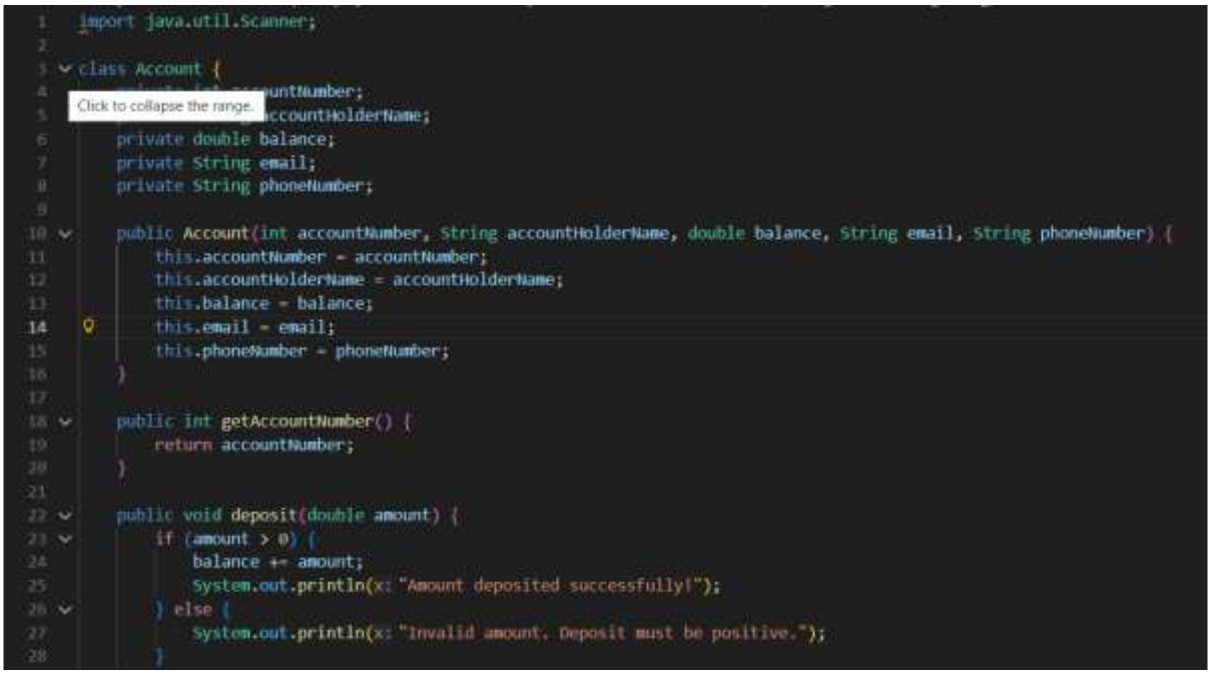
ASSIGNMENT-1

Name-Rajat Rao

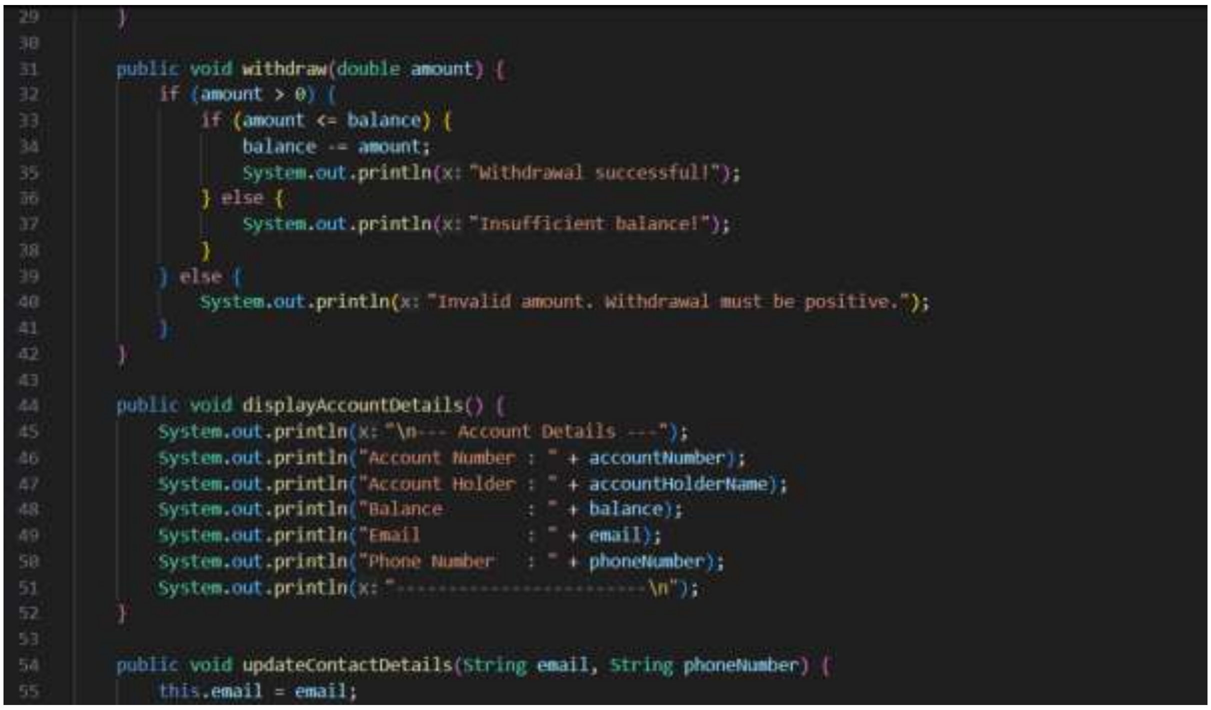
Roll no-2401201067

Course-BCA(AI&DS)

