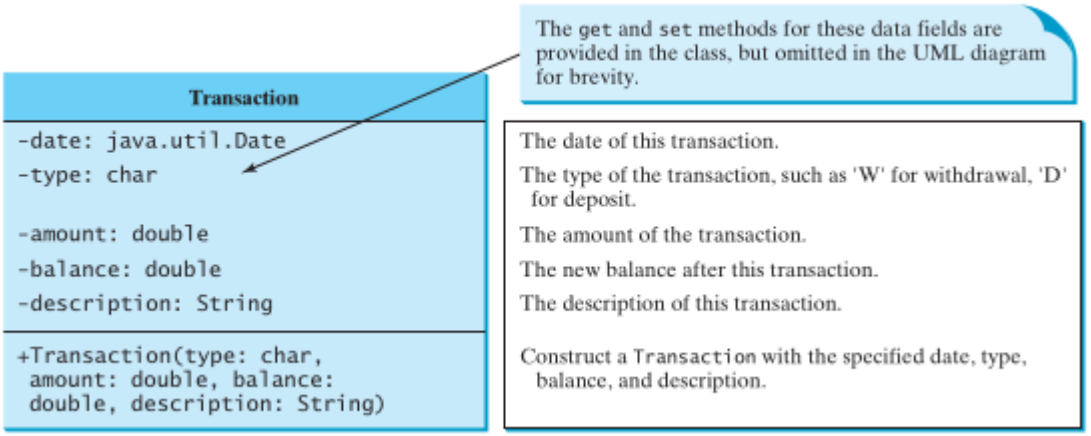
PSG College of Technology
Department of Applied Mathematics and Computational Science
23XD58 - Java Programming Laboratory

**Implementing packages in Java**

(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.
■ Add a data field name of the String type to store the name of the customer.
■ A no-arg constructor that creates a default account.
■ Add a constructor that constructs an account with the specified name, id, and 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 getMonthlyInterest() that returns the monthly interest.
■ A method named withdraw that withdraws a specified amount from the account.
■ A method named deposit that deposits a specified amount to the account.
■ Add a data field named transactions whose type is ArrayList that stores the transaction for the accounts. Each transaction is an instance of the Transaction class.

The Transaction class is defined as shown in the following figure.
■ Include the necessary getters and setters for the transaction class.
■ Modify the withdraw and deposit methods to add a transaction to the transactions array list.

Write a test program that creates an Account with annual interest rate 1.5%, balance 1000, id 1122, and name George. Deposit $30, $40, and $50 to the account and withdraw $5, $4, and $2 from the account. Print an account summary that shows account holder name, interest rate, balance, and all transactions.




Pack the .class files of Account and Transaction in separate packages and implement them in the test program appropriately.