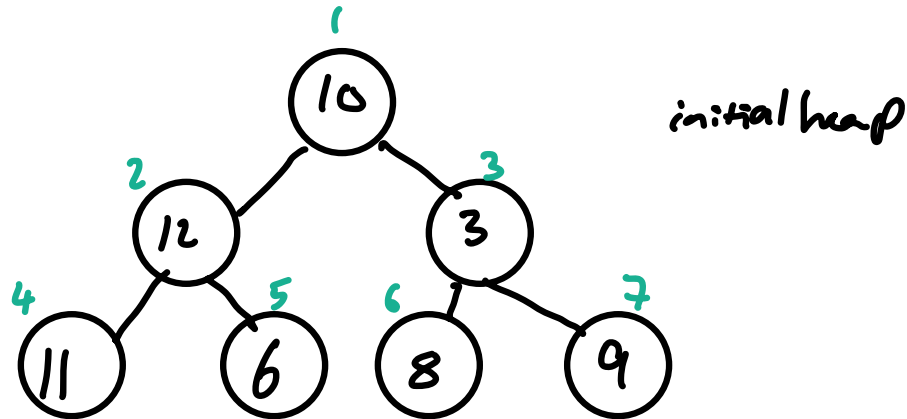# CSCI 104

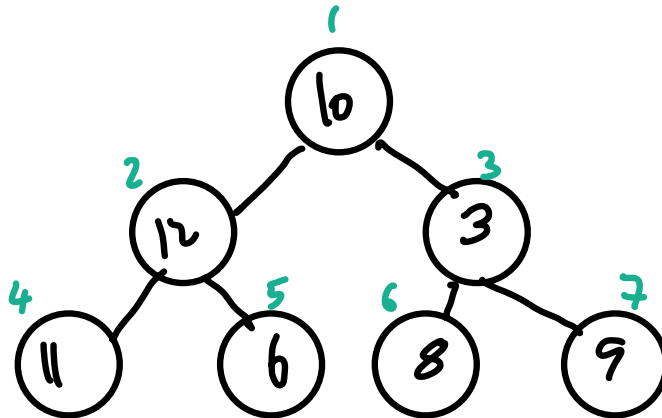- HW 3
- Problem 1 - Heap Tracing

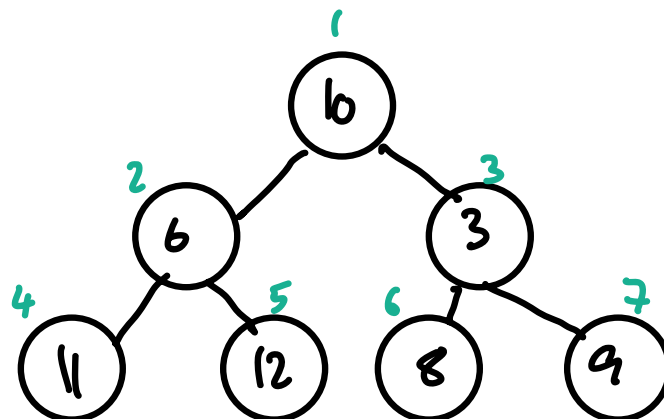Part a)   [10, 12, 3, 11, 6, 8, 9]
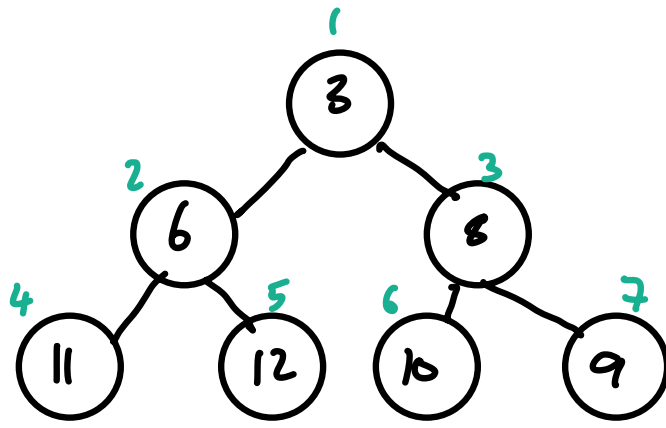
initial heap
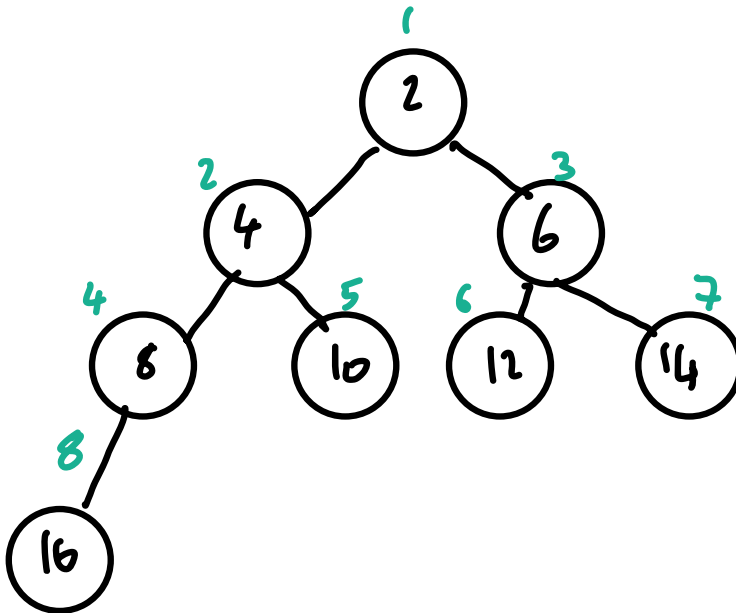
heapify (3)
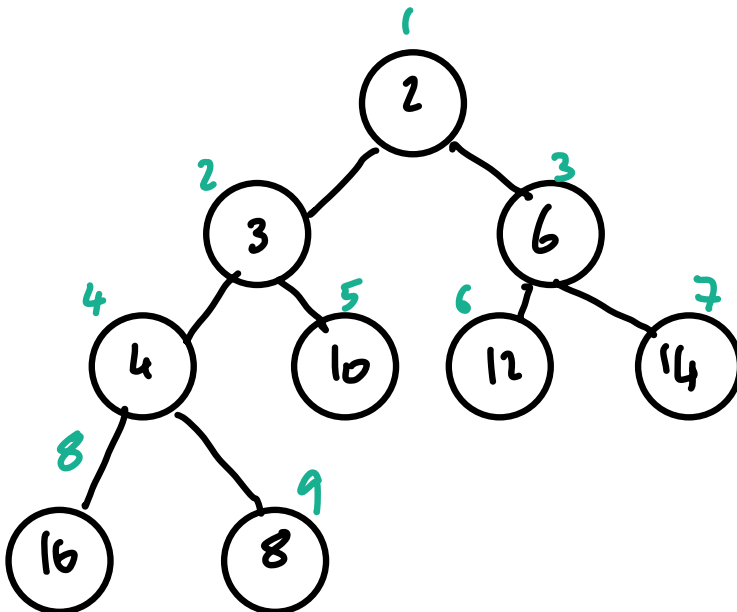
heapify (2)

