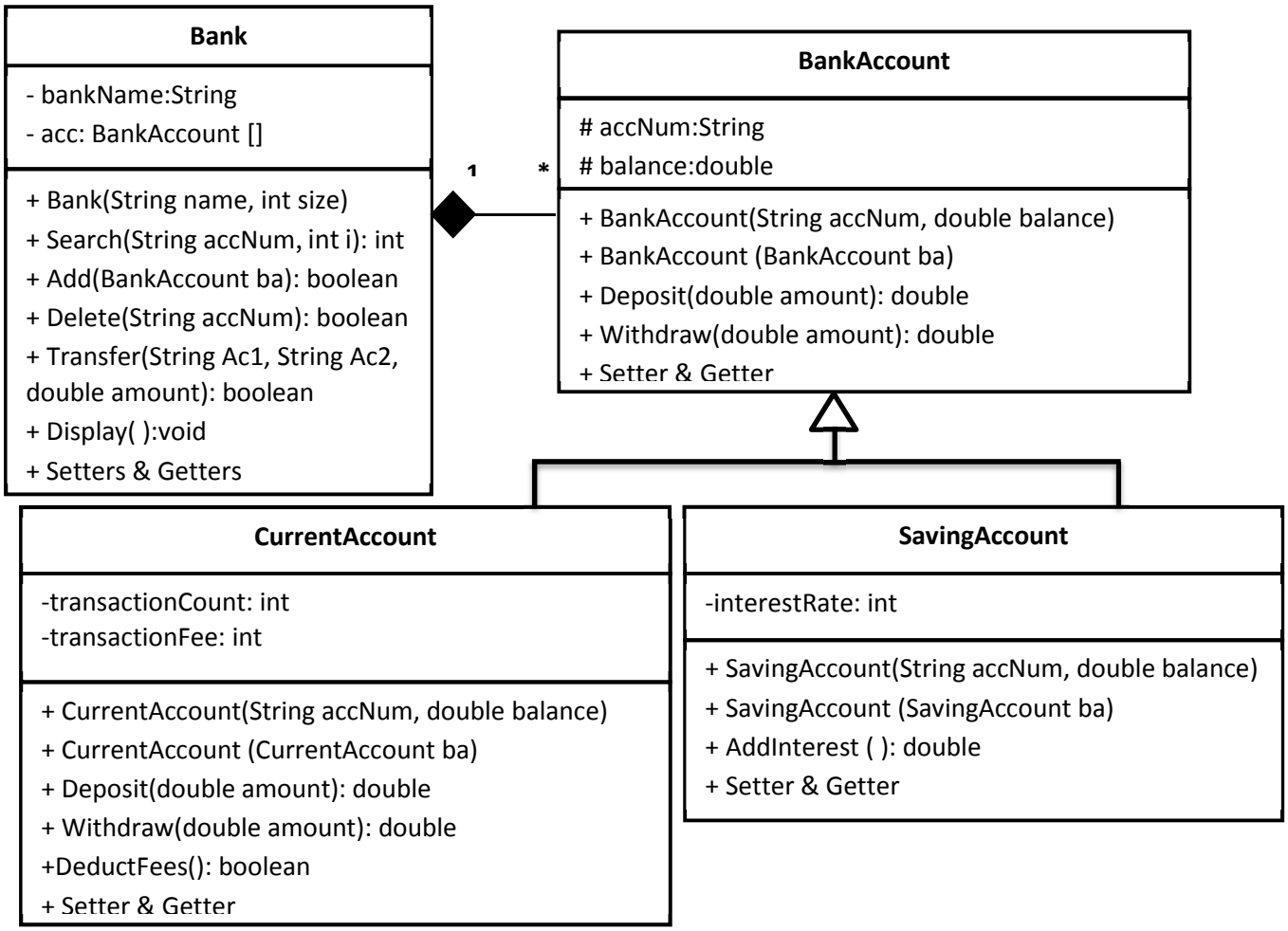
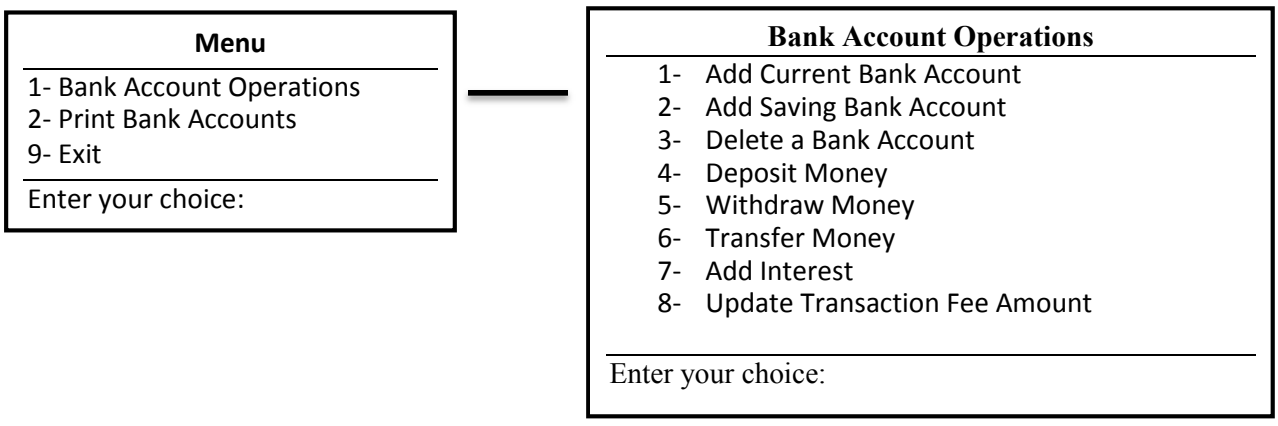
King Saud University
College of Computer and Information
Sciences Lab 6 Exception Handling