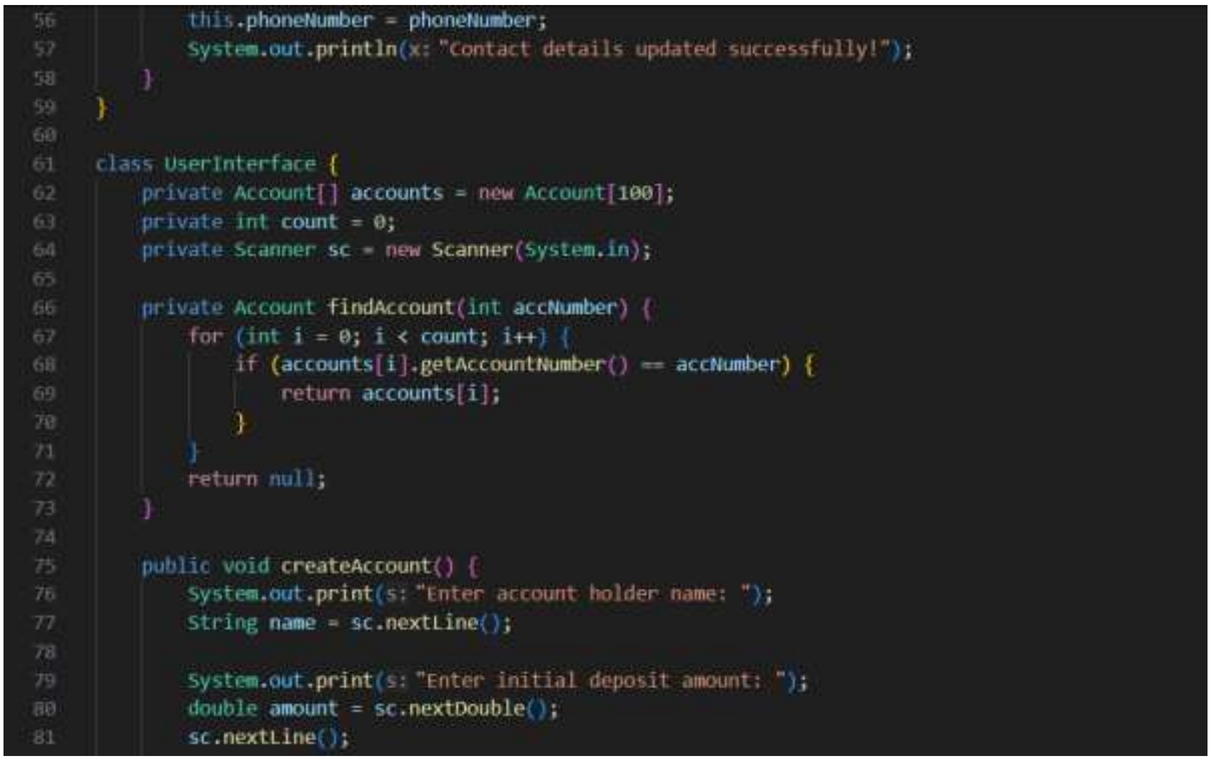
Input-



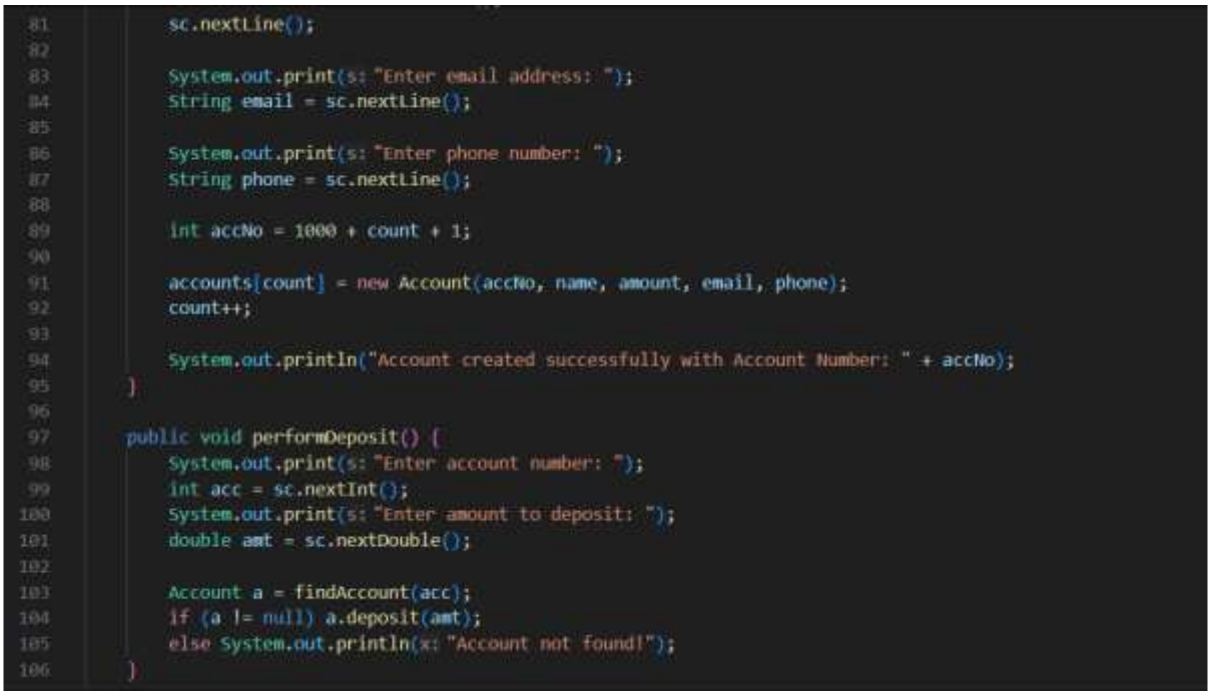
```
import java.util.Scanner;

class Account {
    [illegible]untNumber;
    [illegible]ccountHolderName;
    private double balance;
    private String email;
