

16/12/20

Abhishikat

(Write-up)



Continuation ^{Date} of Binomial Heap

// Decrease value of key at index 'i' to new_val.

// We assume that $\text{new_val} < \text{heap}[i]$

```
void MinHeap::decreaseKey(int i, int new_val)
```

```
{ heap[i] ← new_val;
```

```
  while  $i \neq 0$  and  $\text{heap}[\text{parent}(i)]$  greater than  $\text{heap}[i]$ 
```

```
  { swap(&heap[i], &heap[parent(i)]);
```

```
     $i \leftarrow \text{parent}(i);$  }
```

```
}
```

// It first reduced value to minus infinite, then calls

// extract min.

```
void MinHeap::deleteKey(int i)
```

```
{ decreaseKey(i, INT_MIN)
```

```
  extractMin();
```

```
}
```