



भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY GUWAHATI

Data Structure Lab, B.Tech 2nd Semester

Instructions

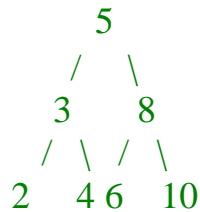
1. After completion, you can share the files through the google form, the link will be provided.
2. Deadline to submit is 18th June 2023 till 5 pm.

Assignment -8

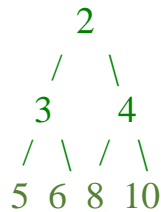
1. Write a C program to implement a Binary search tree from an array then convert it into a Min Heap.

Input: array – 5, 3, 2, 4, 8, 6, 10

Output: The BST is



Min heap is



2. Write a C program to construct a max-heap. Perform the following operations in the tree obtained:
 - (a) Insertion
 - (b) Deletion at specific position

Example:

Input: 32, 7, 8, 63, 59, 44, 4, 88, 5, 29, 45, 2

Output: Display max heap

Enter element you want to insert

Display max heap after insertion

Enter the index you want to delete element from

Display the max heap after deletion

3. Write a C program to find k'th largest element in an array using min-heap.

Input:

arr = [7, 4, 6, 3, 9, 1]

k = 2

Output:

The 2nd largest array element is 7.