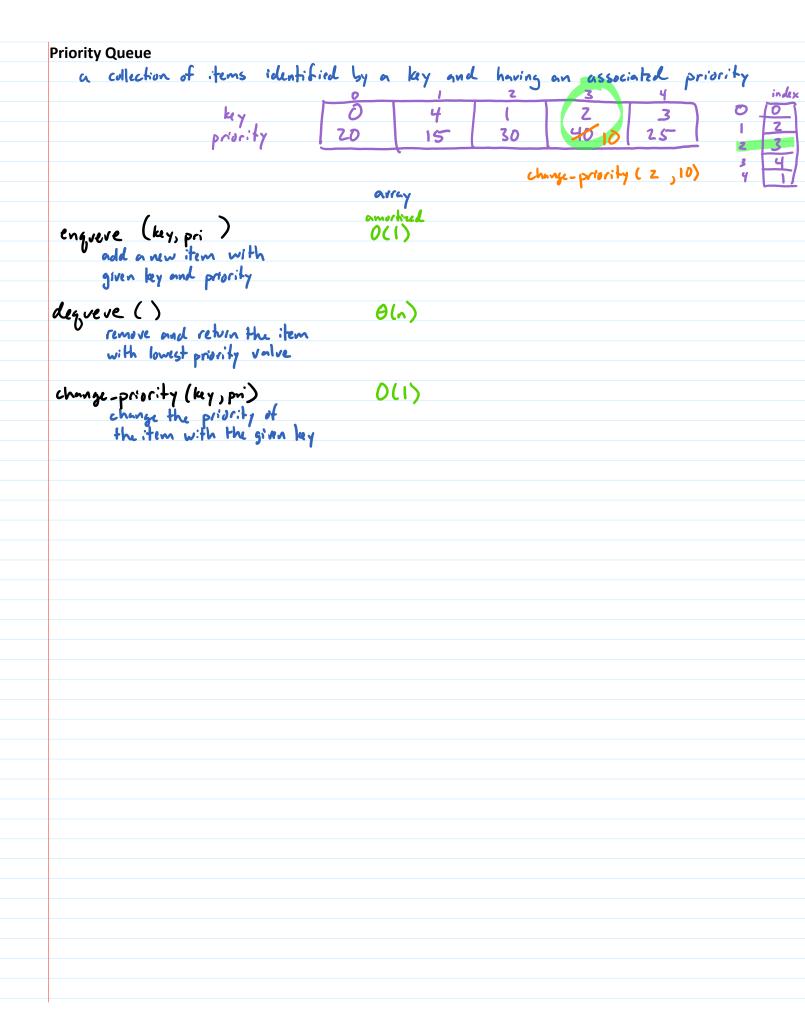
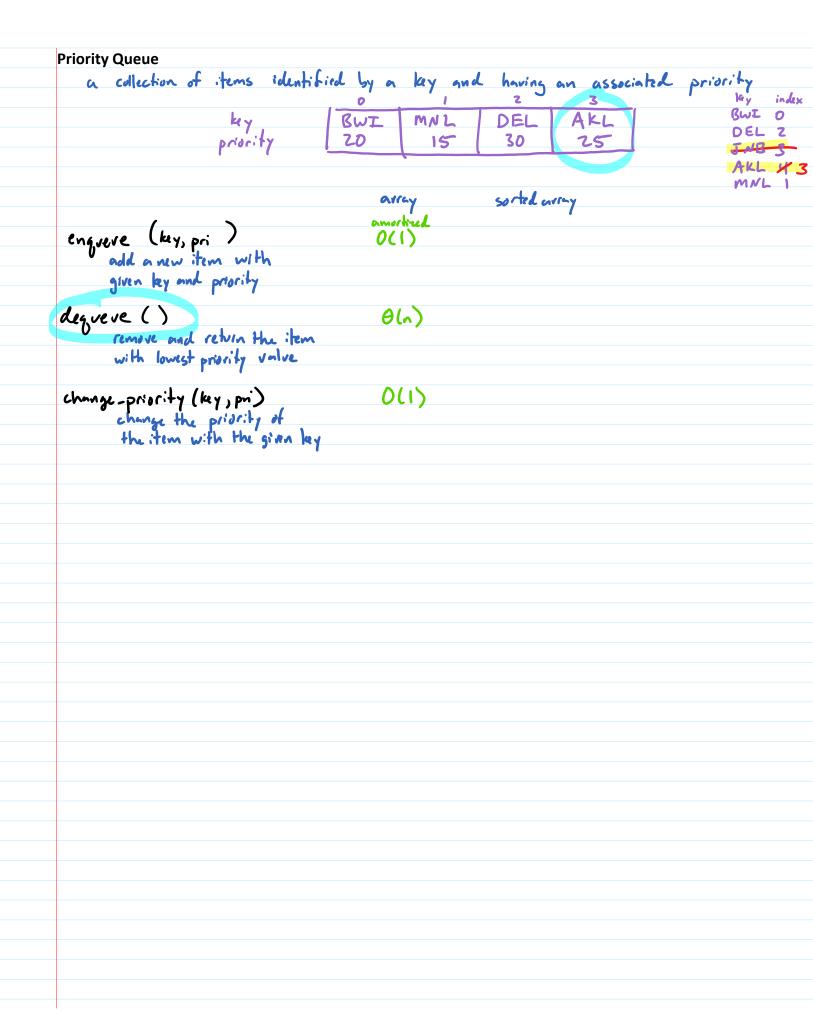
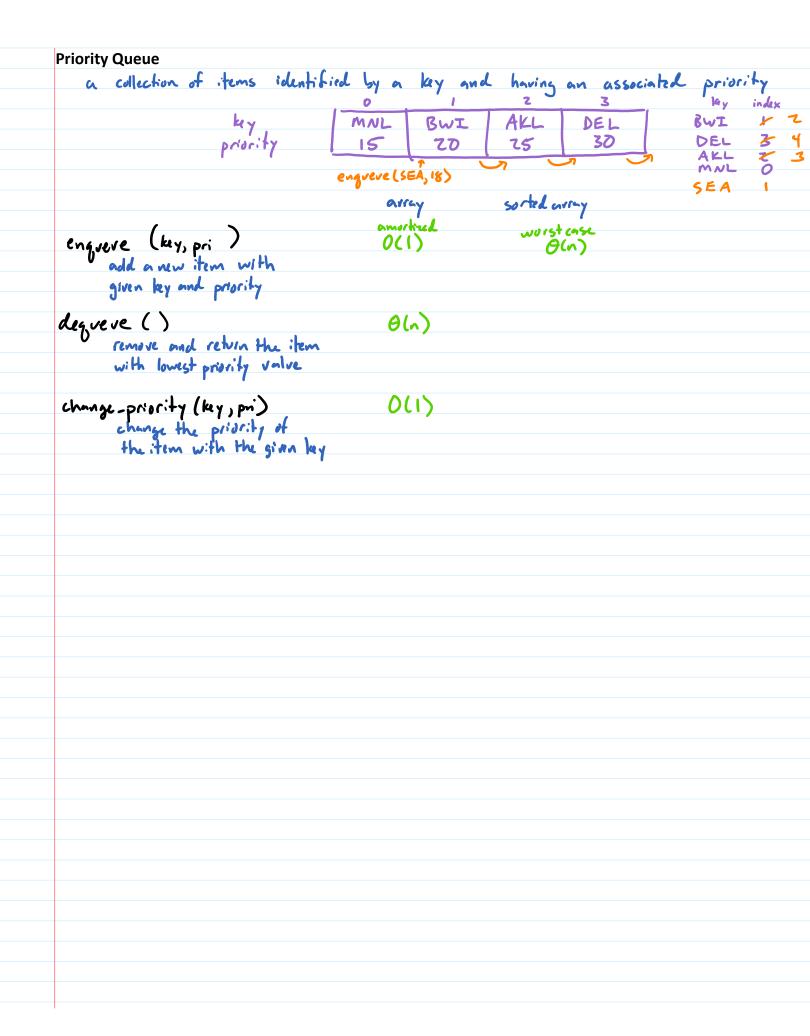
