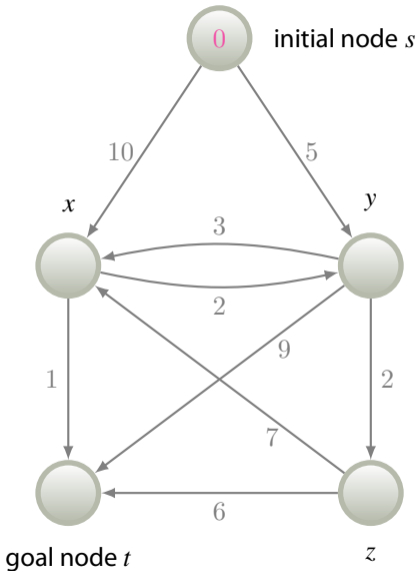


```

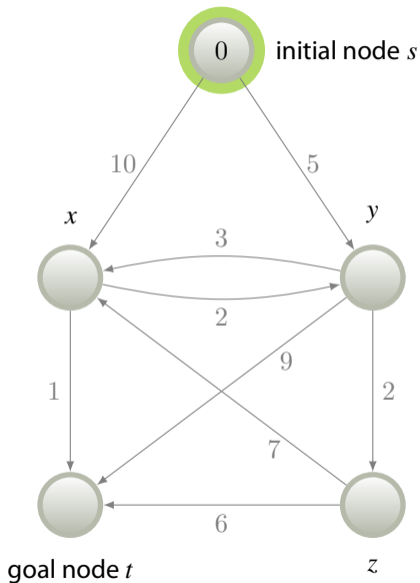
1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
8       return "failure"
9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
11    if IsGoal( $v$ ) then
12      return Solution( $v$ ,  $s$ )
13    Expand( $v$ )
14  procedure Expand( $v$ )
15    foreach  $u \in$  Succ( $v$ ) do
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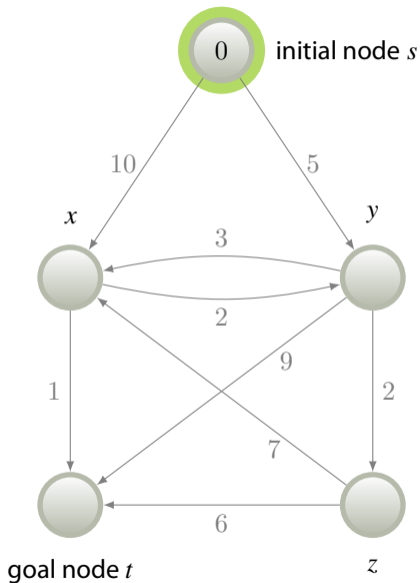
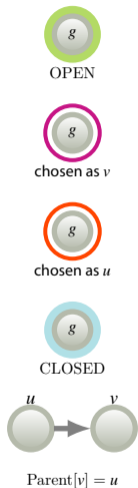


```

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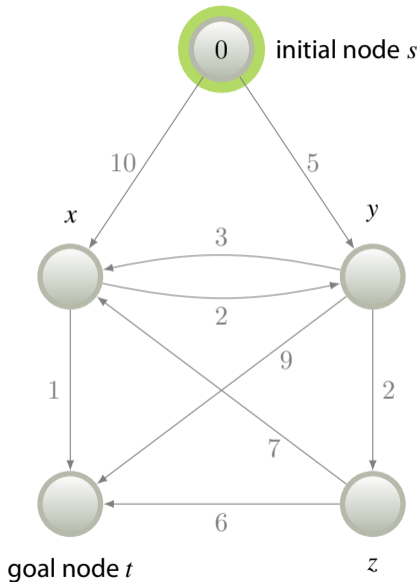
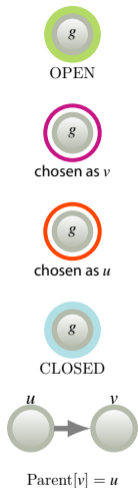
# Iteration 1



