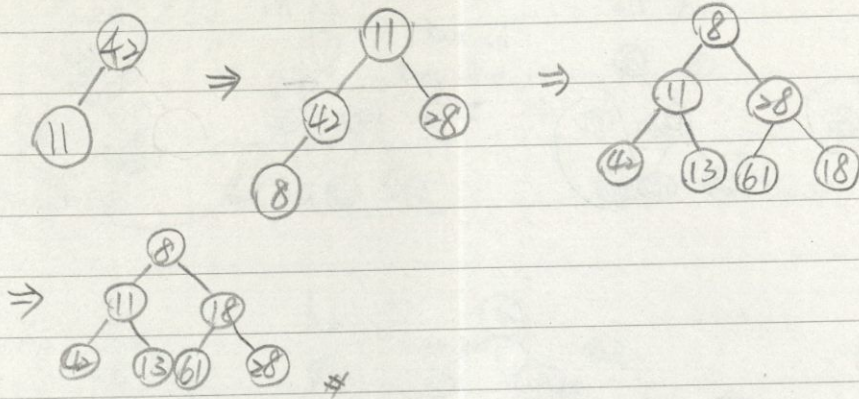


# Data Structure. Assignment 6.

NO. SHIH-HAN WANG.  
DATE 2021389848/

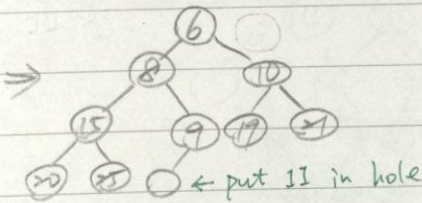
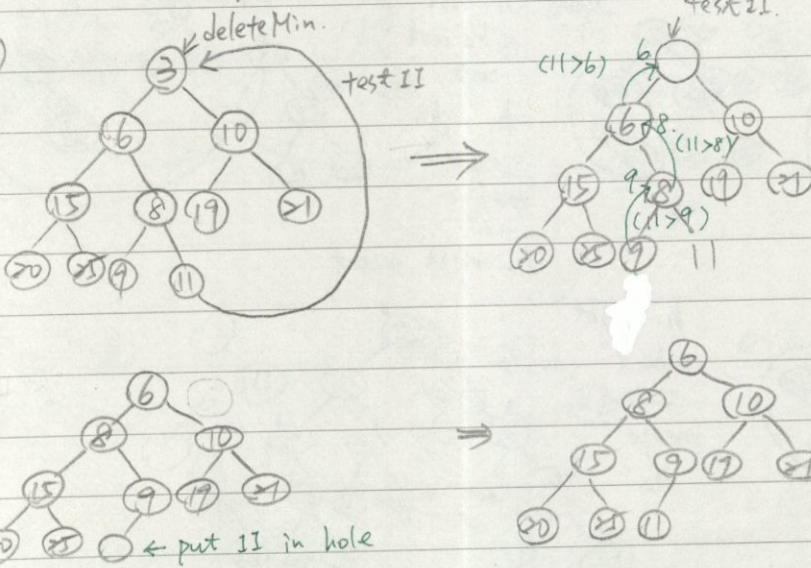
1)



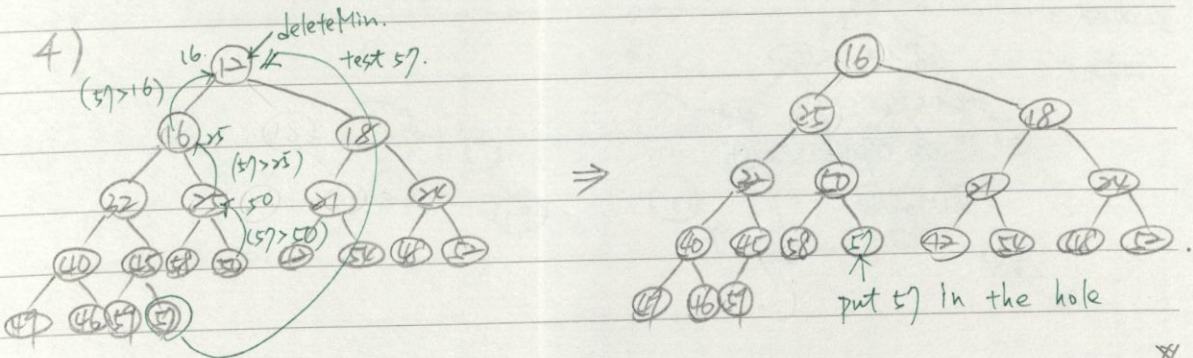
2)

