CSC 212   **First_Semester 1437-1438**

Tutorial #6

Important: This tutorial has an online part, which you should complete on LMS (tutorial section). The deadline for online task is Sunday 30 October at 8:00 A.M

Problem 1:

Write the static method *merge* It should merge two priority queues pq1 and pq2 in one Priority Queue pq.

Method: public static <T> void merge(PriorityQueue<T> pq, PriorityQueue<T> pq1, Priority Queue<T> pq2)

Problem 2:

Write a static method replace (user of Stack ADT) that takes as input a stack st and two elements x and y. The method replaces all the occurrences of the element x in st with y.
Method: public static<T> void replace (Stack<T> st, T x, T y)
Example: assuming st (top-to-bottom): 5, 7, 5, 3, 2. After calling replace(st, 5, 0) then st will be: 0, 7, 0, 3, 2.

Problem 3:

Write a static method insertAfter (user of Stack ADT) that takes a stack st, an index i, and an element e as inputs. It should insert the element e after the element at position i in the stack st. You can assume i is within the range of the stack, and that the top element has an index of 0.

Method: *public static<T> void insertAfter(Stack<T> st, int i, T e)*
Example: assuming st (top-to-bottom): 5, 7, 5, 3, 2. After calling insertAfter(st, 2, 40) then st will be: 5, 7, 5, 40, 3, 2.