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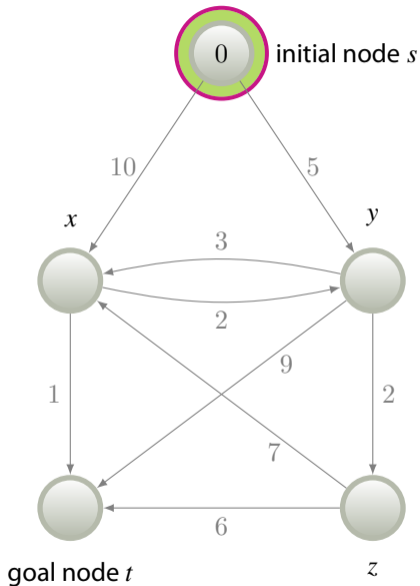
# Iteration 1



```

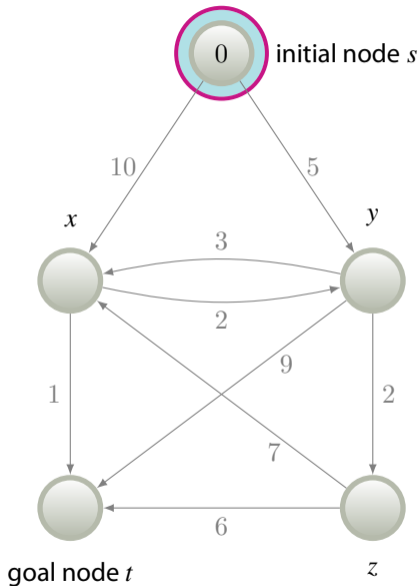
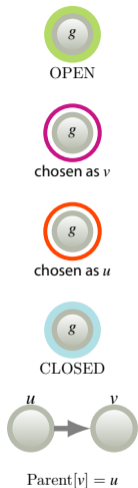
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# Iteration 1



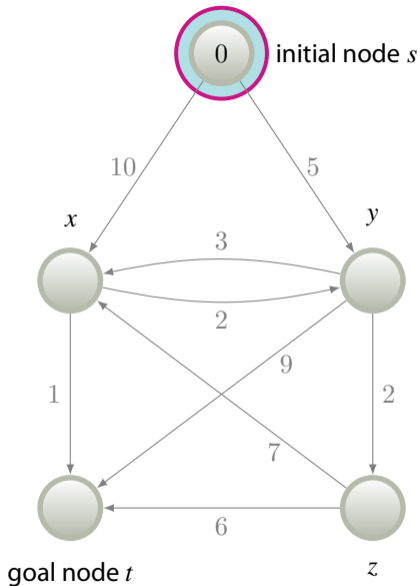
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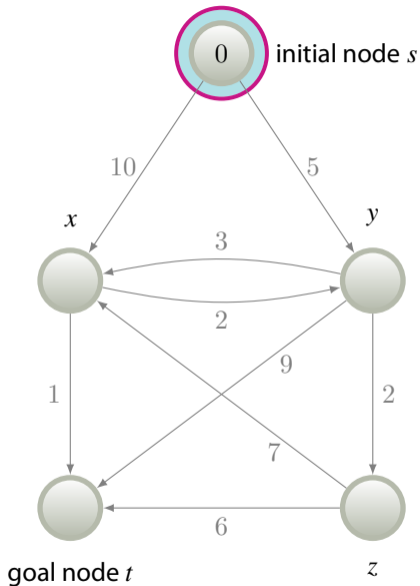


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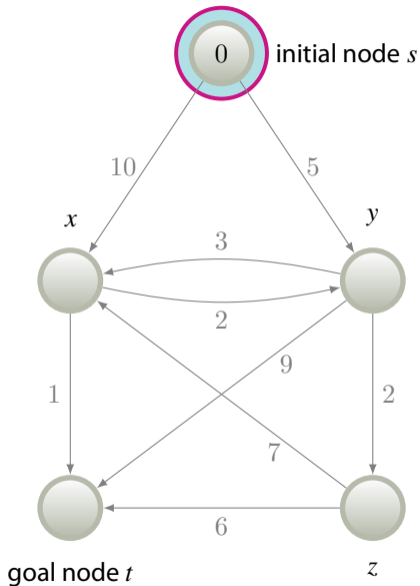
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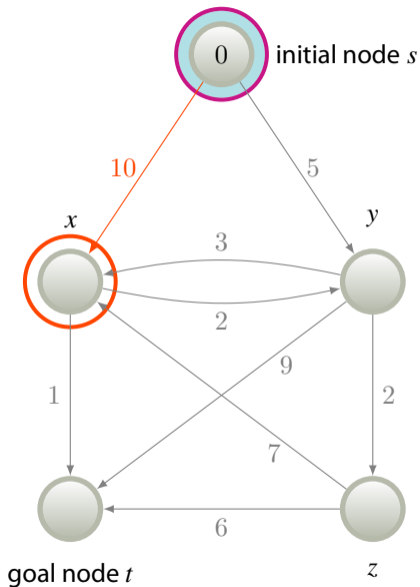
# Iteration 1



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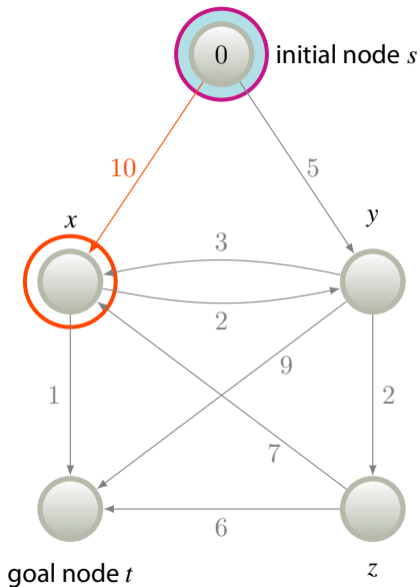
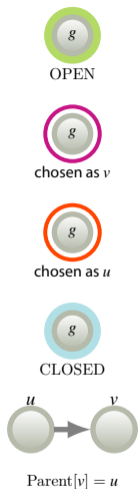
## Iteration 1



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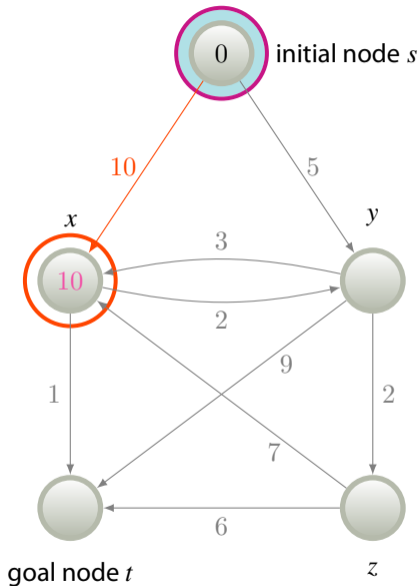
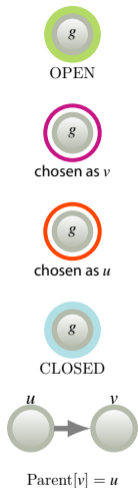
# Iteration 1



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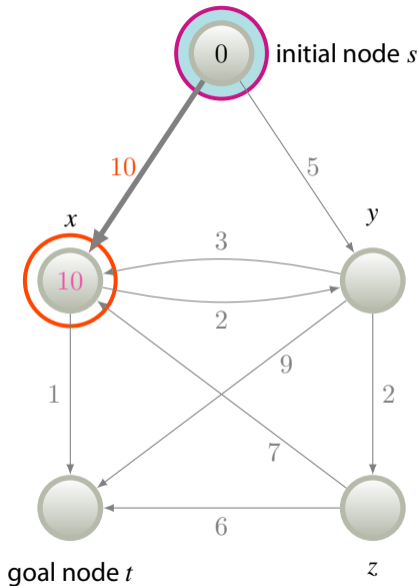
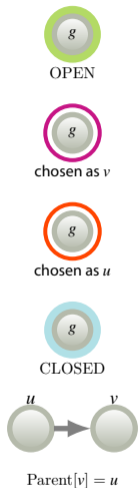
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1 function Dijkstra(s)
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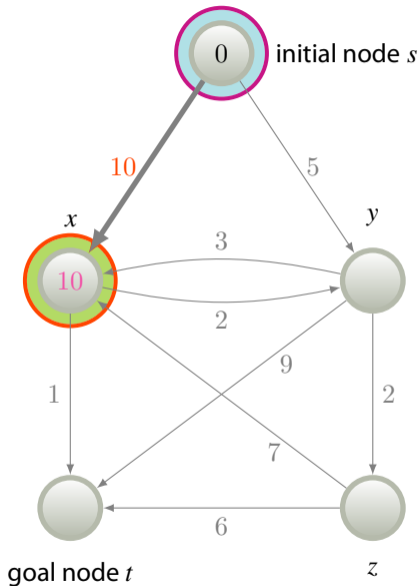
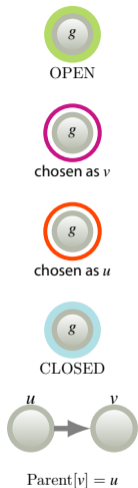
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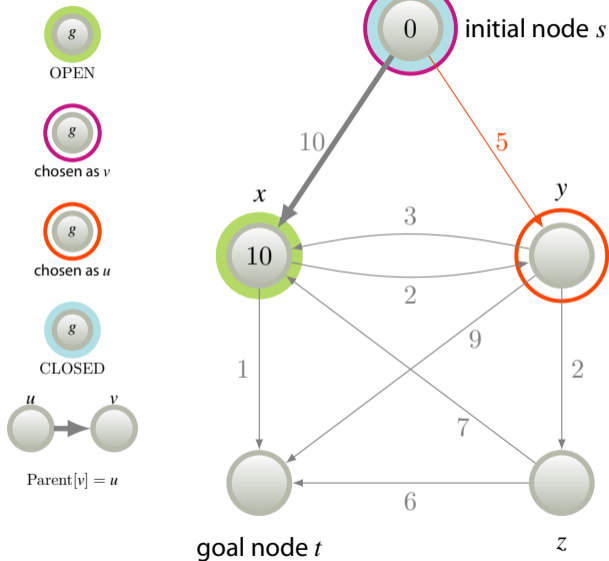
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## Iteration 1

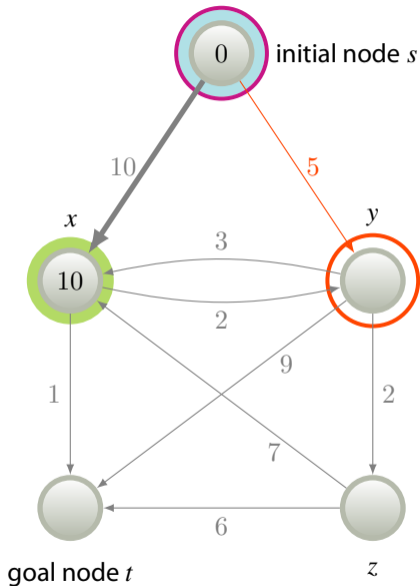


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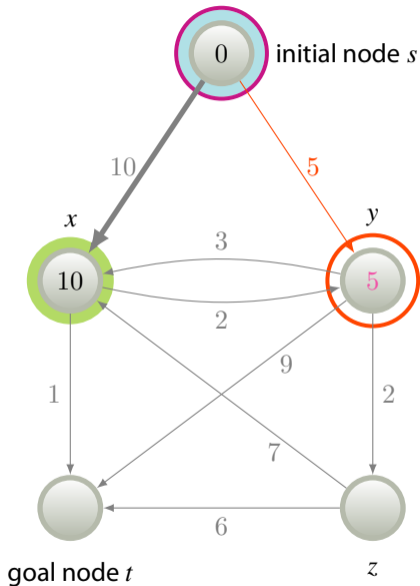
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23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

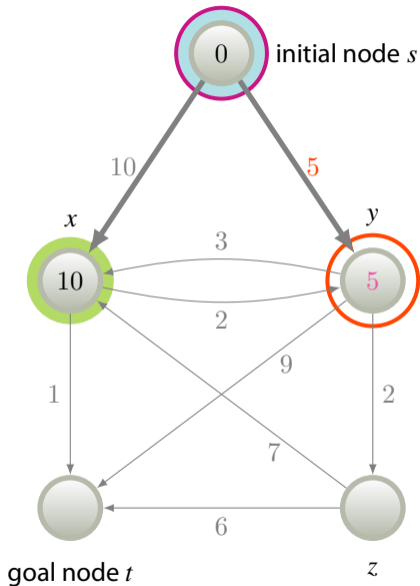
## Iteration 1



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
4  Insert $_g$ (OPEN,  $s$ )
5  CLOSED  $\leftarrow \emptyset$ 
6  loop do
7  if IsEmpty(OPEN) then
8  return "failure"
9   $v \leftarrow$  DeleteMin $_g$ (OPEN)
10  CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
11  if IsGoal( $v$ ) then
12  return Solution( $v, s$ )
13  Expand( $v$ )
14  procedure Expand( $v$ )
15  foreach  $u \in$  Succ( $v$ ) do
16  if  $u \notin$  OPEN  $\cup$  CLOSED then
17   $g[u] \leftarrow g[v] + c(v, u)$ 
18  Parent[ $u$ ]  $\leftarrow v$ 
19  Insert $_g$ (OPEN,  $u$ )
20  else if  $u \in$  OPEN then
21  if  $g[v] + c(v, u) < g[u]$  then
22   $g[u] \leftarrow g[v] + c(v, u)$ 
23  Parent[ $u$ ]  $\leftarrow v$ 
    
```