    private String phoneNumber;

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

    public int getAccountNumber() {
        return accountNumber;
    }

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



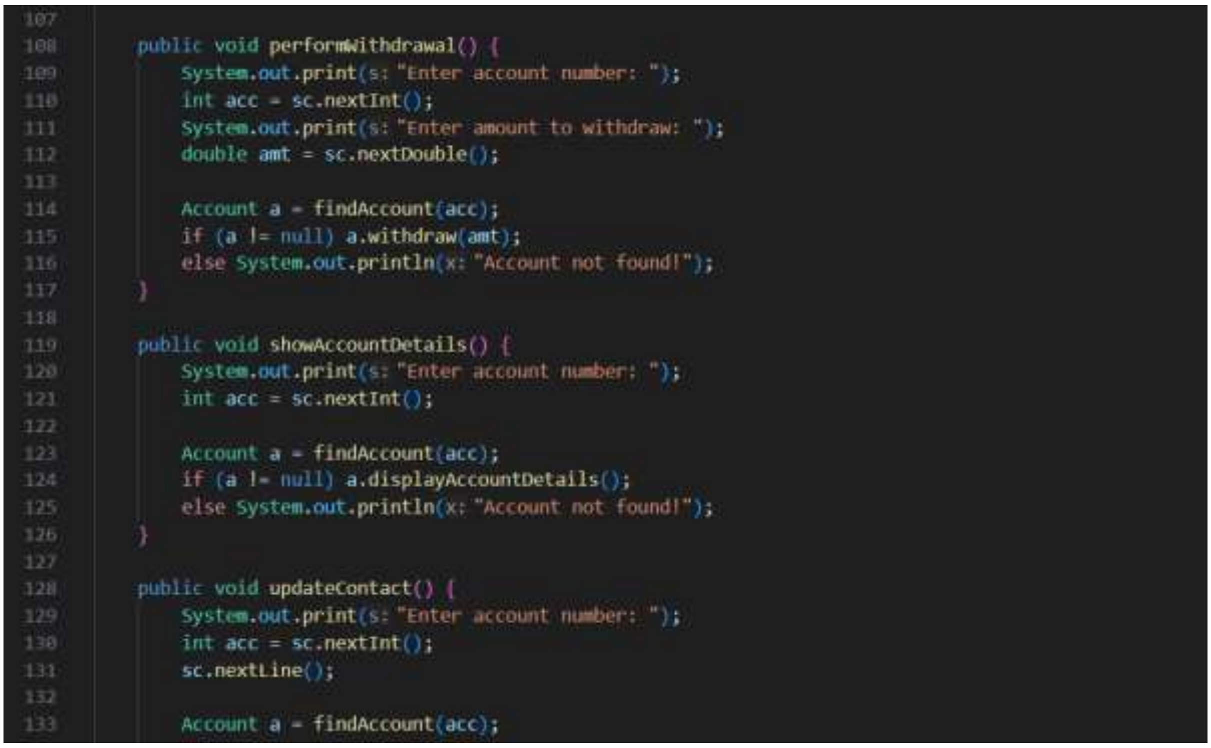
```java
    }

