

## COMP 1409 Lab 7-b ( 4 points )

### Take-home lab

In this lab you will simulate the purchase of a stock.

Design a class called **Stock**. Here are the relevant attributes:

String stockSymbol  
double sharePrice

Provide two constructors. Both constructors call the appropriate set methods to initialize the instance variables. The default constructor initializes the instance variables to the default value, except that the String variables, an empty string ("") is passed instead of null. The non-default constructor takes two parameters to initialize the instance variables.

Provide an accessor and a mutator for each instance variable. The sharePrice mutator will validate the passed parameter and use it only if it is positive; otherwise, the instance variable will not be changed.

Provide a method to display the stock's information on the screen.

Design a class called **StockPurchase**. Here are the relevant attributes:

Stock stock  
int numberOfShares

Provide two constructors. Both constructors call the appropriate set methods to initialize the instance variables. The default constructor passes a new Stock object, created with the default Stock constructor.

The non-default constructor accepts two parameters to initialize the instance variables and passes them to the set methods.

The set method for sharePrice validates the numeric parameter and uses it only if it's positive. The set method for stock validates the object parameter and uses it only if it's not null. If null, a new Stock object is created using the default constructor for the Stock class.

Provide an accessor for each instance variable.

Provide a method called getTotalCost (). The method calculates **and returns** the cost of buying the numberOfShares shares.

Provide a method to **display on the screen** the details of that stock and the cost of buying the numberOfShares shares.

Upload the lab to the appropriate D2L dropbox before the due time. A suggested solution will be discussed in class and labs not already in the dropbox will not receive any points.