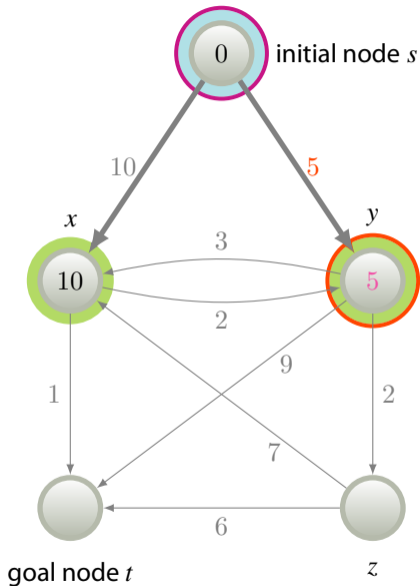
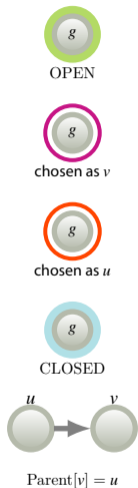
# Iteration 1



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
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22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

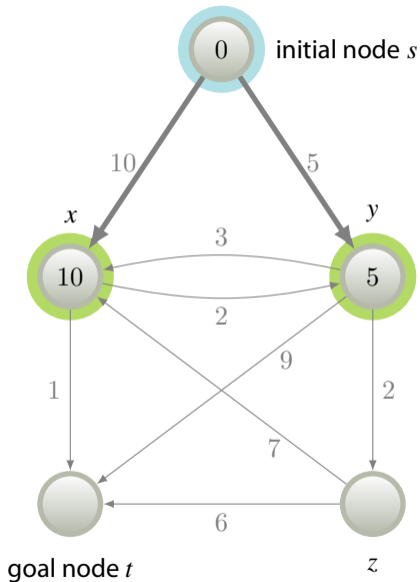
# Iteration 1



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
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22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

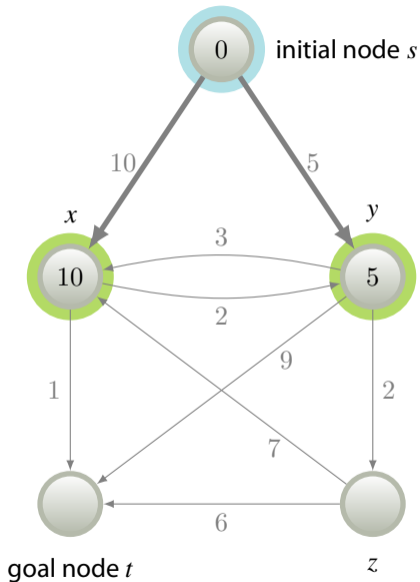
## Iteration 2



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
8       return "failure"
9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup$  { $v$ }
11    if IsGoal( $v$ ) then
12      return Solution( $v$ ,  $s$ )
13    Expand( $v$ )
14  procedure Expand( $v$ )
15    foreach  $u \in$  Succ( $v$ ) do
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18        Parent[ $u$ ]  $\leftarrow v$ 
19        Insert $_g$ (OPEN,  $u$ )
20      else if  $u \in$  OPEN then
21        if  $g[v] + c(v, u) < g[u]$  then
22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

