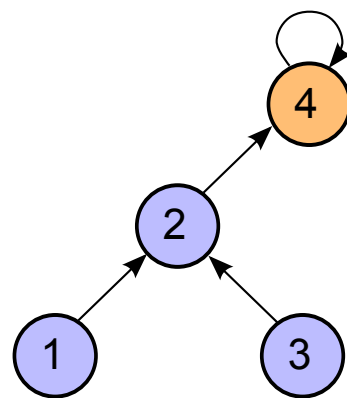
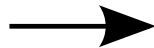
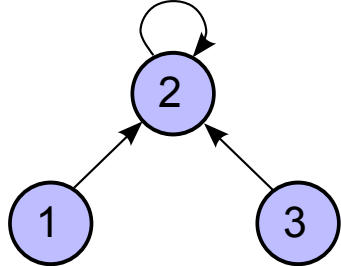
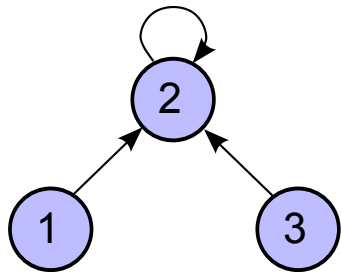


a) union(2,4)  
without  
union by rank



new tree  
with  
height=2

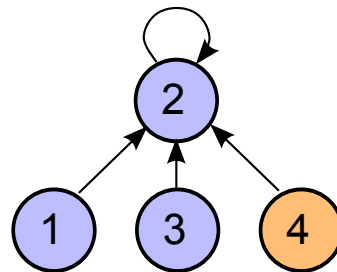
b) union(2,4)  
with  
union by rank



rank(2)=1



rank(4)=0



new tree  
with  
height=1