Assignment 1
Java Programming
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CODE:

```java
import java.util.Scanner;

class Account {
    private int accountNumber;
    private String accountHolderName;
    private double balance;
    private String email;
    private String phoneNumber;

    public Account(int accountNumber, String accountHolderName, double initialDeposit,
String email, String phoneNumber) {
        this.accountNumber = accountNumber;
        this.accountHolderName = accountHolderName;
        this.balance = initialDeposit;
        this.email = email;
        this.phoneNumber = phoneNumber;
    }

    public void deposit(double amount) {
        if (amount > 0) {
            balance += amount;
            System.out.println("Amount deposited successfully. Current balance: " + balance);
        } else {
            System.out.println("Invalid amount. Deposit must be positive.");
        }
    }

    public void withdraw(double amount) {
        if (amount <= 0) {
            System.out.println("Invalid amount. Withdrawal must be positive.");
        } else if (amount > balance) {
            System.out.println("Insufficient balance.");
        } else {
            balance -= amount;
            System.out.println("Amount withdrawn successfully. Remaining balance: " +
balance);
        }
```

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    }

    public void displayAccountDetails() {
        System.out.println("Account Number: " + accountNumber);
        System.out.println("Account Holder Name: " + accountHolderName);
        System.out.println("Balance: " + balance);
        System.out.println("Email: " + email);
        System.out.println("Phone Number: " + phoneNumber);
    }

    public void updateContactDetails(String email, String phoneNumber) {
        this.email = email;
        this.phoneNumber = phoneNumber;
        System.out.println("Contact details updated successfully.");
    }

    public int getAccountNumber() {
        return accountNumber;
    }
}

class Main {
    private Account[] accounts = new Account[10];
    private int accountCount = 0;
    private Scanner scanner = new Scanner(System.in);  // FIXED declaration
    private int accountNumberCounter = 1001;

    public static void main(String[] args) {
        Main app = new Main();
        app.mainMenu();
    }

    public void mainMenu() {
        while (true) {
            System.out.println("\nWelcome to the 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 = scanner.nextInt();
            scanner.nextLine(); // Consume newline character

            switch (choice) {
                case 1:
```

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                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.");
        }
    }
}

private void createAccount() {
    System.out.print("Enter account holder name: ");
    String name = scanner.nextLine();

    System.out.print("Enter initial deposit amount: ");
    double initialDeposit = scanner.nextDouble();
    scanner.nextLine();

    System.out.print("Enter email address: ");
    String email = scanner.nextLine();

    System.out.print("Enter phone number: ");
    String phone = scanner.nextLine();

    Account newAccount = new Account(accountNumberCounter, name, initialDeposit,
email, phone);
    accounts[accountCount++] = newAccount;

    System.out.println("Account created successfully with Account Number: " +
accountNumberCounter);
    accountNumberCounter++;
}

private Account findAccount(int accountNumber) {
    for (int i = 0; i < accountCount; i++) {
```

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            if (accounts[i].getAccountNumber() == accountNumber) {
                return accounts[i];
            }
        }
        return null;
    }

    private void performDeposit() {
        System.out.print("Enter account number: ");
        int accNum = scanner.nextInt();
        scanner.nextLine();

        Account acc = findAccount(accNum);
        if (acc != null) {
            System.out.print("Enter amount to deposit: ");
            double amount = scanner.nextDouble();
            scanner.nextLine();
            acc.deposit(amount);
        } else {
            System.out.println("Account not found.");
        }
    }

    private void performWithdrawal() {
        System.out.print("Enter account number: ");
        int accNum = scanner.nextInt();
        scanner.nextLine();

        Account acc = findAccount(accNum);
        if (acc != null) {
            System.out.print("Enter amount to withdraw: ");
            double amount = scanner.nextDouble();
            scanner.nextLine();
            acc.withdraw(amount);
        } else {
            System.out.println("Account not found.");
        }
    }

    private void showAccountDetails() {
        System.out.print("Enter account number: ");
        int accNum = scanner.nextInt();
        scanner.nextLine();

        Account acc = findAccount(accNum);
        if (acc != null) {
            acc.displayAccountDetails();
        } else {
```

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            System.out.println("Account not found.");
        }
    }

    private void updateContact() {
        System.out.print("Enter account number: ");
        int accNum = scanner.nextInt();
        scanner.nextLine();

        Account acc = findAccount(accNum);
        if (acc != null) {
            System.out.print("Enter new email address: ");
            String email = scanner.nextLine();

            System.out.print("Enter new phone number: ");
            String phone = scanner.nextLine();

            acc.updateContactDetails(email, phone);
        } else {
            System.out.println("Account not found.");
        }
```