California State University, Sacramento
College of Engineering and Computer Science

CSc 20: Programming Concepts and Methodology II

Programming Project

Objective: The objective of this project is to practice using files of objects and gain more experiences in developing interactive GUI using Java Swing and AWT toolkits.

Project description:

In this assignment, you are to design a Java program to record checking account transactions and to keep track of the amount of money in your checking account. A transaction record should include the following information:

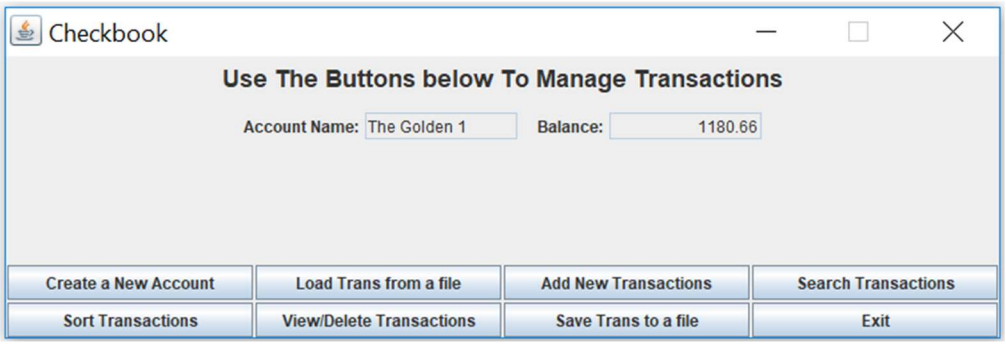
. Transaction date, **a string of characters**
. Transaction type; Deposit, Automatic deposit, ATM Withdrawal, Check, or Debit Card.
. Check No., **an integer**
. Transaction description, **a string of characters**
. Amount, **a floating point number**

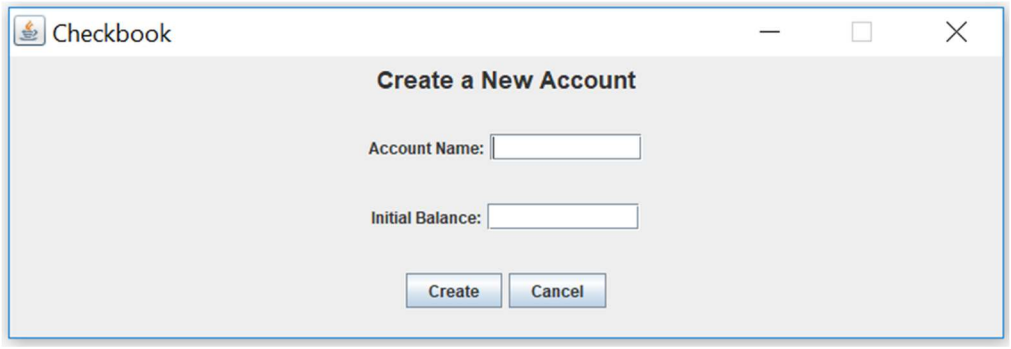
Your program should allow an user to do the following:

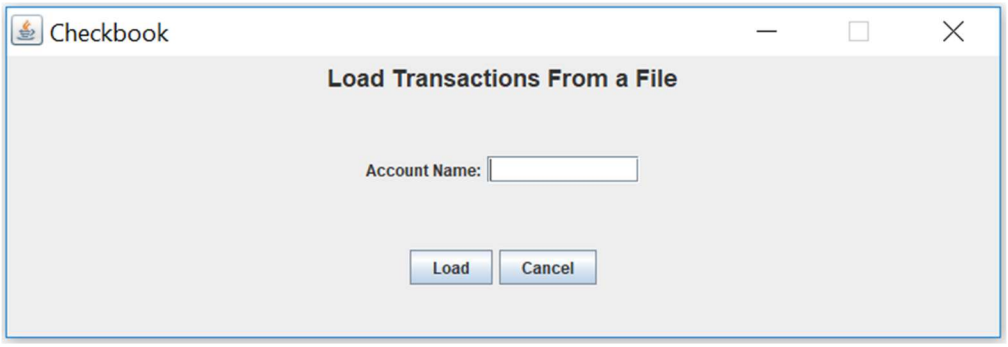
1. Create a new account
2. Load transactions from a file
3. Add new transactions
4. Search transactions (optional)
5. Sort transactions (optional)
6. View/Delete transactions
7. Save transactions to a file

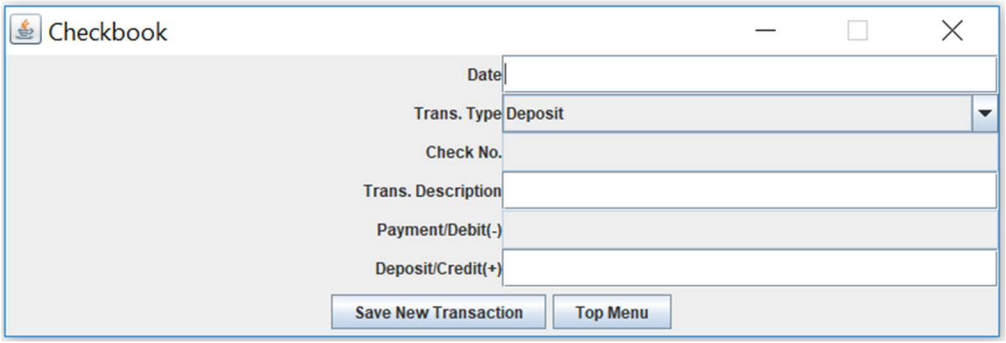
User interface requirement:

