Forman Christian College, Lahore
(A Chartered University)
Lab 6

This is an individual lab.

Consider the following class:
class BinHeap:
  def __init__(self):
    self.heap_list = []

Task 1 Write the following methods to implement Max Heap:
- Insert: Should call perculateUp. Use the following definition: def insert(self, value):
- perculateUp. Use the following definition: def perculateUp (self, index):
- deleteMax: Should call perculateDown
- perculateDown
- buildHeap. Should build a heap from an existing list.

Task 2 Using the build_heap method, write a sorting function that can sort a list in $O(n \log n)$ time. Hint: Use buildHeap and deleteMax operations.