

## **CSE291 Data Structures Lab**

### **Lab Sheet 10**

#### **Heap**

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1. Write a C++ program to build the following
  - (a)Min heap .
  - (b)Max heap.
2. Write a C++ program to do the following in Min Heap
  - (a)Increase the value of a node.
  - (b)Decrease the value of a node.
  - (c)Insert an element .
  - (d)Extract (Delete) the minimum.
  - (e)Delete a node.
3. Write a C++ program to do the following in Max Heap
  - (a)Increase the value of a node in the heap.
  - (b) Decrease the value of a node.
  - (c)Insert an element .
  - (d)Extract(Delete) the maximum
  - (e)Delete a node.
4. Implement Heap sort.

5. Implement priority queue using Heap.

(hint:

A typical Priority Queue requires following operations to be efficient.

1. Get Top Priority Element (Get minimum or maximum).
2. Insert an element.
3. Remove top priority element.

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