# Banking Application (Java Project)

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Course: B.Tech Cybersecurity (2024-2028)

## Java Code:

import java.util.Scanner;  
  
// Account Class  
class Account {  
 private long accountNumber; // long for large numbers  
 private String accountHolderName;  
 private double balance;  
 private String email;  
 private String phoneNumber;  
  
 // Constructor  
 public Account(long accountNumber, String accountHolderName, double balance, String email, String phoneNumber) {  
 this.accountNumber = accountNumber;  
 this.accountHolderName = accountHolderName;  
 this.balance = balance;  
 this.email = email;  
 this.phoneNumber = phoneNumber;  
 }  
  
 // Deposit method  
 public void deposit(double amount) {  
 if (amount > 0) {  
 balance += amount;  
 System.out.println("₹" + amount + " deposited successfully.");  
 } else {  
 System.out.println("Invalid deposit amount!");  
 }  
 }  
  
 // Withdraw method  
 public void withdraw(double amount) {  
 if (amount > 0 && balance >= amount) {  
 balance -= amount;  
 System.out.println("₹" + amount + " withdrawn successfully.");  
 } else if (amount <= 0) {  
 System.out.println("Invalid withdrawal amount!");  
 } else {  
 System.out.println("Insufficient balance!");  
 }  
 }  
  
 // Display account details  
 public void displayAccountDetails() {  
 System.out.println("\n--- Account Details ---");  
 System.out.println("Account Number: " + accountNumber);  
 System.out.println("Holder Name: " + accountHolderName);  
 System.out.println("Balance: ₹" + balance);  
 System.out.println("Email: " + email);  
 System.out.println("Phone: " + phoneNumber);  
 System.out.println("------------------------");  
 }  
  
 // Update contact details  
 public void updateContactDetails(String email, String phoneNumber) {  
 this.email = email;  
 this.phoneNumber = phoneNumber;  
 System.out.println("Contact details updated successfully!");  
 }  
  
 // Getter for account number  
 public long getAccountNumber() {  
 return accountNumber;  
 }  
}  
  
// User Interface Class  
public class BankingApplication {  
 private static Account[] accounts = new Account[100]; // Array of accounts  
 private static int accountCount = 0;  
 private static long accountNumberGenerator = 7651110987611L; // Start with large number  
 private static Scanner sc = new Scanner(System.in);  
  
 // Preload some accounts (optional)  
 public static void preloadAccounts() {  
 accounts[accountCount++] = new Account(++accountNumberGenerator, "Mohit", 10000, "mohit@gmail.com", "8877665544");  
 accounts[accountCount++] = new Account(++accountNumberGenerator, "John Doe", 5000, "john@example.com", "9988776655");  
 accounts[accountCount++] = new Account(++accountNumberGenerator, "Alice", 7500, "alice@example.com", "8899776655");  
 }  
  
 // Create new account  
 public static void createAccount() {  
 System.out.print("Enter account holder name: ");  
 String name = sc.nextLine();  
 System.out.print("Enter initial deposit amount: ");  
 double balance = sc.nextDouble();  
 sc.nextLine(); // consume newline  
 System.out.print("Enter email address: ");  
 String email = sc.nextLine();  
 System.out.print("Enter phone number: ");  
 String phone = sc.nextLine();  
  
 long accountNumber = ++accountNumberGenerator;  
 accounts[accountCount++] = new Account(accountNumber, name, balance, email, phone);  
 System.out.println("Account created successfully with Account Number: " + accountNumber);  
 }  
  
 // Find account by account number  
 public static Account findAccount(long accNum) {  
 for (int i = 0; i < accountCount; i++) {  
 if (accounts[i].getAccountNumber() == accNum) {  
 return accounts[i];  
 }  
 }  
 return null;  
 }  
  
 // Deposit  
 public static void performDeposit() {  
 System.out.print("Enter account number: ");  
 long accNum = sc.nextLong();  
 System.out.print("Enter amount to deposit: ");  
 double amount = sc.nextDouble();  
 sc.nextLine(); // consume newline  
 Account acc = findAccount(accNum);  
 if (acc != null) {  
 acc.deposit(amount);  
 } else {  
 System.out.println("Account not found!");  
 }  
 }  
  
 // Withdraw  
 public static void performWithdrawal() {  
 System.out.print("Enter account number: ");  
 long accNum = sc.nextLong();  
 System.out.print("Enter amount to withdraw: ");  
 double amount = sc.nextDouble();  
 sc.nextLine();  
 Account acc = findAccount(accNum);  
 if (acc != null) {  
 acc.withdraw(amount);  
 } else {  
 System.out.println("Account not found!");  
 }  
 }  
  
 // Show account details  
 public static void showAccountDetails() {  
 System.out.print("Enter account number: ");  
 long accNum = sc.nextLong();  
 sc.nextLine();  
 Account acc = findAccount(accNum);  
 if (acc != null) {  
 acc.displayAccountDetails();  
 } else {  
 System.out.println("Account not found!");  
 }  
 }  
  
 // Update contact details  
 public static void updateContact() {  
 System.out.print("Enter account number: ");  
 long accNum = sc.nextLong();  
 sc.nextLine();  
 Account acc = findAccount(accNum);  
 if (acc != null) {  
 System.out.print("Enter new email: ");  
 String email = sc.nextLine();  
 System.out.print("Enter new phone number: ");  
 String phone = sc.nextLine();  
 acc.updateContactDetails(email, phone);  
 } else {  
 System.out.println("Account not found!");  
 }  
 }  
  
 // Main Menu  
 public static void mainMenu() {  
 while (true) {  
 System.out.println("\n--- Banking Application ---");  
 System.out.println("1. Create a new account");  
 System.out.println("2. Deposit money");  
 System.out.println("3. Withdraw money");  
 System.out.println("4. View account details");  
 System.out.println("5. Update contact details");  
 System.out.println("6. Exit");  
 System.out.print("Enter your choice: ");  
 int choice = sc.nextInt();  
 sc.nextLine(); // consume newline  
  
 switch (choice) {  
 case 1: createAccount(); break;  
 case 2: performDeposit(); break;  
 case 3: performWithdrawal(); break;  
 case 4: showAccountDetails(); break;  
 case 5: updateContact(); break;  
 case 6: System.out.println("Thank you for using the Banking Application!"); return;  
 default: System.out.println("Invalid choice! Please try again.");  
 }  
 }  
 }  
  
 // Main method  
 public static void main(String[] args) {  
 preloadAccounts(); // Optional: preload some accounts  
 mainMenu();  
 }  
}