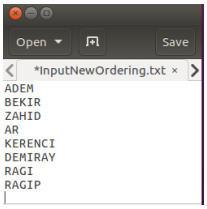
# CS371 - Project #3

Due Date: 09.12.2016

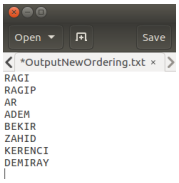
## Question 1

Write a program that takes custom order as an input and sort the given strings according to this order. All strings are uppercase letters in that question. Please use the starter template we are provided.


(a) NewOrdering.txt



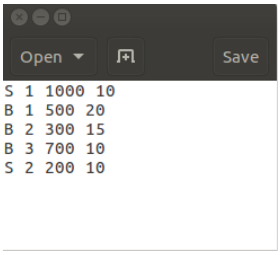

(b) InputNewOrdering.txt



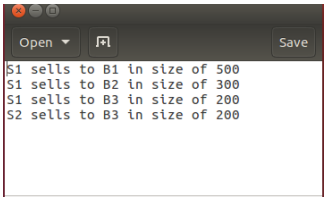

(c) OutputNewOrdering.txt

## Question 2

Investors place buy and sell orders for a particular stock on an electronic exchange, specifying a maximum buy or minimum sell price that they are willing to pay, and how many shares they wish to trade at that price. Develop a program that uses priority queues to match up buyers and sellers and test it through simulation. Maintain two priority queues, one for buyers and one for sellers, executing trades whenever a new order can be matched with an existing order or orders. Your program takes a .txt file which is containing the orders in each line and also create a output file to show trades between buyers and sellers. In the input file, first column specify the trade type, second column represent specific id for each buyer or seller, third column represent number of share and last column specify minimum selling price for sellers or maximum buying price for buyers. Notice that priority for sellers is one who gives lowest price and for buyers is one who gives highest price. Please use the starter template we are provided.




(a) StockDealsInput.txt




(b) TransitionOutput.txt

## Details:

Submit your assignment by 23:59 on the due date through LMS.For the first question, your class name has to be SortingWithNewOrdering. For the second question, your class name has to be StockMarket. All input and output naming is strict. You have to compress your code with the zip utility and name your file as `StudentId_Name_Surname_Project3.zip`. As you expected, we will test your program with different input files. Assignments must be done individually. We will not tolerate any act that may be interpreted as plagiarism, and in such cases, you will be referred to the university ethical committee. Do not walk in randomly (especially on the last day) into your TA's or the instructor's offices. Make an appointment first. This is important. Your TA's have other responsibilities. Please respect their personal schedules!