



Introduction to Java Programming

Sheet # 3: Objects and Classes

► Textbook: Introduction to Java Programming and Data Structures, Comprehensive Version (12th Edition)

► This sheet covers chapter 09 “Objects and Classes”

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► Check Point Questions:

Review the questions at the following URL:

<https://liveexample.pearsoncmg.com/checkpoint12/Chapter9.html>

► Solve the following Programming Exercises from the textbook (pages 362-366)

9.1	9.2	9.3	9.4	9.5	9.6
9.8	9.10	9.11			

► Mini Project: The Account Class

(The Account class) Design a class named Account that contains:

- A private int data field named id for the account (default 0).
- A private double data field named balance for the account (default 0).
- A private double data field named annualInterestRate that stores the current interest rate (default 0). Assume all accounts have the same interest rate.
- A private Date data field named dateCreated that stores the date when the account was created.
- A no-arg constructor that creates a default account.
- A constructor that creates an account with the specified id and initial balance.
- The accessor and mutator methods for id, balance, and annualInterestRate.
- The accessor method for dateCreated.
- A method named getMonthlyInterestRate() that returns the monthly interest rate.
- A method named withdraw that withdraws a specified amount from the account.
- A method named deposit that deposits a specified amount to the account.

Draw the UML diagram for the class. Implement the class. Write a test program that creates an Account object with an account ID of 1122, a balance of \$20,000, and an annual interest rate of 4.5%. Use the withdraw method to withdraw \$2,500, use the deposit method to deposit \$3,000, and print the balance, the monthly interest, and the date when this account was created.

With our best wishes;