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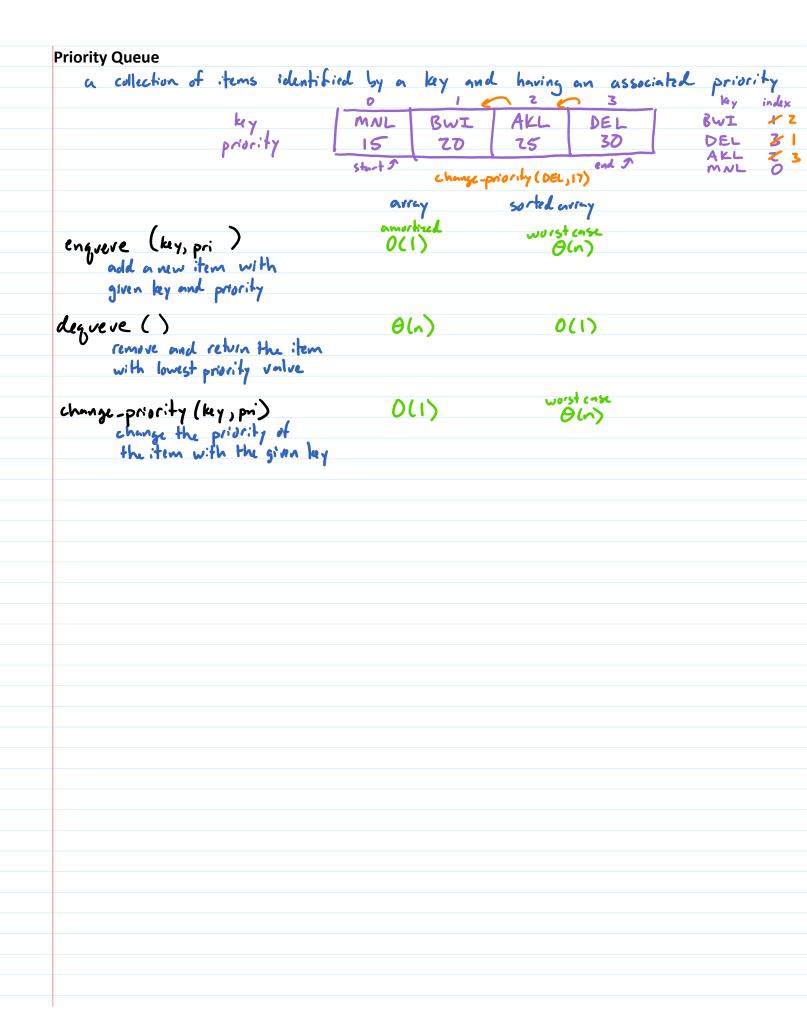
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