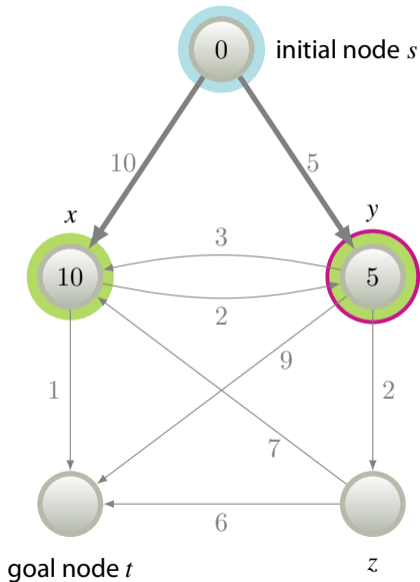
## Iteration 2



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
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23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

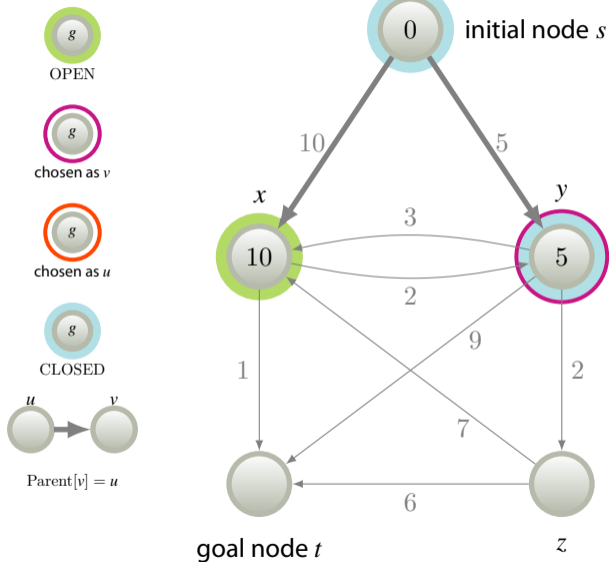
## Iteration 2



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
4  Insert $_g$ (OPEN,  $s$ )
5  CLOSED  $\leftarrow \emptyset$ 
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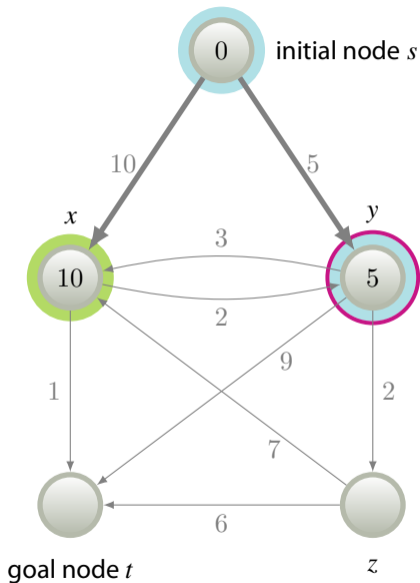
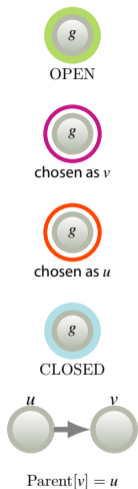
## Iteration 2



```
1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
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```



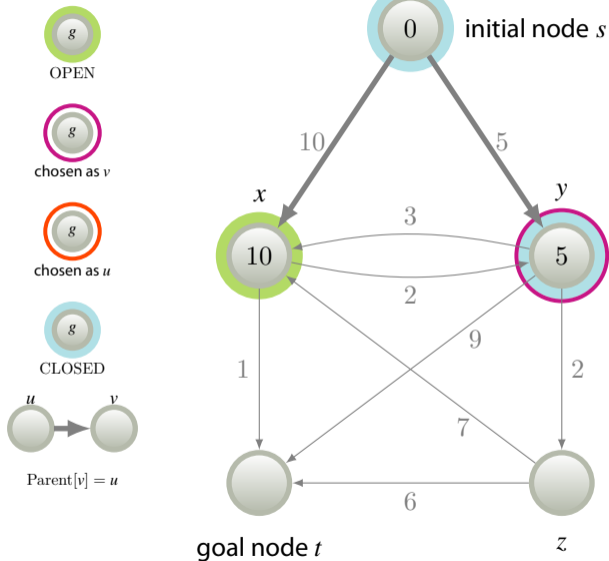
## Iteration 2



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
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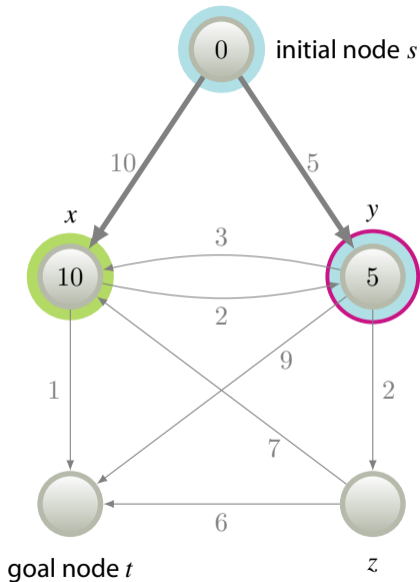
## Iteration 2



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
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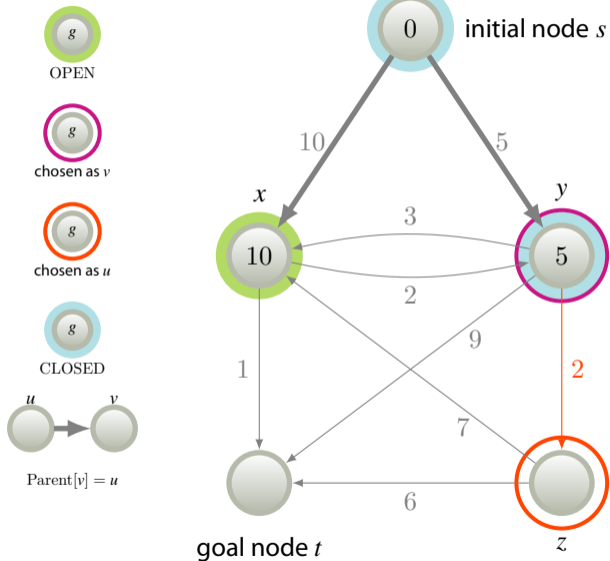
## Iteration 2



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
4  Insert $_g$ (OPEN,  $s$ )
5  CLOSED  $\leftarrow \emptyset$ 
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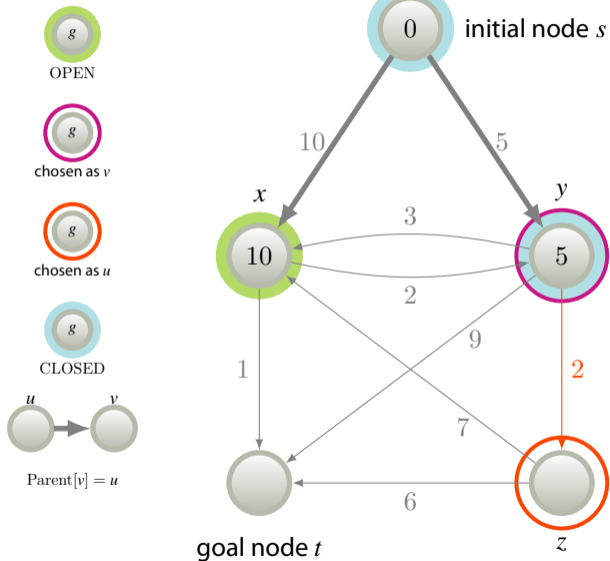
## Iteration 2



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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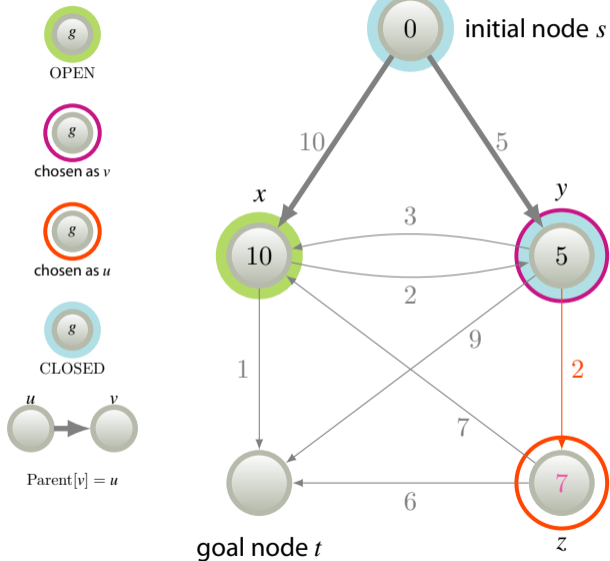
## Iteration 2



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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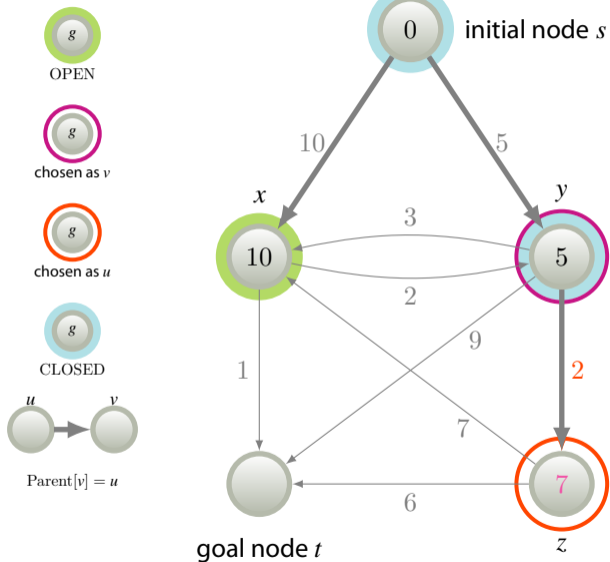
## Iteration 2



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $g$ 
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```

## Iteration 2

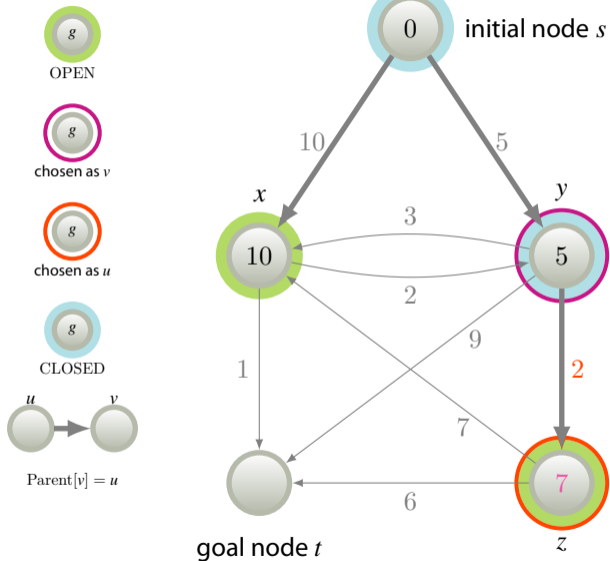