    public void withdraw(double amount) {
        if (amount > 0) {
            if (amount <= balance) {
                balance -= amount;
                System.out.println(x: "Withdrawal successful!");
            } else {
                System.out.println(x: "Insufficient balance!");
            }
        } else {
            System.out.println(x: "Invalid amount. Withdrawal must be positive.");
        }
    }

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

    public void updateContactDetails(String email, String phoneNumber) {
        this.email = email;
```



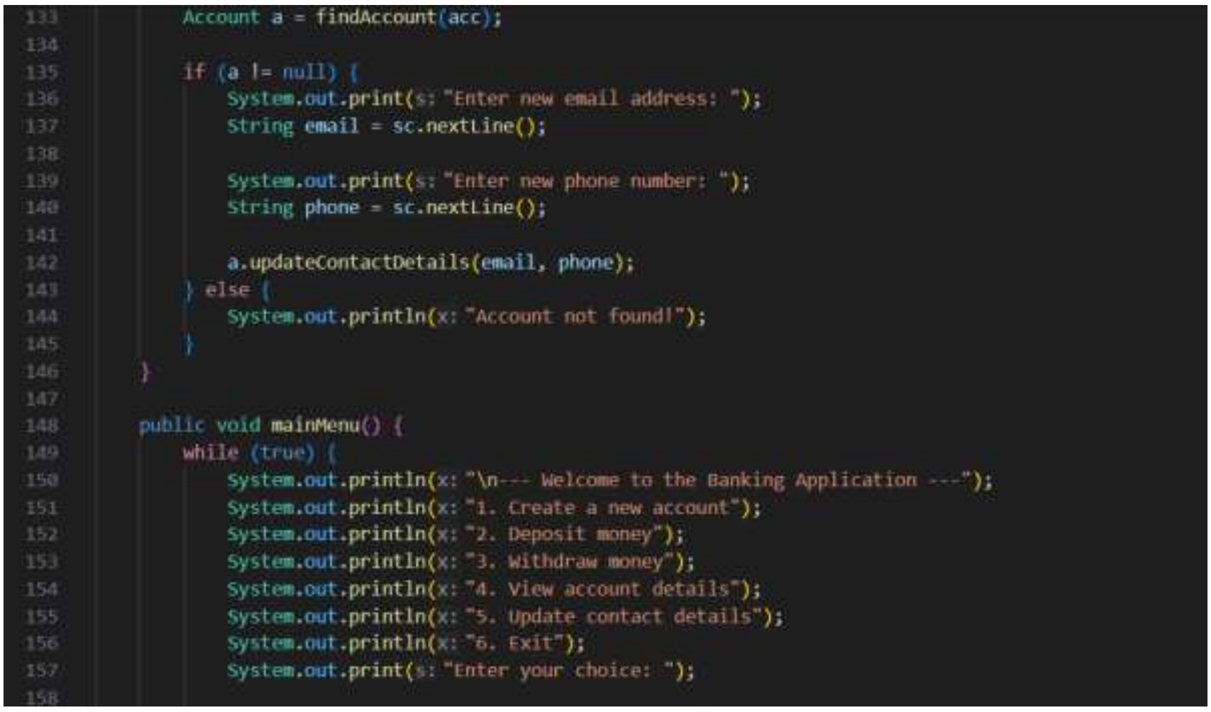
```java
        this.phoneNumber = phoneNumber;
        System.out.println(x: "Contact details updated successfully!");
