Triangle); المعلى والموادد: ١ System. Out. printh ("3. Circle); of: None) little System. act. printh ("4. Exit); int lun = 1; the of Petengle: So .00 inhile (lun == 1) of System . aut. plintln ("Enter Choice: "); int choice = &arriver. nextIntl); Switch (choice) of Casel: System. act plint ("Forter the langth: "); double length = Scanner, restrouble W: System. Out plint (" Friter the width: "); double width = Scannol, next Pouble (): Rectangle lectangle = new lectangle (lagter, width): Sectongle, pant Abreals; bleak: Case 2: System out. Plint ("Friter Base of Thiangle: ");

(ale 2: System act. Print ("Frital Base of Thiangle: ");

double base = Scannal. Next Double ();

System. out. plint ("Frital Height: ");

double height = Scannel. Next Double();

Thiangle triangle = new triangle (base height);

triangle. Print Plan);

break;

Cale 3: System out. print ("Fortel Redius of Cercle:") double Radius = Scanner. next Double (): Circle circle = nau circle (Radius): Circle . Plint Alea (); bleak: 12:010123 (5) I chesting bis world Case4; luno; bleak; 1 11 default: System. act. printer! "Trudid choice."); Samol. Closel): notes on a somme Output: "A stabled at agent a elegan"! Atribed the settle? Choose 8 hape te Calculate Alea: 1. Rectangle 2. Thienglo 3. Wiche 4. Exit System Cit. Jerith ["2. Thisugh): Enter choice: 1 " could be the ("3, colder"). Entel length: lo 22 121 to a water Enter width: 5 Alea of Poctangle: So.00 1 (1 == 12) elistas Entel Choice: 2 Enter Base: 2 Enter Height: I all about his has ned to have Alea of Thiangle: 1.0 Forter choice: 3 Entel Radius of Corcle: 2" Orla of Circle: 12.566 Total chaice: 4 Exited . will posed son I'l tring. I a why? : (sed Coloration annual = sed sidual il": exist set I" third two . restit Coode Stren games = trying sales (Mangle Diungle = very trangle (1088, beight); biangle. Plithled):