

**COIS 2240H**

**Assignment 2**

**Winter 2024**

Dikshith Reddy Macherla

Student Id : 0789055

Bachelor Of Computer Science, Trent University

COIS 2240H: Software Design and Modelling

Professor : Alaadin Addas

24th March, 2024

# Assignment 2

## Part 1 Screenshots

### Test 1: View All Accounts

**Description:** Display all accounts loaded from the CSV file.

**Expected Output:** List all accounts with their details as present in the bank\_accounts.csv file.

**Actual Output:**

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\diksh\Desktop\COIS 2240H\Assignment 2> & 'C:\Program Files\Amazon Corretto\jdk21.0.2_13\bin\java.exe' '-agentlib:jdwp=transport=y,address=localhost:50731' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\diksh\AppData\Roaming\Code\User\204ca6eea6a4d54e53f\redhat.java\jdt_ws\Assignment 2_3292a946\bin' 'AccountManager'
Menu:
1. View All Accounts
2. Search by Account Number
3. Deposit
4. Withdraw
5. Exit
Enter your choice: 1
BankAccount{accountNumber='12345', accountHolderName='John Doe', accountType='Savings', balance=1500.5}
BankAccount{accountNumber='23456', accountHolderName='Jane Doe', accountType='Checking', balance=2500.75}
BankAccount{accountNumber='34567', accountHolderName='Michael Smith', accountType='Savings', balance=3000.0}
BankAccount{accountNumber='45678', accountHolderName='Lisa Simpson', accountType='Checking', balance=4000.25}
BankAccount{accountNumber='56789', accountHolderName='Bart Simpson', accountType='Savings', balance=500.0}
BankAccount{accountNumber='55696', accountHolderName='Aladdin Addas', accountType='Savings', balance=0.0}
```

### Test 2: Search for an Existing Account

**Description:** Search for an account using an account number that exists.

**Expected Output:** The details of the account matching the provided account number.

**Actual Output:**

```
Menu:
1. View All Accounts
2. Search by Account Number
3. Deposit
4. Withdraw
5. Exit
Enter your choice: 2
Enter account number to search: 12345
Account found: BankAccount{accountNumber='12345', accountHolderName='John Doe', accountType='Savings', balance=1500.5}
```

### Test 3: Deposit to Existing Account

**Description:** Deposit a positive amount of money into an existing account.

**Expected Output:** Confirmation message with the new balance.

**Actual Output:**

```
Menu:
1. View All Accounts
2. Search by Account Number
3. Deposit
4. Withdraw
5. Exit
Enter your choice: 3
Enter account number for deposit: 12345
Enter amount to deposit: 200
Deposit successful. New balance: $1700.5
```

#### Test 4: Search for a Non-existing Account

**Description:** Attempt to search for an account using an account number that does not exist.

**Expected Output:** A message indicating that the account could not be found.

**Actual Output:**

```
Menu:
1. View All Accounts
2. Search by Account Number
3. Deposit
4. Withdraw
5. Exit
Enter your choice: 2
Enter account number to search: 4859
Account not found.
```

#### Test 5: Withdraw from Existing Account with Sufficient Balance

**Description:** Withdraw an amount smaller than the current balance from an existing account.

**Expected Output:** Confirmation message with the new balance.

**Actual Output:**

```
Menu:
1. View All Accounts
2. Search by Account Number
3. Deposit
4. Withdraw
5. Exit
Enter your choice: 4
Enter account number for withdrawal: 12345
Enter amount to withdraw: 300
Withdrawal successful. New balance: $1400.5
```

#### Test 6: Withdraw More Than Balance

**Description:** Attempt to withdraw an amount greater than the current balance from an account.

**Expected Output:** Error message indicating insufficient funds.

**Actual Output:**

```

Menu:
1. View All Accounts
2. Search by Account Number
3. Deposit
4. Withdraw
5. Exit
Enter your choice: 4
Enter account number for withdrawal: 12345
Enter amount to withdraw: 5000
Withdrawal failed. Account not found, insufficient balance, or invalid amount.

```

```

Menu:
1. View All Accounts
2. Search by Account Number
3. Deposit
4. Withdraw
5. Exit
Enter your choice: 5
PS C:\Users\diksh\Desktop\COIS 2240H\Assignment 2>

```

## The UML diagram