```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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```

## Iteration 2

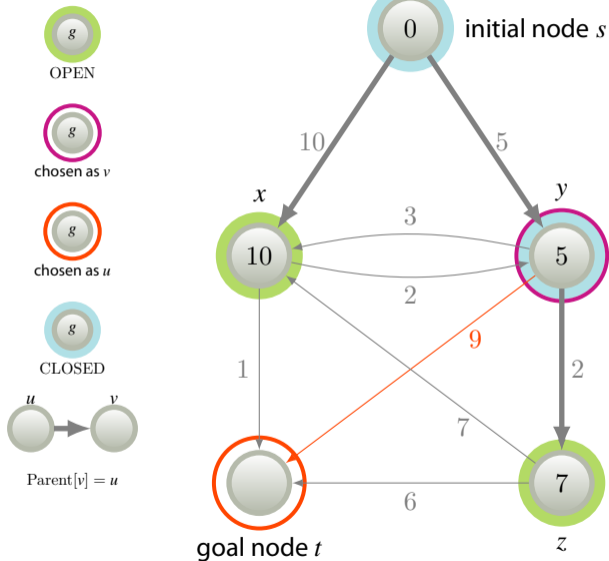


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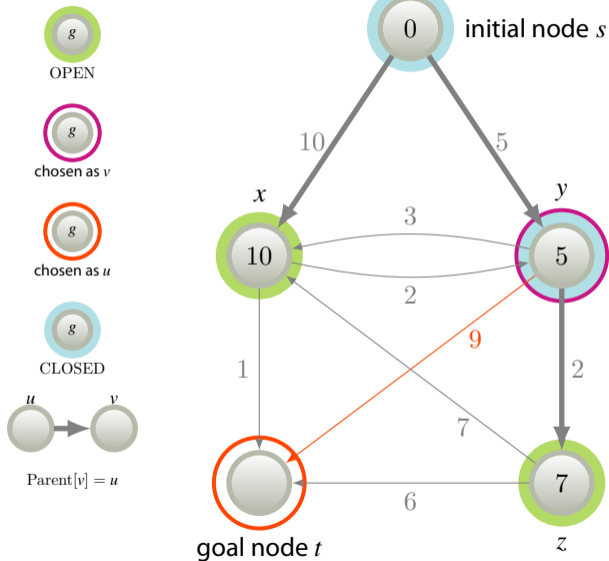
## Iteration 2



