COSC 2007T

Programming Lab 5 (Priority Queue as a Binary Heap)

Problem Specification:

1. Write a Java program to construct a priority queue in binary max heap form. Queue will be represented in the form of array as 45 31 14 13 20 7 11 12 7. Also Perform the following operations:

- Insert the elements in the following order 45, 20, 14, 12, 31, 7, 11, 13, 7
- Display the elements of priority queue
- Display the node with maximum priority
- Display the priority queue after extracting max
- Change the priority of element present at index 2 to 49 and display the elements
- Remove the element at index 3 and display the priority queue elements.

Submission Instructions:

Please ensure you submit an original work and should not be copied or zero will be given for copying.

Please record a one minute video, showing the program execution (code and output). You must show your face and introduce yourself in the first 5 seconds of video. Longer videos cannot be uploaded therefore keep your recordings short. You can use any screen recording software which captures your face and the screen or you may start a meeting keeping only yourself in Google Meet and record.

Ensure that your code follows Java language programming style and guidelines. Your code must compile without errors and execute as per the specifications in the problem description.

Carefully write comments in the source code to have an understanding.

Marking Scheme:

Introduction	3
Complete program with comments, no compile/logical error, and correct output:	7