Implementation of Min Heap
Max Marks: 100
Time duration: 2 Hours

Implement HeapNode class. [20]
HeapNode class has following 2 data members.
int Key; // Heap item priority key
double Data;// data of herapNode

Implement MinHeap Class.
class MinHeap hass following data members:
HeapNode *Arr; // Pointer to dynamically allocated array
int Length; // Size of the array
int NumElements; // Number of elements in the heap

Implement the folowing functions.[80]

Display left, right and parent of a node.

Enqueue(int key, double data);//Add an element in Min Heap.
Dequeue(); // delete the element with least priority.
printAll(); // print all elements in heap.

void heapifyUp(int root, int size);
//Reheap when an element is added, in order to keep it a minHeap
void heapifyDown((int root, int size);
// Reheap when an element is deleted.

int findMax(); // find max element in minHeap
void deleteMax(); // Delete max element.