8	11	18	42	13	61	28	
0	1	2	3	4	5	6	7

3)



4)

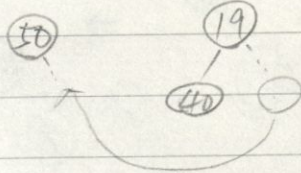
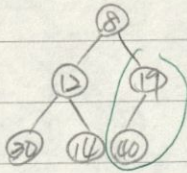
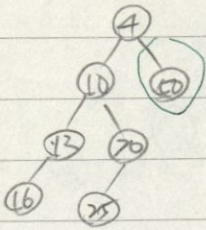




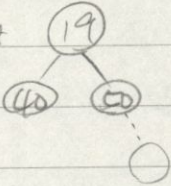
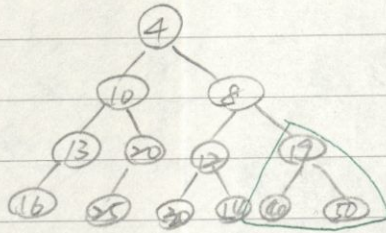
5)

 $h_1$  $h_2$ 

$h_2$  root  
 $> h_1$  root  
 $\Rightarrow$

 $h_1$  $h_2$ 

$h_1$  put  
 to  $h_2$  right  
 $\Rightarrow$   
 subset.

 $\Rightarrow$ 

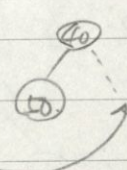
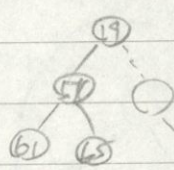
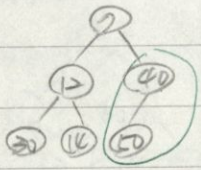
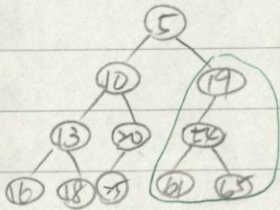
#

6)

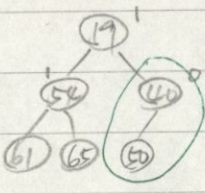
 $h_1$  $h_2$ 

$h_1$  root  
 $< h_2$  root  
 $\Rightarrow$

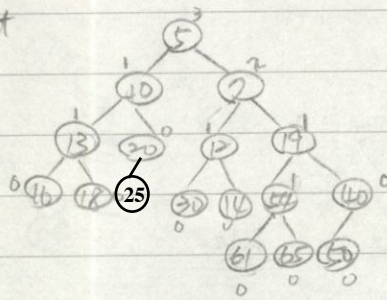
$h_1$  right  
 subset  
 merge  
 $\rightarrow$   
 $h_2$  right subset.

 $h_1$  $h_2$ 

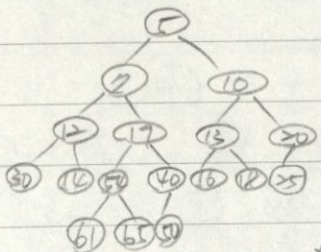
New  
 $h_2$   
 $\Rightarrow$   
 right  
 subset.



$h_1$  right  
 subset  
 $\Rightarrow$   
 merge.  
 $h_2$ .



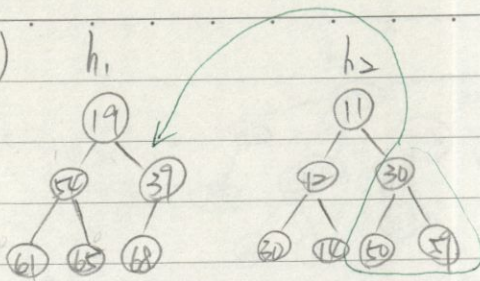
Leftist

 $\Rightarrow$ 

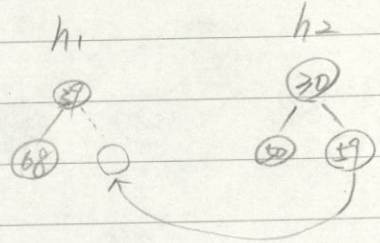
#



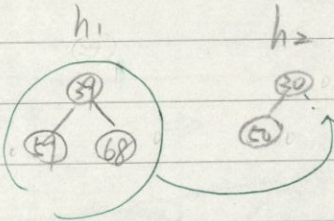
7)



