**1. Account Class**

import java.util.Date;

public abstract class Account {

// Fields

private int id = 0;

private String firstName;

private String lastName;

private double balance = 0.0;

private static double annualInterestRate = 0.0; // Applies to all accounts

private Date dateCreated;

// No-arg constructor

public Account() {

this.dateCreated = new Date();

}

// Constructor with parameters

public Account(int id, String firstName, String lastName, double balance) {

this.id = id;

this.firstName = firstName;

this.lastName = lastName;

this.balance = balance;

this.dateCreated = new Date();

}

// Getters and Setters

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

public double getBalance() {

return balance;

}

public void setBalance(double balance) {

this.balance = balance;

}

public static double getAnnualInterestRate() {

return annualInterestRate;

}

public static void setAnnualInterestRate(double annualInterestRate) {

Account.annualInterestRate = annualInterestRate;

}

public Date getDateCreated() {

return dateCreated;

}

// Method to calculate monthly interest rate

public double getMonthlyInterestRate() {

return annualInterestRate / 12;

}

// Method to withdraw money

public void withdraw(double amount) {

if (amount > balance) {

System.out.println("Insufficient balance!");

} else {

balance -= amount;

}

}

// Method to deposit money

public void deposit(double amount) {

balance += amount;

}

// toString method

@Override

public String toString() {

return "Account ID: " + id + "\n" +

"Name: " + firstName + " " + lastName + "\n" +

"Balance: $" + balance + "\n" +

"Annual Interest Rate: " + annualInterestRate + "%\n" +

"Date Created: " + dateCreated;

}

}

**2. CheckingAccount Subclass**

public class CheckingAccount extends Account {

private double overdraftLimit;

// Constructor

public CheckingAccount(int id, String firstName, String lastName, double balance, double overdraftLimit) {

super(id, firstName, lastName, balance);

this.overdraftLimit = overdraftLimit;

}

// Getters and Setters

public double getOverdraftLimit() {

return overdraftLimit;

}

public void setOverdraftLimit(double overdraftLimit) {

this.overdraftLimit = overdraftLimit;

}

// Overridden withdraw method

@Override

public void withdraw(double amount) {

if (getBalance() - amount < -overdraftLimit) {

System.out.println("Withdrawal denied. Overdraft limit exceeded!");

} else {

setBalance(getBalance() - amount);

}

}

// Overridden toString method

@Override

public String toString() {

return super.toString() + "\nAccount Type: Checking\n" +

"Overdraft Limit: $" + overdraftLimit;

}

}

**3. SavingsAccount Subclass**

public class SavingsAccount extends Account {

private double transactionFee;

// Constructor

public SavingsAccount(int id, String firstName, String lastName, double balance, double transactionFee) {

super(id, firstName, lastName, balance);

this.transactionFee = transactionFee;

}

// Getters and Setters

public double getTransactionFee() {

return transactionFee;

}

public void setTransactionFee(double transactionFee) {

this.transactionFee = transactionFee;

}

// Overridden withdraw method

@Override

public void withdraw(double amount) {

double totalAmount = amount + transactionFee;

if (totalAmount > getBalance()) {

System.out.println("Insufficient balance for this transaction!");

} else {

setBalance(getBalance() - totalAmount);

}

}

// Overridden deposit method

@Override

public void deposit(double amount) {

double totalAmount = amount - transactionFee;

setBalance(getBalance() + totalAmount);

}

// Overridden toString method

@Override

public String toString() {

return super.toString() + "\nAccount Type: Savings\n" +

"Transaction Fee: $" + transactionFee;

}

}

**4. Test Program**

public class TestAccounts {

public static void main(String[] args) {

// Create a Checking Account

CheckingAccount checking = new CheckingAccount(1122, "John", "Doe", 20000, 500);

checking.setAnnualInterestRate(4.5);

checking.withdraw(2500);

checking.deposit(3000);

System.out.println(checking);

System.out.println();

// Create a Savings Account

SavingsAccount savings = new SavingsAccount(1123, "Jane", "Smith", 100000, 50);

savings.setAnnualInterestRate(4.5);

savings.withdraw(2500);

savings.deposit(3000);

System.out.println(savings);

}

}