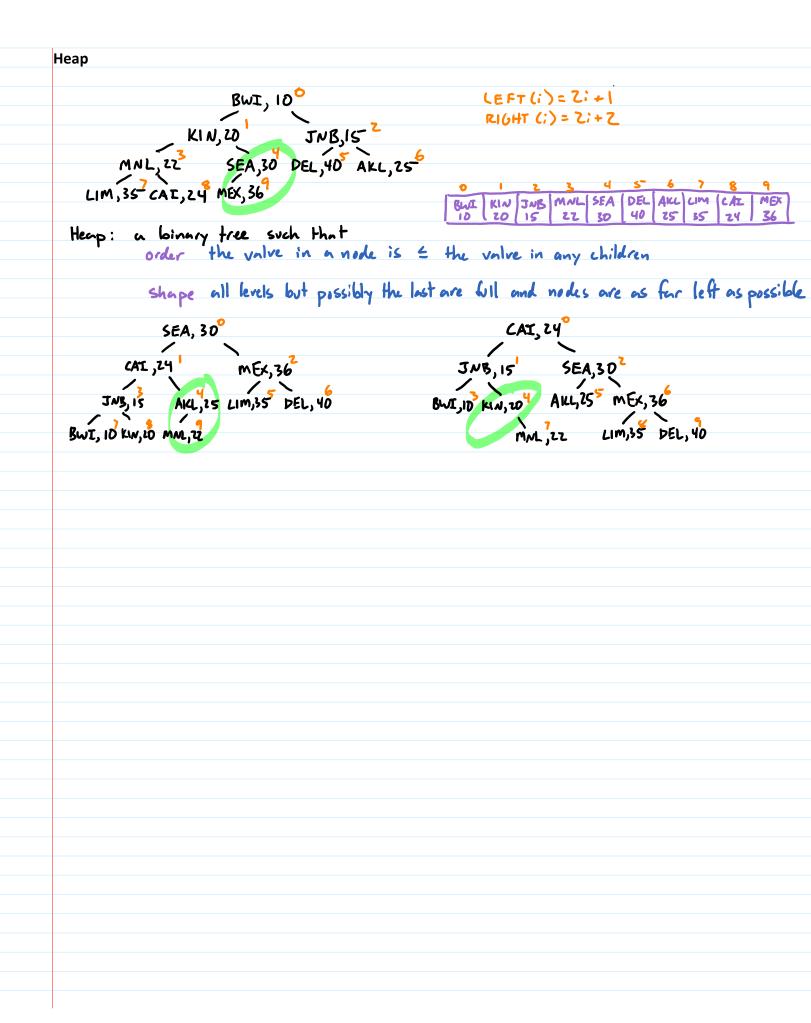
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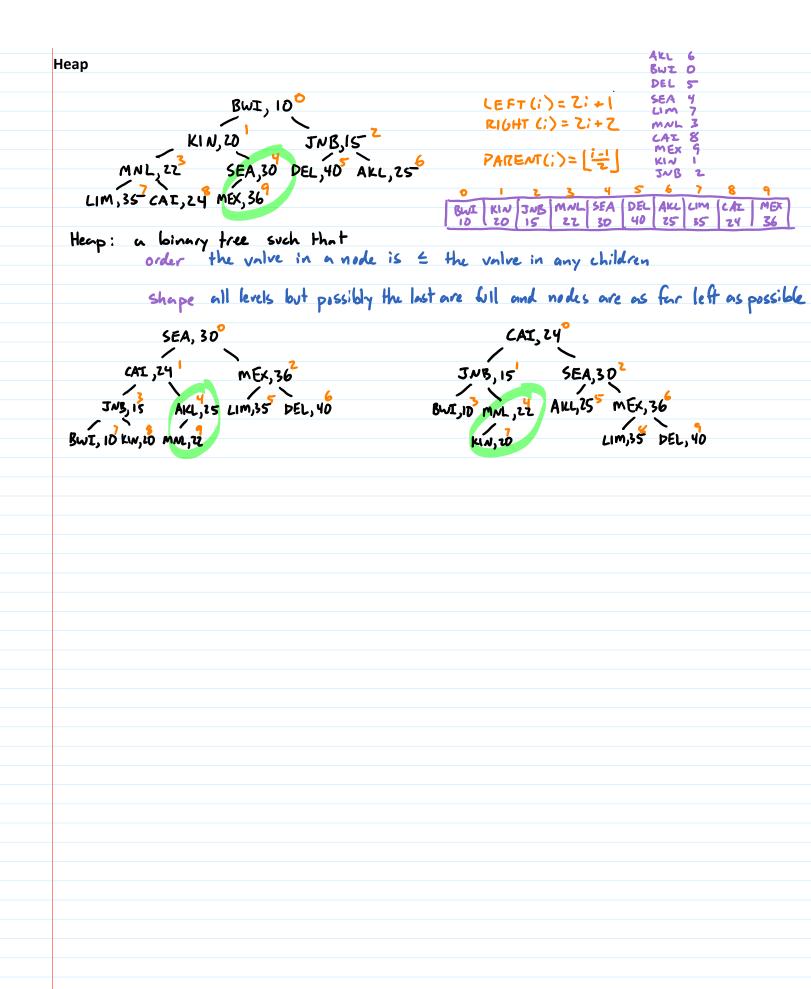


