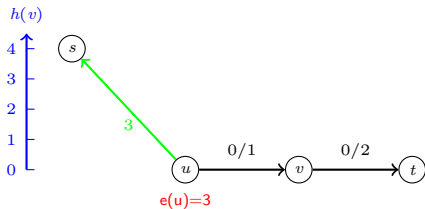
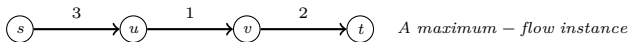
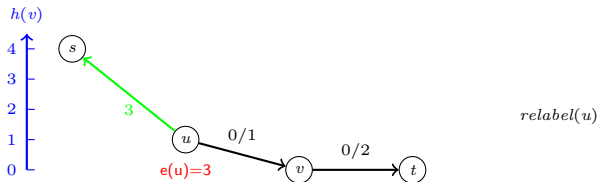
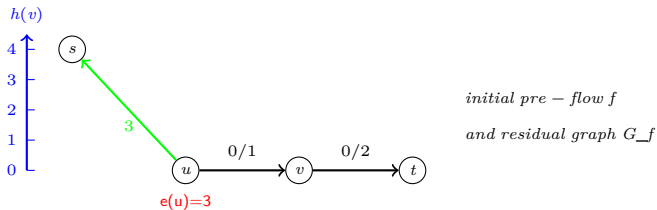


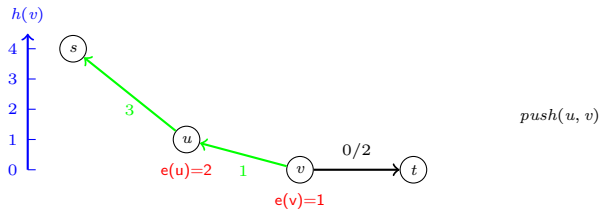
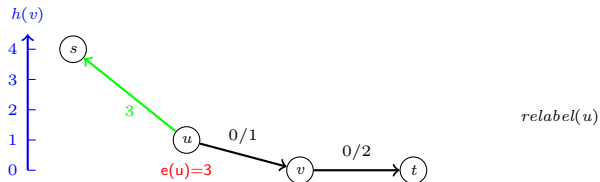
# push-relabel Demo Step 1



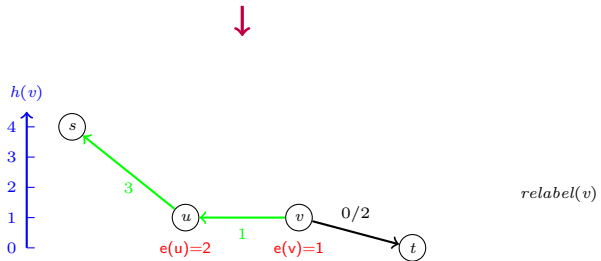
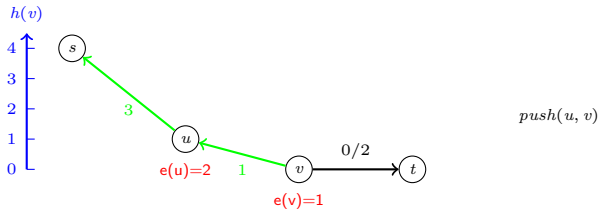
# push-relabel Demo Step 2



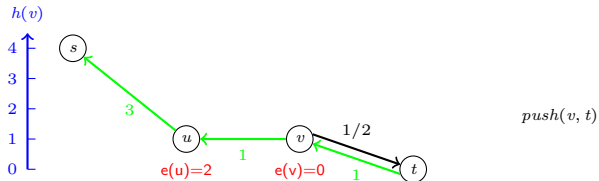
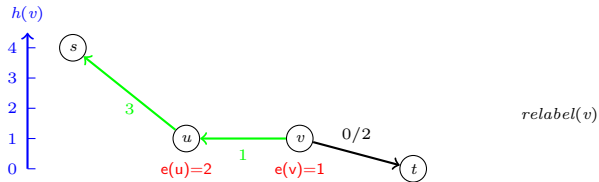
# push-relabel Demo Step 3