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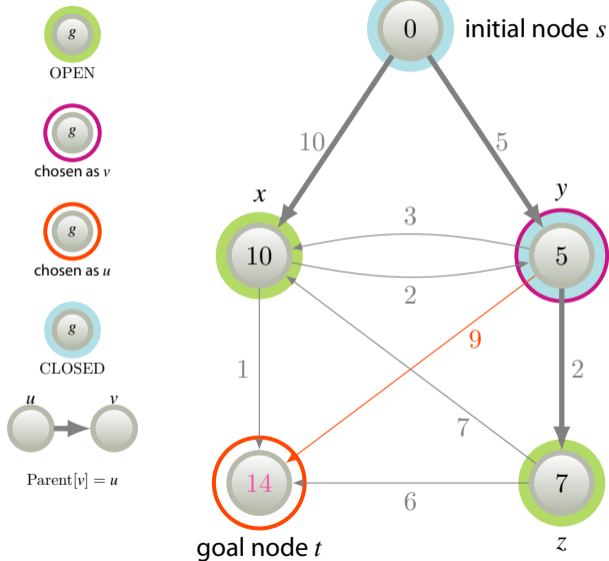
## Iteration 2



```

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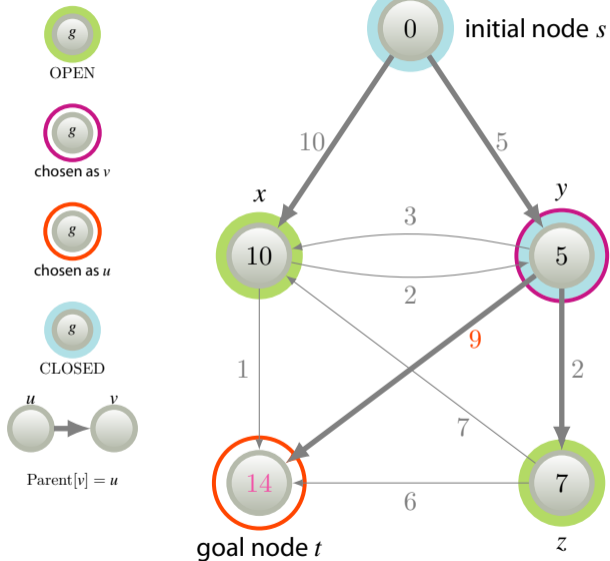
## Iteration 2



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
8       return "failure"
9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
11    if IsGoal( $v$ ) then
12      return Solution( $v, s$ )
13    Expand( $v$ )
14  procedure Expand( $v$ )
15    foreach  $u \in$  Succ( $v$ ) do
16      if  $u \notin$  OPEN  $\cup$  CLOSED then
17         $g[u] \leftarrow g[v] + c(v, u)$ 
18        Parent[ $u$ ]  $\leftarrow v$ 
19        Insert $_g$ (OPEN,  $u$ )
20      else if  $u \in$  OPEN then
21        if  $g[v] + c(v, u) < g[u]$  then
22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

## Iteration 2

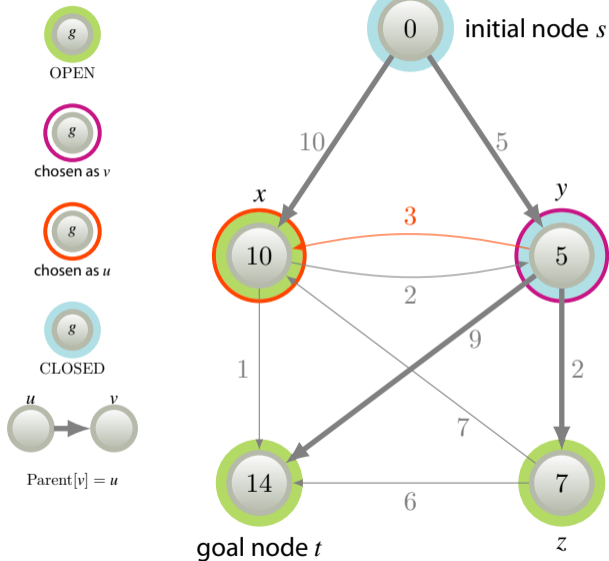


```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
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9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
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16      if  $u \notin$  OPEN  $\cup$  CLOSED then
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18        Parent[ $u$ ]  $\leftarrow v$ 
19        Insert $_g$ (OPEN,  $u$ )
20      else if  $u \in$  OPEN then
21        if  $g[v] + c(v, u) < g[u]$  then
22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```



## Iteration 2

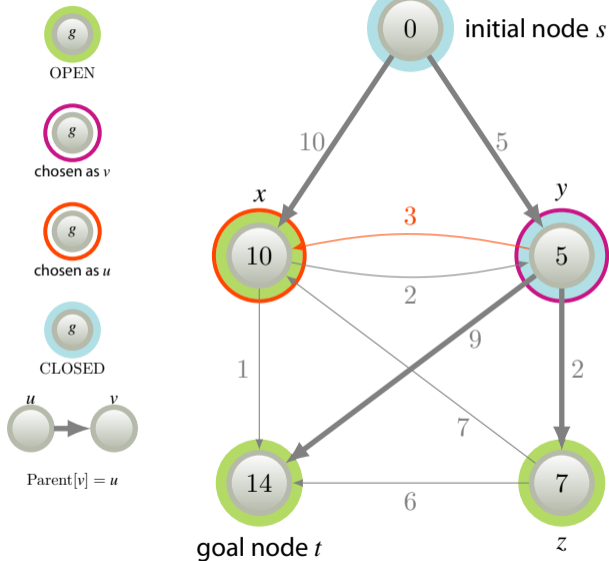


```

1  function Dijkstra(s)
2  | OPEN ← new PriorityQueueg
3  | g[s] ← 0
4  | Insertg(OPEN, s)
5  | CLOSED ← ∅
6  | loop do
7  | | if IsEmpty(OPEN) then
8  | | | return "failure"
9  | | v ← DeleteMing(OPEN)
10 | | CLOSED ← CLOSED ∪ {v}
11 | | if IsGoal(v) then
12 | | | return Solution(v, s)
13 | | Expand(v)
14 procedure Expand(v)
15 | foreach u ∈ Succ(v) do
16 | | if u ∉ OPEN ∪ CLOSED then
17 | | | g[u] ← g[v] + c(v, u)
18 | | | Parent[u] ← v
19 | | | Insertg(OPEN, u)
20 | | else if u ∈ OPEN then
21 | | | if g[v] + c(v, u) < g[u] then
22 | | | | g[u] ← g[v] + c(v, u)
23 | | | | Parent[u] ← v
  
