



Python

heapq



Asha
Tutorials

Heap

Element	1	2	3	6	7	5	9	11	15	8
Index	0	1	2	3	4	5	6	7	8	9



Current i : 0

1

Left : $2 * i + 1$

Right : $2 * i + 2$

Heap

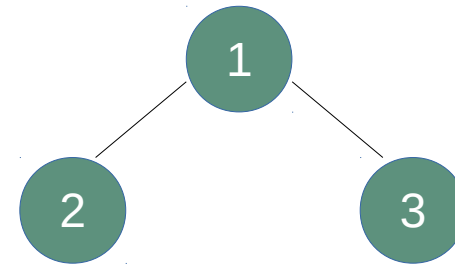
Element	1	2	3	6	7	5	9	11	15	8
Index	0	1	2	3	4	5	6	7	8	9



Current i : 0

Left : $2 * i + 1$
 $2 * 0 + 1$
 $= 1$

Right : $2 * i + 2$
 $2 * 0 + 2$
 $= 2$



Heap

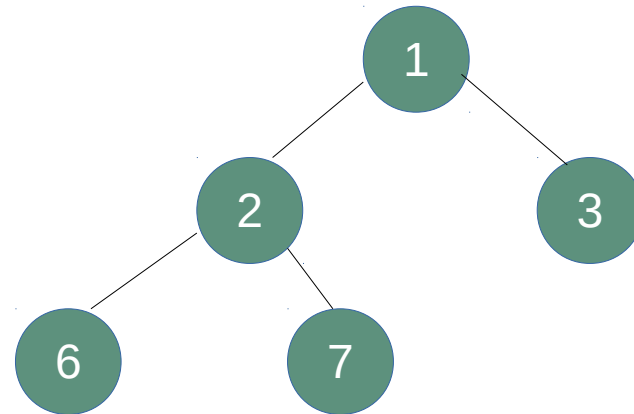
Element	1	2	3	6	7	5	9	11	15	8
Index	0	1	2	3	4	5	6	7	8	9



Current i : 1

$$\begin{aligned}\text{Left : } & 2 * i + 1 \\ & 2 * 1 + 1 \\ & = 3\end{aligned}$$

$$\begin{aligned}\text{Right : } & 2 * i + 2 \\ & 2 * 1 + 2 \\ & = 4\end{aligned}$$



Heap

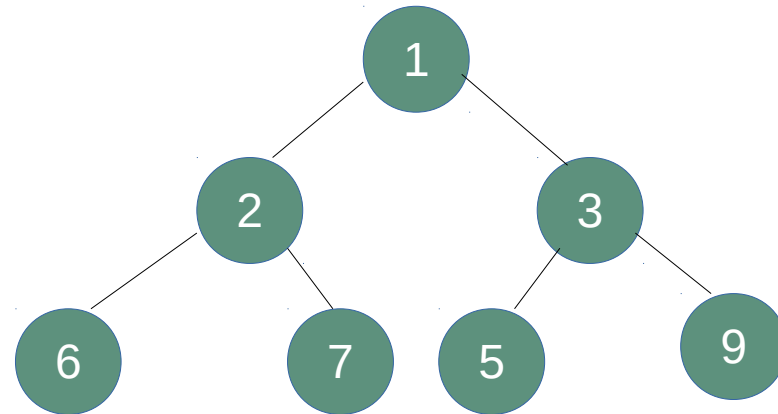
Element	1	2	3	6	7	5	9	11	15	8
Index	0	1	2	3	4	5	6	7	8	9



Current i : 2

$$\begin{aligned}\text{Left : } & 2 * i + 1 \\ & 2 * 2 + 1 \\ & = 5\end{aligned}$$

$$\begin{aligned}\text{Right : } & 2 * i + 2 \\ & 2 * 2 + 2 \\ & = 6\end{aligned}$$