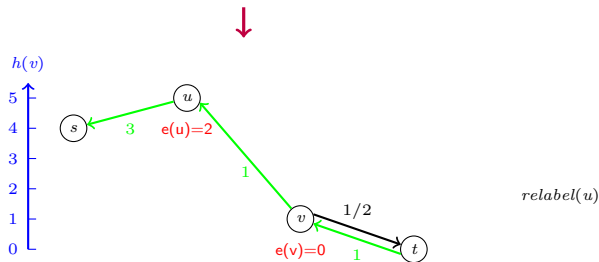
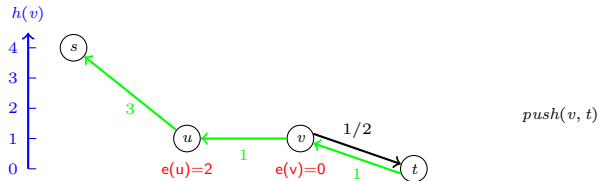
## push-relabel Demo Step 4



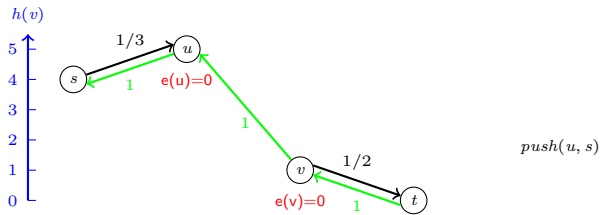
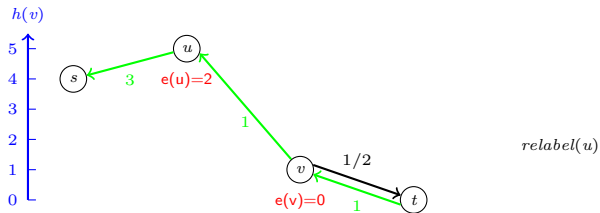
# push-relabel Demo Step 5



