Home Work

1. We (as a user for ***QueueADT***) have two filled queues; the first queue holds section code while the other holds group code (where number of groups inside the section is maximum 10). Merge those numbers (section code*10+group code) in a newly created queue.
2. Use a stack structure to check the balance and ordering between various parentheses in a mathematical expression.
3. Given a binary search tree and a value k, please find a node in the binary search tree whose value is closest to k.
4. Multimap Dictionary (data structure): is an abstract data type composed of a collection of pairs of (Key, Value), such that each possible key appears at most once in the collection, and more than one value may be associated with and returned for a given key. Propose a suitable implementation for Multimap Dictionary ADT with the following operations.
    - the addition of pairs to the collection
    - the removal of pairs from the collection
    - the modification of the values of existing pairs
    - the lookup of the value associated with a particular key

Please Note:

Students should complete assignments individually. The code you write must be your own. You may not show or give your code to anyone except this course's TAs and instructors. You are not allowed to write code with another student on an assignment or to show another student your solution to an assignment. Any code sharing will be considered as cheating. When a breach of the code of ethics occurs (cheating, plagiarism, deception, etc.), you will

get a negative mark for that exam or assignment. Even if a small portion of code is shared in an assignment, you will get a negative mark for that assignment.

Turning in Homework:

You will turn in your assignment as a hard copy accompanied by a soft copy on a rewritable CD. Submission is due at the beginning of your section at the week which will start in 3 Dec. 2017. Your submitted homework (hard & soft copies) will be graded by your TA for **5 Marks**.
