

Lab Assignment 7 (Heap Sort): CS2233

15th October, 2025

Kindly adhere to the following instructions.

- Please write a C/C++ program corresponding to each problem. Your code should be well commented and variable names should be appropriately chosen. Also, prepare a **readme** text file where you can mention instructions to run the program/how to take input, etc.
 - Create a folder and put all the code files and **readme** text file in it, give a name to the folder as “yourName_yourRollNo”, zip the folder and submit it to the Google Classroom portal.
 - Your code will also be checked against plagiarism (both from web and peer).
 - Any form of plagiarism (web/chatGPT/with peers) will be severely penalised and will result in an F grade.
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Question: Given an array of n elements, write a code in C to sort these elements using **Heap Sort**. In your implementation first, it should create a **Heap** of the elements in the array and then output the sorted sequence of these elements using the following operations:

- `Delete-Min()`
- `Heapify()`

Your final code should not take any extra auxiliary space.

Example:

Input:

57 64 72 85 93 58 69 76 88 94 61 79 66 82 97

Output:

57 58 61 64 66 69 72 76 79 82 85 88 93 94 97