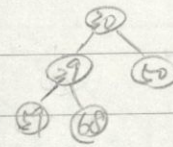
⇒



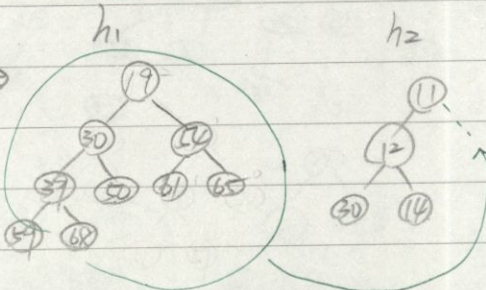
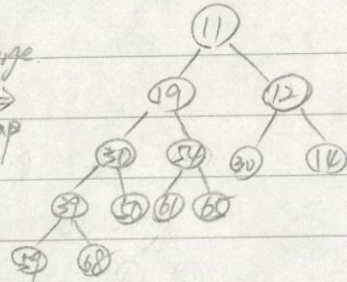
Merge

 &⇒  
 swap


Merge

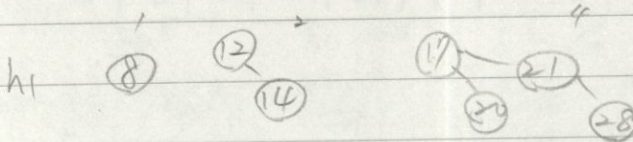
 &⇒  
 swap


⇒


 Merge  
 &⇒  
 swap


#

8)



0111



0111

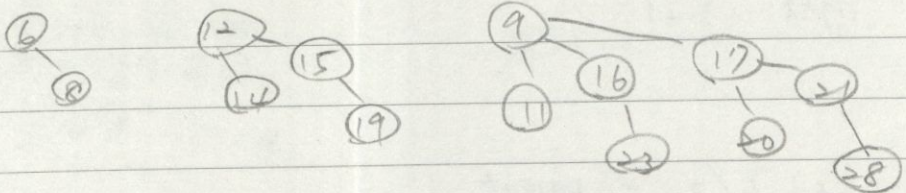
&gt;

4

8

||| 0

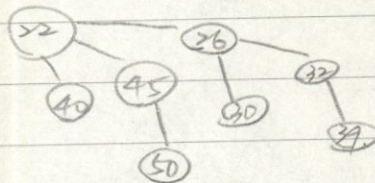
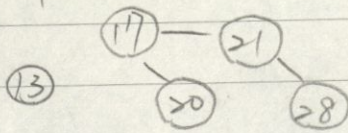
Merge.



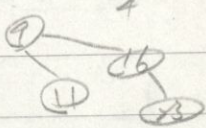
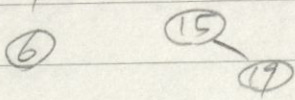
#



9)

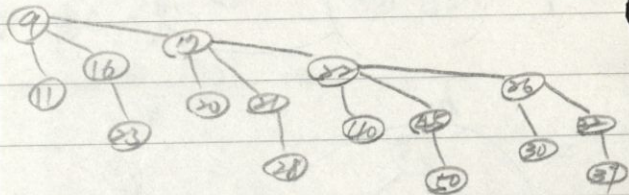
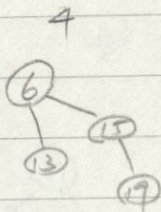
h<sub>1</sub>

1101

h<sub>2</sub>

0111

Merge.



10100

10)

index	0	1	2	3	4	5	6	7	8	9	10	11	12	13
value		1	2	3	5	4	7	10	13	15	6	8	17	12

index	14	15
value	11	9

left  $3i-1$ middle  $3i$ right  $3i+1$ 

#

$$(i+1)/3 = \text{parent} \quad \#$$

ex:

$$i=3 \Rightarrow (i+1)/3 = 4/3 = 1 \quad \text{parent is } 1$$