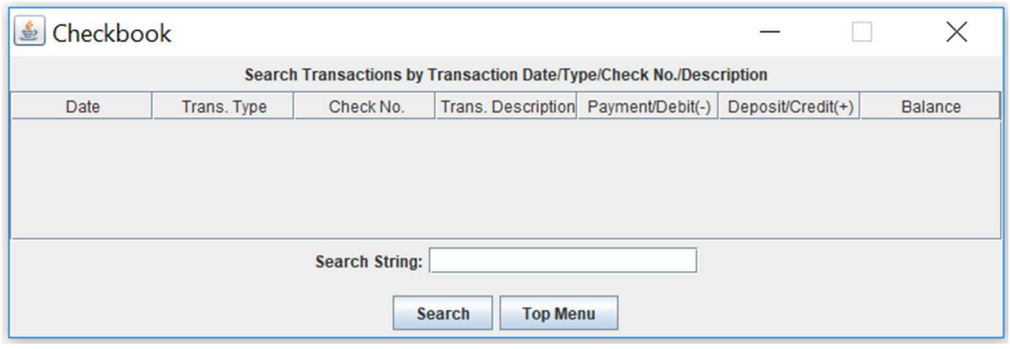
Your program should have a GUI closely similar to the following.

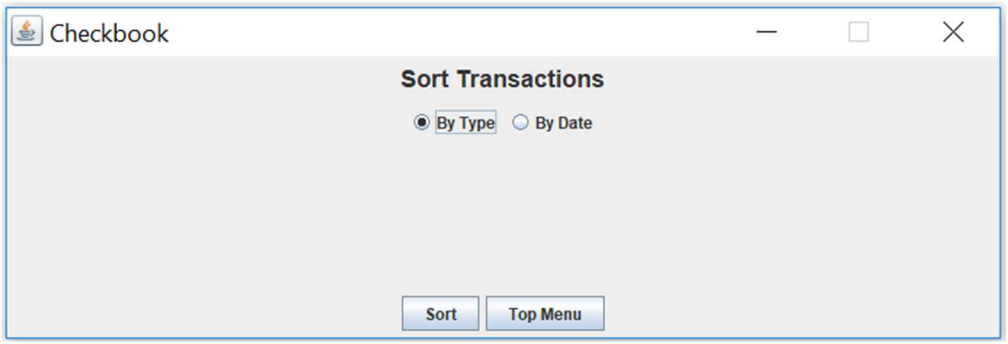


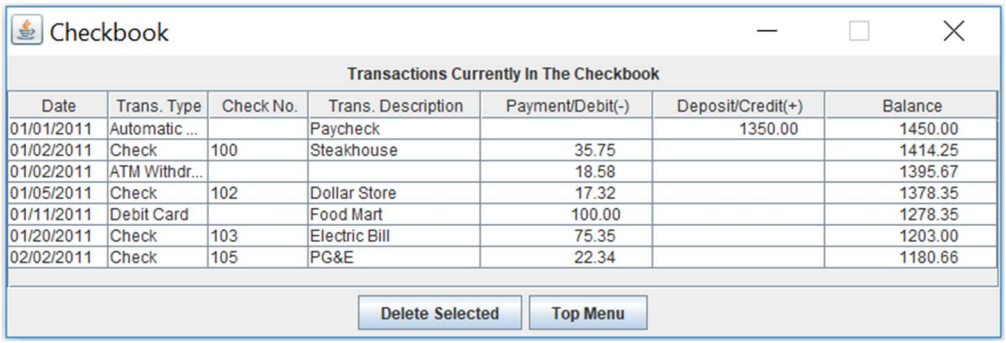

Checkbook
Create a New Account
Account Name:
Initial Balance:
Create
Cancel


Checkbook
Load Transactions From a File
Account Name:
Load
Cancel


Checkbook
Date
Trans. Type
Deposit
Check No.
Trans. Description
Payment/Debit(-)
Deposit/Credit(+)
Save New Transaction
Top Menu


Checkbook
Search Transactions by Transaction Date/Type/Check No./Description
Date
Trans. Type
Check No.
Trans. Description
Payment/Debit(-)
Deposit/Credit(+)
Balance
Search String:
Search
Top Menu





Date	Trans. Type	Check No.	Trans. Description	Payment/Debit(-)	Deposit/Credit(+)	Balance
01/01/2011	Automatic ...		Paycheck		1350.00	1450.00
01/02/2011	Check	100	Steakhouse	35.75		1414.25
01/02/2011	ATM Withdr...			18.58		1395.67
01/05/2011	Check	102	Dollar Store	17.32		1378.35
01/11/2011	Debit Card		Food Mart	100.00		1278.35
01/20/2011	Check	103	Electric Bill	75.35		1203.00
02/02/2011	Check	105	PG&E	22.34		1180.66

To submit your project:

1. A hardcopy of your Java source code.
2. Email a softcopy of your source code.
3. Demo your program on athena before **12/07/2017.**

Programming hints about JLabel, JTable and JScrollPane:

1. To change the font size of a JLabel.

```
new JLabel("<html><font size=5><b>JLabel text</b></html>");
```

2. Create a JScrollPane and add it to the center of the contentPane of a frame.

```
scrollPane = new JScrollPane();
contentPane.add(scrollPane,BorderLayout.CENTER);
```

3. Before display contacts.

   a. Create a JTable.

```
JTable abtable = new JTable(data,columnName);
```

b. Use the JTable to create a temporary JScrollPane.

```
JScrollPane tmp = new JScrollPane(abtable);
```

c. Get the viewport from the temporary JScrollPane and add it to the original JScrollPane.

```
scrollPane.setViewport(tmp.getViewport());
```