```



## Iteration 2

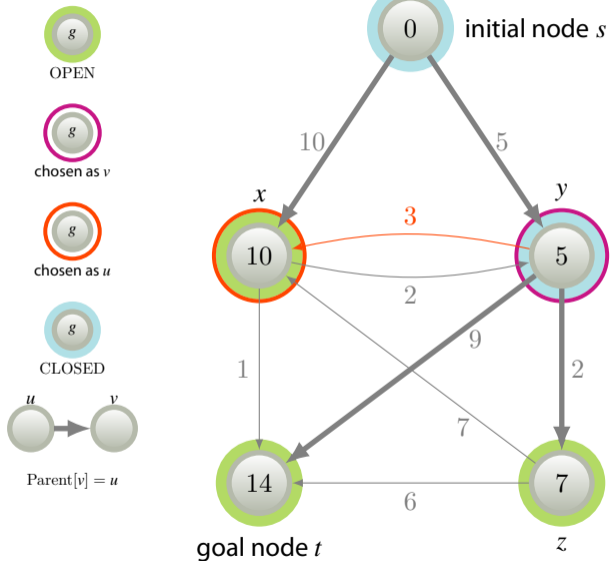


```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
4  Insert $_g$ (OPEN,  $s$ )
5  CLOSED  $\leftarrow \emptyset$ 
6  loop do
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9  |  $v \leftarrow$  DeleteMin $_g$ (OPEN)
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22 | | | |  $g[u] \leftarrow g[v] + c(v, u)$ 
23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```



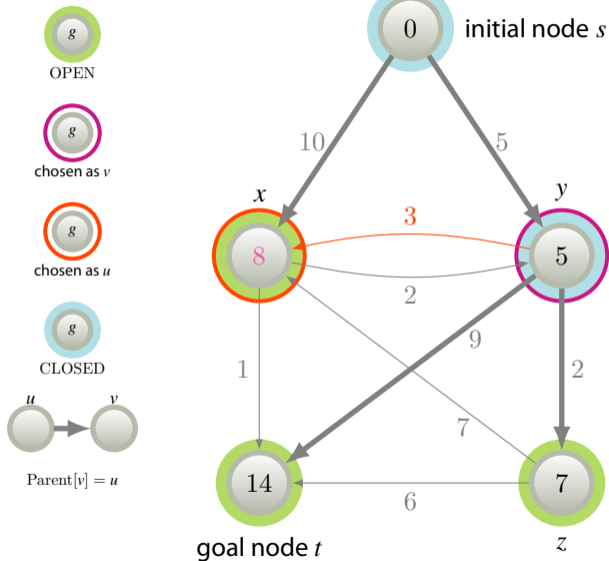
## Iteration 2



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
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22           $g[u] \leftarrow g[v] + c(v, u)$ 
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```

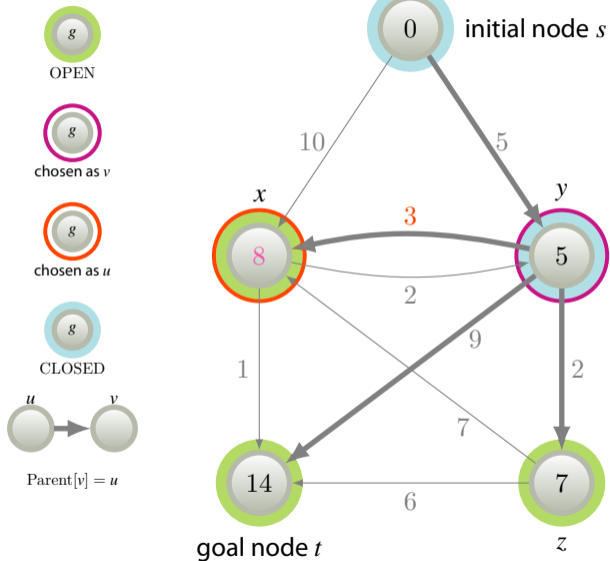
## Iteration 2



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1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
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20 | | else if  $u \in$  OPEN then
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22 | | | |  $g[u] \leftarrow g[v] + c(v, u)$ 
23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```

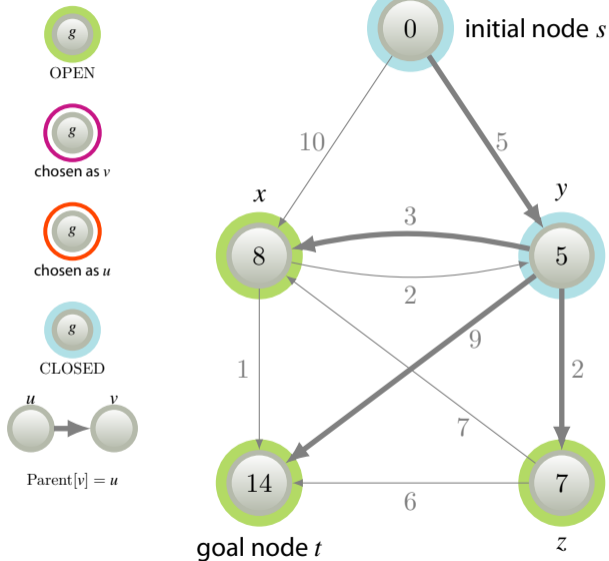
## Iteration 2



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
4  Insert $_g$ (OPEN,  $s$ )
5  CLOSED  $\leftarrow \emptyset$ 
6  loop do
7  | if IsEmpty(OPEN) then
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10 | CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
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22 | | | |  $g[u] \leftarrow g[v] + c(v, u)$ 
23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```

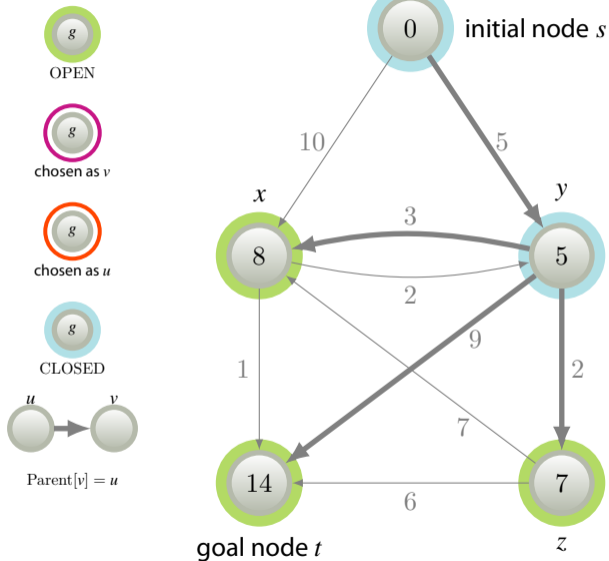
## Iteration 3



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
4  Insert $_g$ (OPEN,  $s$ )
5  CLOSED  $\leftarrow \emptyset$ 
6  loop do
7    if IsEmpty(OPEN) then
8      return "failure"
9     $v \leftarrow$  DeleteMin $_g$ (OPEN)
10   CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
11   if IsGoal( $v$ ) then
12     return Solution( $v, s$ )
13   Expand( $v$ )
14 procedure Expand( $v$ )
15   foreach  $u \in$  Succ( $v$ ) do
16     if  $u \notin$  OPEN  $\cup$  CLOSED then
17        $g[u] \leftarrow g[v] + c(v, u)$ 
18       Parent[ $u$ ]  $\leftarrow v$ 
19       Insert $_g$ (OPEN,  $u$ )
20     else if  $u \in$  OPEN then
21       if  $g[v] + c(v, u) < g[u]$  then
22          $g[u] \leftarrow g[v] + c(v, u)$ 
23         Parent[ $u$ ]  $\leftarrow v$ 
  