    }
}

class UserInterface {
    private Account[] accounts = new Account[100];
    private int count = 0;
    private Scanner sc = new Scanner(System.in);

    private Account findAccount(int accNumber) {
        for (int i = 0; i < count; i++) {
            if (accounts[i].getAccountNumber() == accNumber) {
                return accounts[i];
            }
        }
        return null;
    }

    public void createAccount() {
        System.out.print(s: "Enter account holder name: ");
        String name = sc.nextLine();

        System.out.print(s: "Enter initial deposit amount: ");
        double amount = sc.nextDouble();
        sc.nextLine();
```



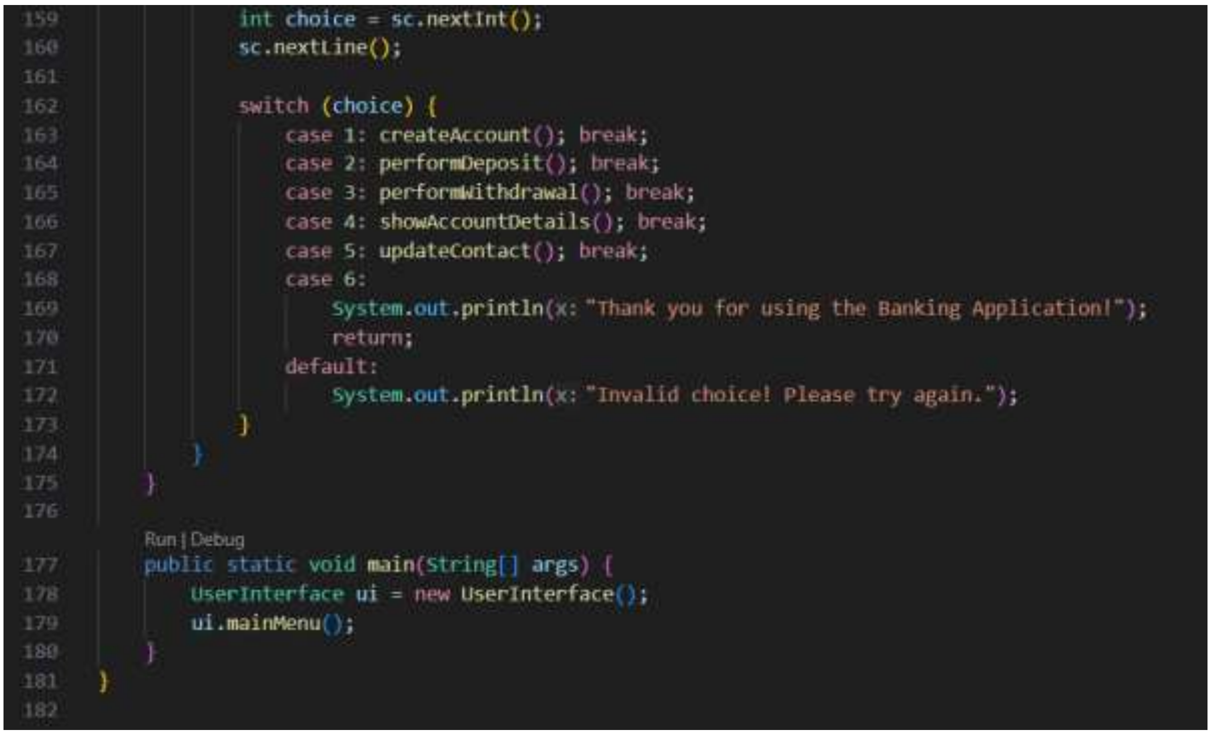
```java
        sc.nextLine();