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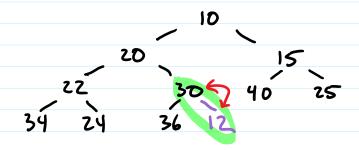
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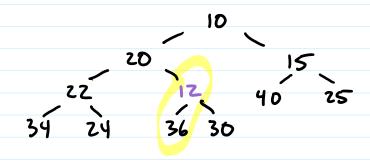
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## Heap



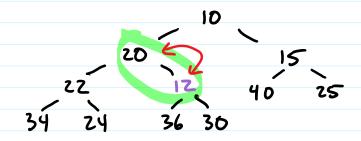


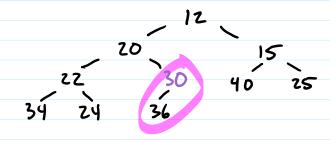
enqueve (key, pri): i 
add (key, pri) at location (i)
while priority at i 
priority at i 
priority at PARENT(i)

Swap i, PARENT(i)

i 
PARENT(i)

## Неар





degreve(): remember item at root worst case  $\Theta(\log n)$  move last node to root  $n \leftarrow n-1$   $i \leftarrow 0$ 

worst case while LEFT(i) < a and priority at i > priority at one of i's children - Ollog a iterations) swap i with smallest child Oll) per iteration i < former index of smallest child

change-priority: find index i of item to change use loop from dequeve if priority value 1, loop from enqueve if 1

## Dijkstra's Algorithm