

Heap \rightarrow Complete Binary Tree

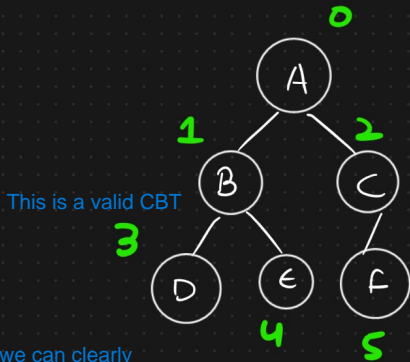
Array ??

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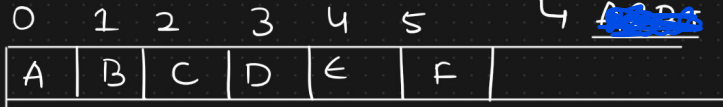
graph LR
    A[Heap] --- B[Minheap Tree]
    A --- C[Maxheap Tree]

```

→ Array for the Storage purpose

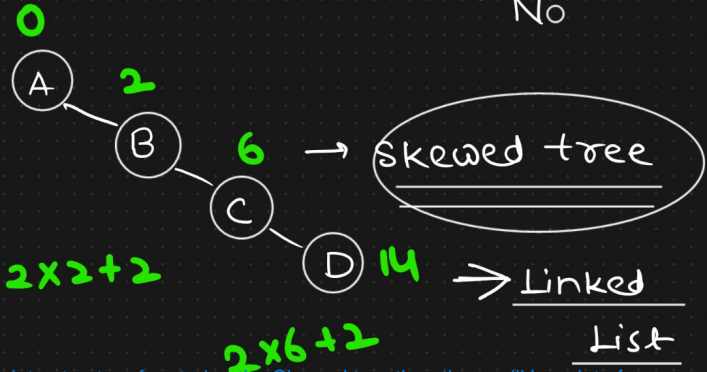


very less voltage
↑↑ of space

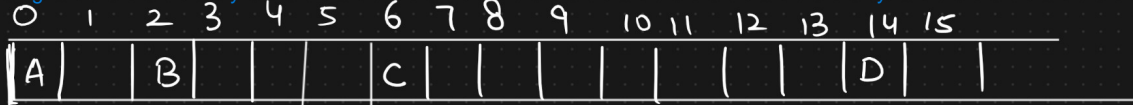


Left index $\rightarrow 2*i + 1$

Right index $\rightarrow 2 \times i + 2$



We can clearly observe that if we are using the Array based data structure for storing the Skewed tree then there will be a lot of wastage in terms of memory. Here Linked List based data structure is better alternative over Array based data structure.



↳ lot of wastage of
space

Minheap Tree

↳ Parent node data < child node data

Root Node → smallest element data

↳ $O(1) = \text{constant}$

TC for finding smallest element in MinHeap Tree

→ $a[0]$ Root node

Maxheap Tree

↳ Parent node data > child node data

Root Node → maximum/largest element

↳ $O(1) = \text{constant}$

TC for finding Largest element in Maxheap Tree

→ $a[0]$ Root node