Heap

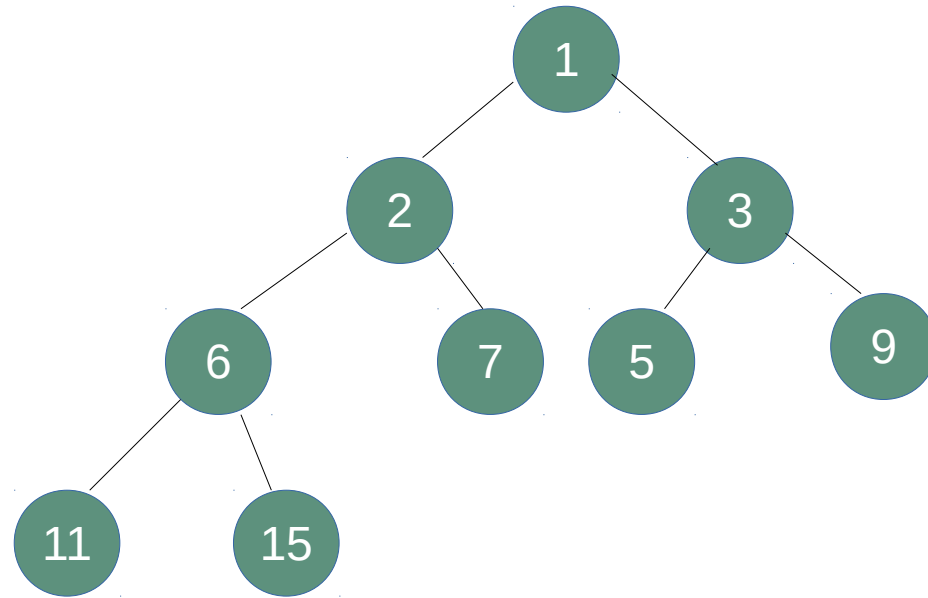
Element	1	2	3	6	7	5	9	11	15	8
Index	0	1	2	3	4	5	6	7	8	9



Current i : 3

$$\begin{aligned}\text{Left : } & 2 * i + 1 \\ & 2 * 3 + 1 \\ & = 7\end{aligned}$$

$$\begin{aligned}\text{Right : } & 2 * i + 2 \\ & 2 * 3 + 2 \\ & = 8\end{aligned}$$



Heap

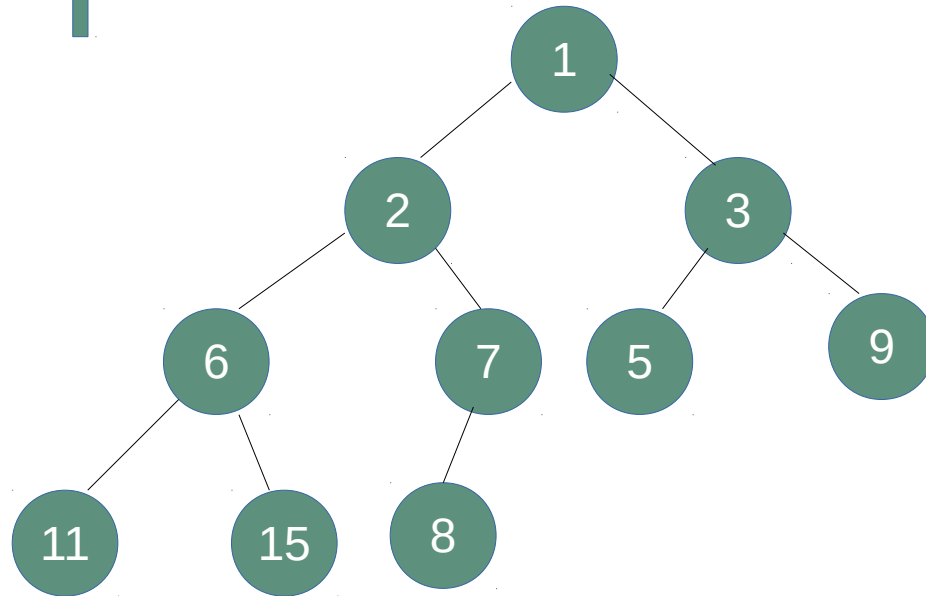
Element	1	2	3	6	7	5	9	11	15	8
Index	0	1	2	3	4	5	6	7	8	9



Current i : 4

$$\begin{aligned}\text{Left : } & 2 * i + 1 \\ & 2 * 4 + 1 \\ & = 9\end{aligned}$$

$$\begin{aligned}\text{Right : } & 2 * i + 2 \\ & 2 * 4 + 2 \\ & = 10\end{aligned}$$



End