

2021 – 2022 Spring, CMPE 114/211 Fundamentals of Programming II**Lab Assignment 10****Question 1**

In this lab assignment, you are asked to write java code of banking application with limited capabilities. The application will include custom designed exception handling property.

Instructions:

- You will have three java classes: Bank.java (runnable class), InsufficientFundsException.java, and CheckingAccount.java.
- In the Bank.java class:
 - o Create one instance of CheckingAccount class.
 - o Ask user if they want to “withdraw money” or “deposit money”,
 - o If the user deposits money, ask the amount to user, add the given amount to the account.
 - o If the user withdraw money, ask the amount to user,
 - If the amount is less than the current balance then subtract the given amount from existing account,
 - If the amount is greater than the current balance then the withdraw method should throw InsufficientFundsException exception,
 - o The exception should be caught by the class and inform user as:
 - "Sorry, but you are short \$" + the amount.
 - o No matter what value is entered, or the program crashes, the program prints out the following:
 - "You are exiting. The current amount is \$" + current amount value
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- InsufficientFundsException.java class:
 - o Extends exception class.
 - o The class variable “amount” keeps the insufficient fund amount, This value is set with constructor. (The constructor is called when an exception occurs)
- CheckingAccount.java class:
 - o When an instance is created its balance is set to “0”.
 - o The class does the banking operations. It has deposit, withdraw, getBalance methods.
 - o Withdraw method throws exception, if it does not have sufficient funds.

You are supposed to submit 3 classes together, in the same zip file.

Example Output:

Account is created. Do you want to deposit initial money?

100

You deposit \$100.0

Do you want to deposit or withdraw money? D or W
(E for exit)

W

Please enter the amount:

90

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You withdraw $90.0
Do you want to deposit or withdraw money? D or W
(E for exit)
WrongEntry
Please enter D, W or E
Do you want to deposit or withdraw money? D or W
(E for exit)
W
Please enter the amount:
11
Sorry, but you are short $1.0
w11.InsufficientFundsException
You are exiting. The current amount is $10.0
    at w11.CheckingAccount.withdraw(CheckingAccount.java:24)
    at w11.BankDemo.main(BankDemo.java:25)
```