heapify (1)
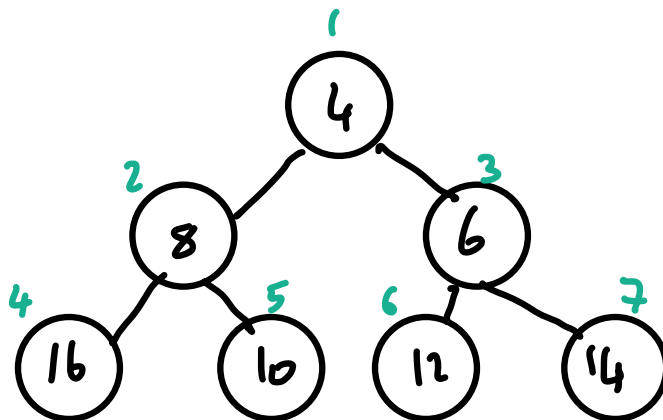

part b)

initial configuration

insert 3

② (element popped)

Tree with root **3**:
- 1: 3
- 2: 4
- 3: 6
- 4: 8
- 5: 10
- 6: 12
- 7: 14
- 8: 16
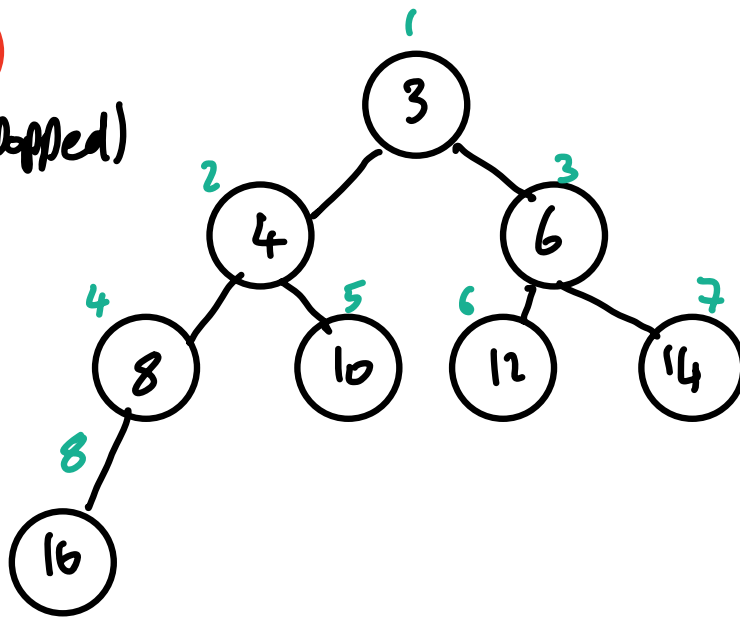
Pop top element

③ (element popped)

Tree with root **4**:
- 1: 4
- 2: 8
- 3: 6
- 4: 16
- 5: 10
- 6: 12
- 7: 14

Pop top element

Tree with root **4**:
- 1: 4
- 2: 5
- 3: 6
- 4: 8
- 5: 10
- 6: 12
- 7: 14
- 8: 16

insert 5