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

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

        int accNo = 1000 + count + 1;

        accounts[count] = new Account(accNo, name, amount, email, phone);
        count++;

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

    public void performDeposit() {
        System.out.print(s: "Enter account number: ");
        int acc = sc.nextInt();
        System.out.print(s: "Enter amount to deposit: ");
        double amt = sc.nextDouble();

        Account a = findAccount(acc);
        if (a != null) a.deposit(amt);
        else System.out.println(x: "Account not found!");
    }
```



```java

    public void performWithdrawal() {
        System.out.print(s: "Enter account number: ");
        int acc = sc.nextInt();
        System.out.print(s: "Enter amount to withdraw: ");
        double amt = sc.nextDouble();

        Account a = findAccount(acc);
        if (a != null) a.withdraw(amt);
        else System.out.println(x: "Account not found!");
    }

    public void showAccountDetails() {
        System.out.print(s: "Enter account number: ");
        int acc = sc.nextInt();

        Account a = findAccount(acc);
        if (a != null) a.displayAccountDetails();
        else System.out.println(x: "Account not found!");
    }

    public void updateContact() {
        System.out.print(s: "Enter account number: ");
        int acc = sc.nextInt();
        sc.nextLine();

        Account a = findAccount(acc);
```

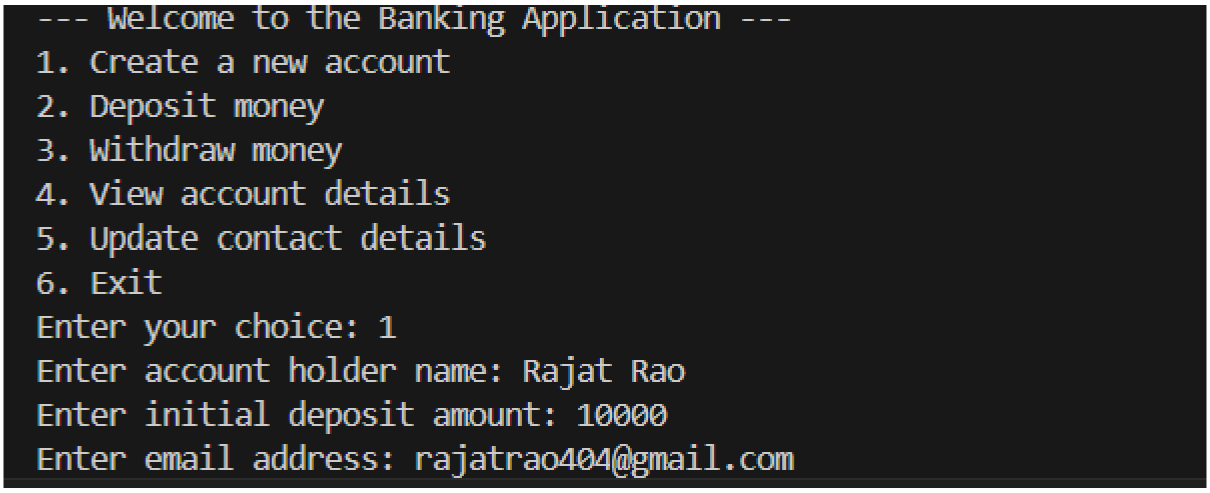


```java
        Account a = findAccount(acc);

        if (a != null) {
            System.out.print(s: "Enter new email address: ");
            String email = sc.nextLine();