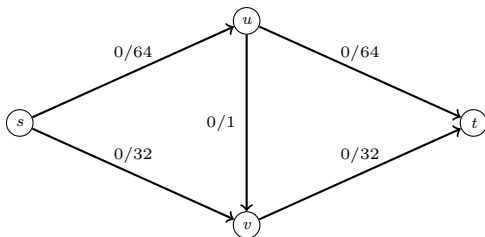
# push-relabel Demo Step 6



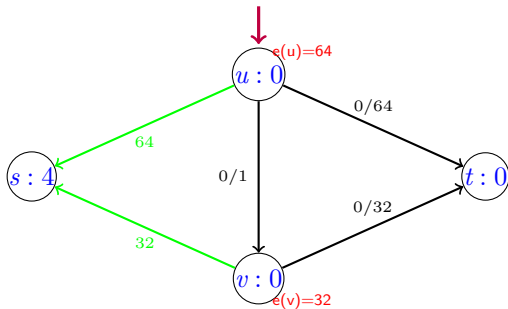
# push-relabel Demo Step 7



# push-relabel Demo2 Step 1



*a maximum – flow instance*

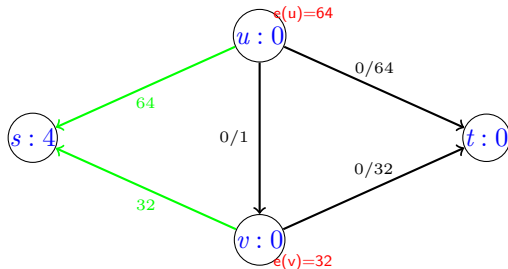


*initial*

$S : 4$  indicates that the height of  $S$  is 4

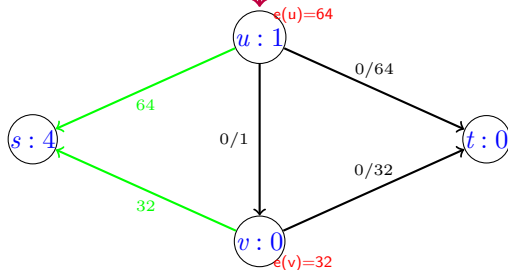


# push-relabel Demo2 Step 2



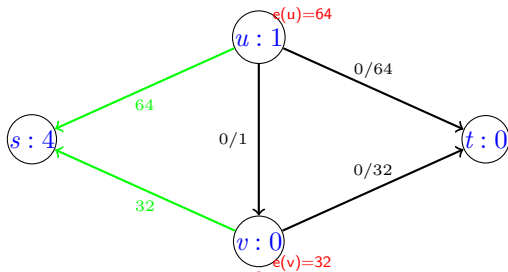
*initial*

*$S : 4$  indicates that the height of  $S$  is 4*

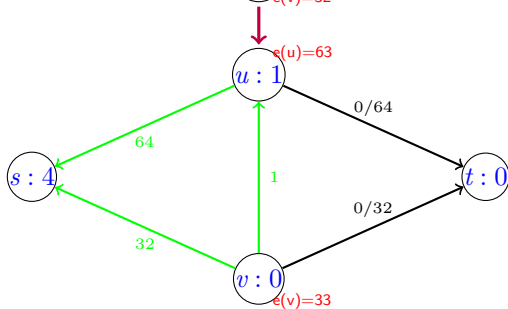


*if  $\text{relabel}(u)$  first*

# push-relabel Demo2 Step 3

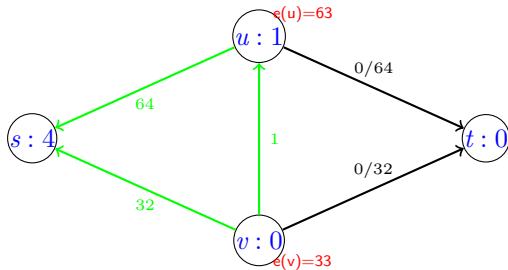


*if relabel( $u$ ) first*

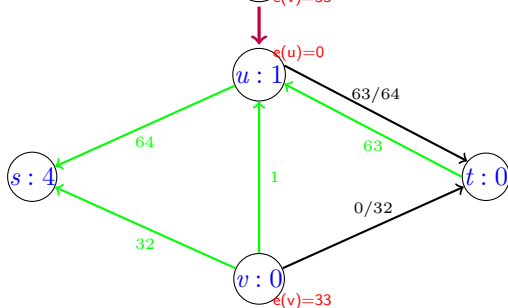


*then if we chose to push( $u, v$ )*

# push-relabel Demo2 Step 4

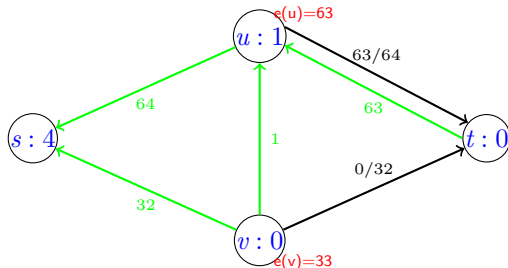


then if we chose to push( $u, v$ )

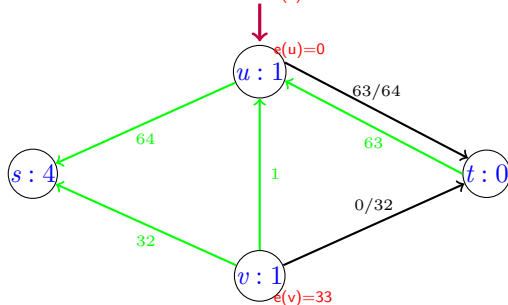


push( $u, t$ )

