

Assignment 4

Hacettepe University Computer Engineering

Ahmet Dursun Avci

21827129

Problem definition

In this assignment, we are expected to create own stack and own queue classes, and perform the operations that stated in pdf with these stack's and queue's methods. in addition, with this assignment we will be familiar stack and queue data structures.

Steps of algorithm

I created seven class

(Stack.java, Queue.java, QueueExecution.java, StackExecution.java, Input.java, Writing.java, Main.java)

In stack and queue classed I defined basic method which is pop, enqueue etc. . Most of my algorithms are in StackExecution and QueueExecution classes, my code reads the command.txt after that according to operations, it enters execution classes, after that it enters the methods which I defined(calculatedistance, sort etc.) and, it creates and updates the txt files in that way.

Algorithm complexity

I will explain reverse method. In reverse method, firstly I used while loop to empty my stack and use the datas. In first loop I filled an array and filled an stack. After that I used an while loop to fill my main stack with datas, I used an array to fill my main stack with reverse datas. Actually I could use different ways to perform this operation, because I used nested loop and it is a little bit against code efficiency, I could have written more efficiency code, but I choosed this way, it really easy way for me to write. So I wrote like that.