Once you are done writing the classes, you need to test your work by implementing the class Lab6 with main method that shows the following menu:

In Bank Account Operations from choice 4 to 8, the user should be asked for the Account numbers, get the index by using search and see if the choice applies to the chosen account. Check the account type, There is no interest in current account and no transaction fees in saving.



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Bank

Bank: Pass the parameter to Name Attribute and initialize the array Acc with size.

Search: Using Recursion, Takes AccNum and returns the index. Else -1.

Add: Takes a BankAccount to add it to the bank and return true if successful otherwise return false.

Delete: Removes an account by using the returned index from search.

Transfer: Withdraw amount from Ac1 and deposit it into Ac2.

Display: Displays Bank info in the following format:

Bank Name: XY
Account Number:1234SA
Balance:1234 SR
Etc..

BankAccount

BankAccount: Pass the parameter value to each Attribute and copy constructor.

Deposit: add a positive amount to the balance and return the new balance.

Withdraw: subtract money from the account and ensure that the debit amount does not exceed the account's balance and return the new balance.

Setter & Getter: Create the get and set method to each attribute.

CurrentAccount

CurrentAccount: Pass the parameter value to each Attribute and copy constructor.

***Deposit*:** Similar to BankAccount but reset TransationCount to 0 if successful.

Withdraw: Same as in BankAccount but keep track of TransationCount and apply deductfees method if amount is less than 500 SR.

DeductFees: takes transaction fee from the account balance whenever the transaction is performed successfully and the TransationCount exceeds 3.

SavingAccount

Saving Account: Pass the parameter value to each Attribute and copy constructor.

***AddInterest* :** Add the amount of earned interest to the balance. Balance += InterestRate *Balance.

Exception Handling:

The constructor Bank throws an exception when the array is created with a negative size. (**NegativeArraySizeException**).

The method Add () throws an exception when an illegal index term in the array has been accessed. (**ArrayIndexOutOfBoundsException**).

The method Delete () throws an exception when the method has been passed an illegal or inappropriate argument. (**IllegalArgumentException**).

MENU in main throws an exception when the user enters a choice different of the type Integer. (**InputMismatchException**).

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Helpful tips and hints:

- To auto generate Getters and setters go to
  Source -> Generate Getter and Setter
  Or just type set and press Ctrl + Space for the variable you just added.
- To invoke the Auto Formatter for your code : Ctrl + Shift + F
- For auto complete: Ctrl + space
- For `System.out.println():` syso + Ctrl + space
- To Undo: Ctrl + z
- To Copy: Ctrl + c
- To Paste: Ctrl + v
- To Save: Ctrl + s
- - means private, + public, # protected.
- , # protected.