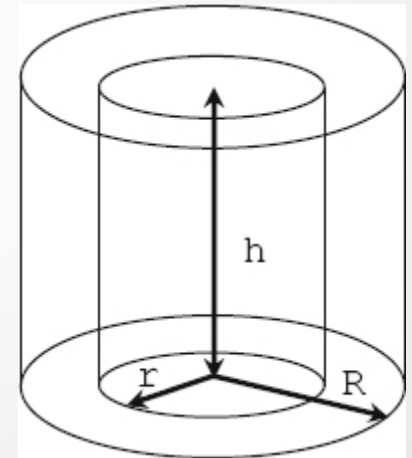


Guide to Java: A Concise Introduction to Java

Chapter 2 Objects: An Introduction

- Motivating Problem (Ch 2 Problem 6)
 - Write a complete program to calculate the volumes of a cone and a hollow cylinder. The shape of a hollow cylinder is shown, where r is the radius of the inner cylinder and R is the radius of the outer cylinder
 - Draw a UML diagram for a class named Cone as described in Books24x7, then write code to implement the Cone class.
 - Draw a UML diagram for a class named HollowCylinder as described in Books24x7, then write the code to implement the HollowCylinder class.
 - Write a client program to test the Cone and HollowCylinder classes. Name this class CalcVolume. The main method should perform tasks as described in Books24x7.



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Chapter 2 Objects: An Introduction

- Chapter sections
 1. Introduction
 2. Classes and Objects
 3. Public and Private Data Members
 4. Value-Returning Methods
 5. Void Methods and Parameters
 6. Creating Objects and Invoking Methods
 7. Contour Diagrams
 8. Constructors
 9. Multiple Objects and Classes
 10. Universal Modeling Language (UML) Class Diagrams
 11. Complete Program: Implementing a Simple Class and Client Program

```
class Circle {  
    private double radius;  
    public Circle() {  
        radius = 0.0;  
    }  
    public double getRadius() {  
        return radius;  
    }  
    public void setRadius(double inputRadius) {  
        radius = inputRadius;  
    }  
    public double computeCircumference() {  
        return 2*Math.PI*radius;  
    }  
    public double computeArea() {  
        return Math.PI*Math.pow(radius, 2);  
    }  
}
```