July 2021 CSE204: Data Structures and Algorithms I Sessional

Offline on Heap

A max binary heap is a data structure with the following properties.

1. It is a complete binary tree.
2. The value at any node in the tree is greater than or equal to values of each of the node's child.

In this offline, you will have to implement a max binary heap. The necessary functionalities that need to be implemented are demonstrated in main.cpp. You will also need numbers.txt. The lines of main.cpp which won't run without your code have a comment like "You need to implement this". Carefully, go through the code and try to understand what you need to do to run the main function successfully.

Special Instructions:

We will take only the heap.h file as submission and run that against the provided main.cpp. So, changing main.cpp to adapt with your heap.h will result in deduction of marks.

Please **DO NOT COPY** solutions from anywhere (your friends, seniors, internet etc.). Any form of plagiarism (irrespective of source or destination), will result in getting -100% marks in the offline. Also, be informed that for repeated offence of plagiarism, the departmental policies suggest stricter measures.

Submission Guideline:

1. Create a directory with your 7 digit student id as its name
2. Put **only the heap.h** into the directory created in step 1
3. Zip the directory (compress in .zip format; .rar, .7z or any other format is not acceptable)
4. Upload the .zip file on Moodle.

For example, if your student id is 1905xxx, create a directory named 1905xxx. Put only your header file (.h) into 1905xxx. Compress 1905xxx into 1905xxx.zip and upload the 1905xxx.zip on Moodle.

Failure to follow the above-mentioned submission guideline may result in upto 10% penalty.

Submission Deadline: January 14, 2022 11:30 PM