Chapter 10 Practice Set Questions by Munawar

Questions

1. Create a class Circle and use inheritance to create another class Cylinder from it.

Solution

```
// Question 1
class Circle{
    public int radius;
    // By default run this constructor can changed the behavior of this using
super keyword
    Circle(){
        System.out.println("I am non parameterized Constructor");
    }
    Circle(int r){
        System.out.println("I am parameterized constructor of Circle: ");
        this.radius=r;
    }
    public double area(){
        return Math.PI*this.radius*this.radius;
    }
}

class Cylinder extends Circle{
    public int height;

    Cylinder(int r,int h){
        super(r);// if not used this than another constructor is run
        System.out.println("I am parameterized constructor of Cylinder");
        this.height=h;
    }
    public double volume(){
        return Math.PI*this.radius*this.radius*this.height;
    }
}
```

```
// Question 1
Cylinder cy=new Cylinder(4,5);
```

2. Create a class Rectangle and use inheritance to create another class Cuboid. Try to Reap it as close to real world scenario as possible.

Solution

Self-Question

3. Create methods for area and volume in Question 1.

Solution

Self-Question

4. Create methods for area & Volume in Question 2. Also create getters and setters.

Solution

Self-Question

5. What is the order of the constructor execution for the following inheritance hierarchy?

Base

:

:

Derived 1

:

:

Derived 2

Derived 2 object=new Derived 2 ();

Which constructor(s) will be executed 8 in what order?

Solution

First run Base

And then Derived 1

And last Derived 2

Source code:

```
import javax.swing.plaf.synth.SynthTextAreaUI;
import java.util.Scanner;
import java.util.Random;

//// Question 1
//class Circle{
//    public int radius;
//    // By default run this constructor can changed the behavior of this
using super keyword
//    Circle(){
//        System.out.println("I am non parameterized Constructor");
//    }
//    Circle(int r){
//        System.out.println("I am parameterized constructor of Circle: ");
//        this.radius=r;
//    }
//    public double area(){
//        return Math.PI*this.radius*this.radius;
//    }
//}
//
//class Cylinder extends Circle{
//    public int height;
//
//    Cylinder(int r,int h){
//        super(r);// if not used this than another constructor is run
//        System.out.println("I am parameterized constructor of Cylinder");
//        this.height=h;
//    }
//    public double volume(){
//        return Math.PI*this.radius*this.radius*this.height;
//    }
//}
public class Main {
    public static void main (String [] args) {
//
//        // Question 1
//        Cylinder cy=new Cylinder(4,5);



    }

}
```

Thank You