Lab 9   Heap

Q1.
Illustrate the operation of Max_Heapify(A, 3) using the array

$A = \langle 27, 17, 3, 16, 13, 10, 1, 5, 7, 12, 4, 8, 9, 0 \rangle$.

Q2.
Show the operation of Build-Heap using the array below:

$A = \langle 5, 3, 17, 10, 84, 19, 6, 22, 9 \rangle$.

Q3. Illustrate the operation of Heapsort using the array below:

$\langle 5, 13, 2, 25, 7, 17, 20, 8, 4 \rangle$.

Q4.

Show that in an n-element heap, there are at most $\lceil n/2^{h+1} \rceil$ nodes of height h.