# push-relabel Demo2 Step 5

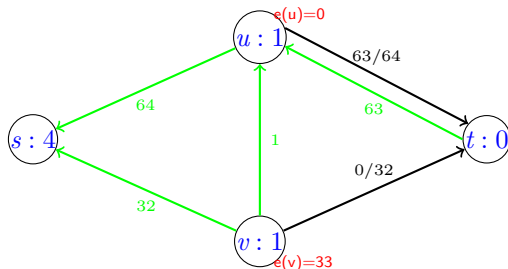


$push(u, t)$

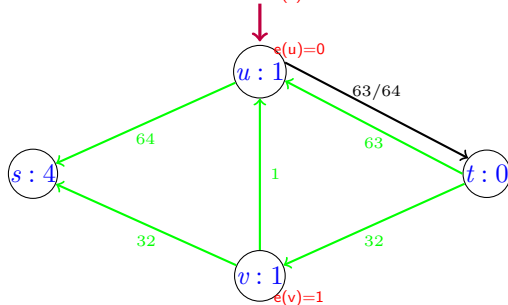


$relabel(v)$

# push-relabel Demo2 Step 6

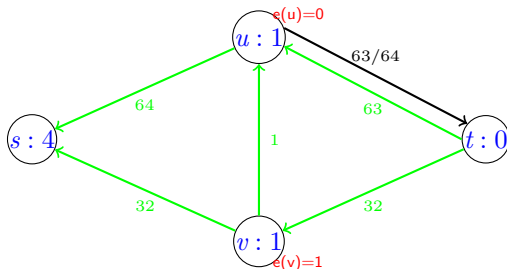


$relabel(v)$

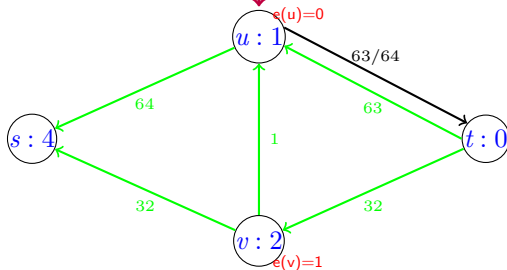


$push(v, t)$

# push-relabel Demo2 Step 7

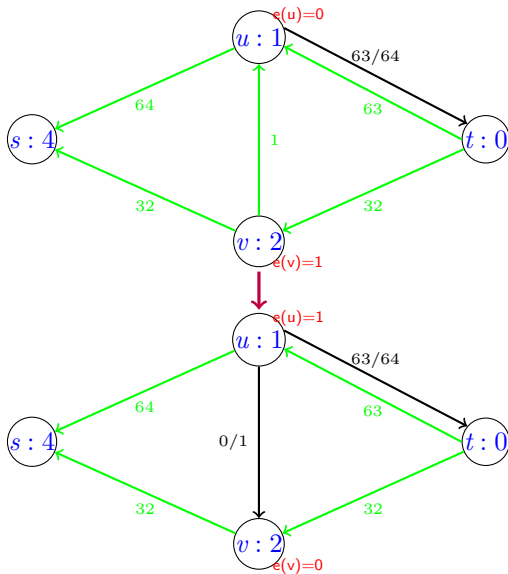


$push(v, t)$



$relabel(v)$

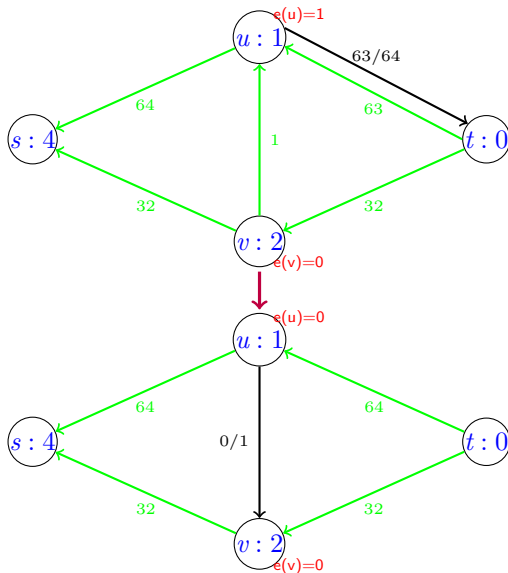
# push-relabel Demo2 Step 8



*relabel(v)*

*push(v, u)*

# push-relabel Demo2 Step 9



$push(v, u)$

$push(u, t)$