**HEAP**

**Binary Heap**: It is a complete binary tree,i.e., all levels are completely filled except last level and last level is filled from left to right.

Left(i)=2i+1

Right(i)=2i+2

Parent(i)=floor(i-1)/2

With above properties we can represent it as array.

**Two types**:

* **Min Heap**: Highest priority is assigned lowest value. Every node has a value smaller than its descendants in this complete binary tree.
* **Max Heap**: Highest priority is assigned highest value.

**Applications**:

* Heap sort
* Implementation of priority queue.
* Used in Dijsktra shortest path algo, Prim’s minimum Spanning tree prob, Huffman coding prob