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

            a.updateContactDetails(email, phone);
        } else {
            System.out.println(x: "Account not found!");
        }
    }

    public void mainMenu() {
        while (true) {
            System.out.println(x: "\n--- Welcome to the Banking Application ---");
            System.out.println(x: "1. Create a new account");
            System.out.println(x: "2. Deposit money");
            System.out.println(x: "3. Withdraw money");
            System.out.println(x: "4. View account details");
            System.out.println(x: "5. Update contact details");
            System.out.println(x: "6. Exit");
            System.out.print(s: "Enter your choice: ");

```

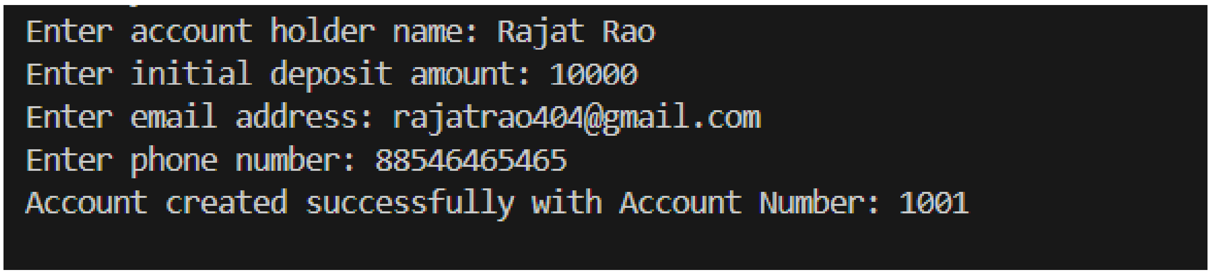


```java
            int choice = sc.nextInt();
            sc.nextLine();

            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(x: "Thank you for using the Banking Application!");
                    return;
                default:
                    System.out.println(x: "Invalid choice! Please try again.");
            }
        }
    }

    Run | Debug
    public static void main(String[] args) {
        UserInterface ui = new UserInterface();
        ui.mainMenu();
    }
}

```

Output-



```
--- Welcome to the Banking Application ---
1. Create a new account
2. Deposit money
3. Withdraw money
4. View account details
5. Update contact details
6. Exit
Enter your choice: 1
Enter account holder name: Rajat Rao
Enter initial deposit amount: 10000
Enter email address: rajatrao404@gmail.com
```



```
Enter account holder name: Rajat Rao
Enter initial deposit amount: 10000
Enter email address: rajatrao404@gmail.com
Enter phone number: 88546465465
Account created successfully with Account Number: 1001
```

EXPLANATION-

1. Account Class

- ***This class stores details of a single bank account such as account number, name, balance, email, and phone.***
- ***It has methods to perform basic banking operations:***
  - ***deposit() – adds money to the account after checking the amount is positive.***
  - ***withdraw() – subtracts money if the amount is valid and the balance is enough.***
  - ***displayAccountDetails() – prints all account information.***
  - ***updateContactDetails() – updates the email and phone number of the account holder.***

2. UserInterface Class

- ***This class interacts with the user.***
- ***It uses an array of Account objects to store multiple accounts.***
- ***A Scanner is used to take input from the user.***
- ***The class provides methods to:***
    - ***createAccount() – takes user details and creates a new account.***
    - ***performDeposit() – asks for account number and amount, then deposits.***
    - ***performWithdrawal() – asks for account number and withdraws money.***
    - ***showAccountDetails() – displays details of a selected account.***
    - ***updateContact() – changes the email/phone number for an account.***

3. mainMenu()

- ***Displays a menu with options (1–6).***
- ***Uses a switch-case to perform tasks based on the user's choice.***
- ***Continues in a loop until the user chooses Exit (6).***