```

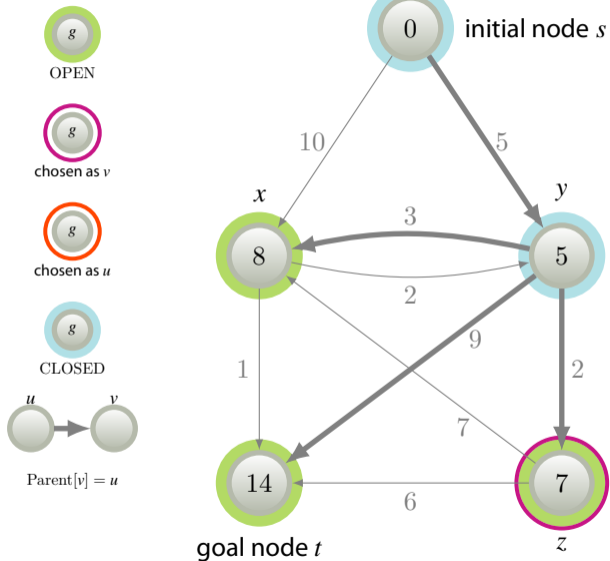
## Iteration 3



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
8       return "failure"
9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup$  { $v$ }
11    if IsGoal( $v$ ) then
12      return Solution( $v$ ,  $s$ )
13    Expand( $v$ )
14  procedure Expand( $v$ )
15    foreach  $u \in$  Succ( $v$ ) do
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```

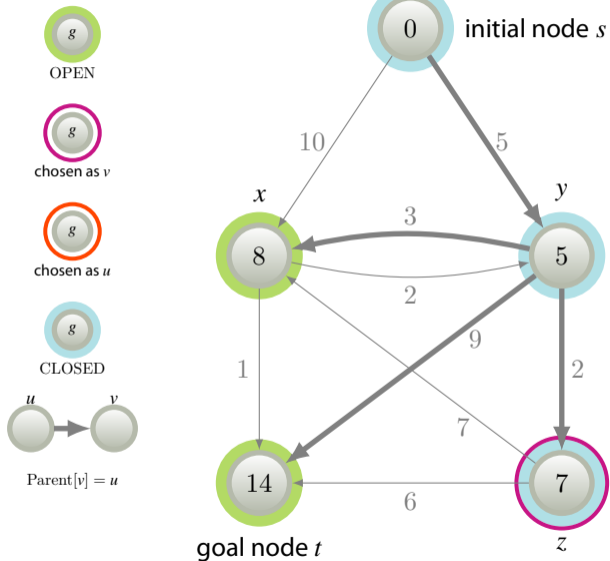
## Iteration 3



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
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5  CLOSED  $\leftarrow \emptyset$ 
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23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```

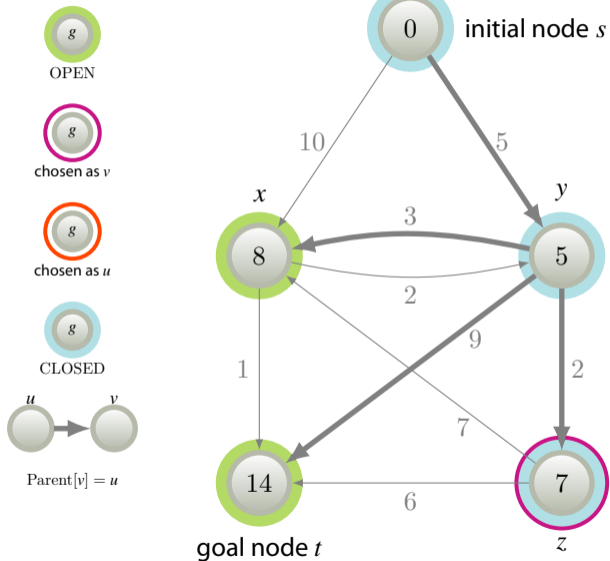
## Iteration 3



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

## Iteration 3



```

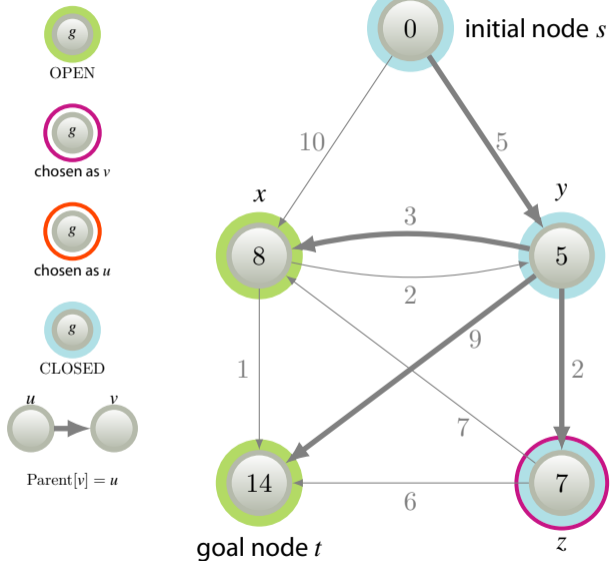
1  function Dijkstra(s)
2  | OPEN ← new PriorityQueueg
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4  | Insertg(OPEN, s)
5  | CLOSED ← ∅
6  | loop do
7  | | if IsEmpty(OPEN) then
8  | | | return "failure"
9  | | v ← DeleteMing(OPEN)
10 | | CLOSED ← CLOSED ∪ {v}
11 | | if IsGoal(v) then
12 | | | return Solution(v, s)
13 | | Expand(v)
14 | procedure Expand(v)
15 | | foreach u ∈ Succ(v) do
16 | | | if u ∉ OPEN ∪ CLOSED then
17 | | | | g[u] ← g[v] + c(v, u)
18 | | | | Parent[u] ← v
19 | | | | Insertg(OPEN, u)
20 | | | else if u ∈ OPEN then
21 | | | | if g[v] + c(v, u) < g[u] then
22 | | | | | g[u] ← g[v] + c(v, u)
23 | | | | | Parent[u] ← v

```





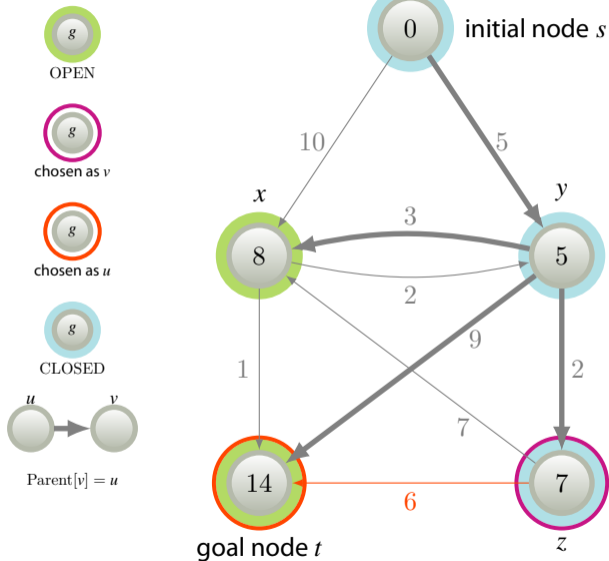
## Iteration 3



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```

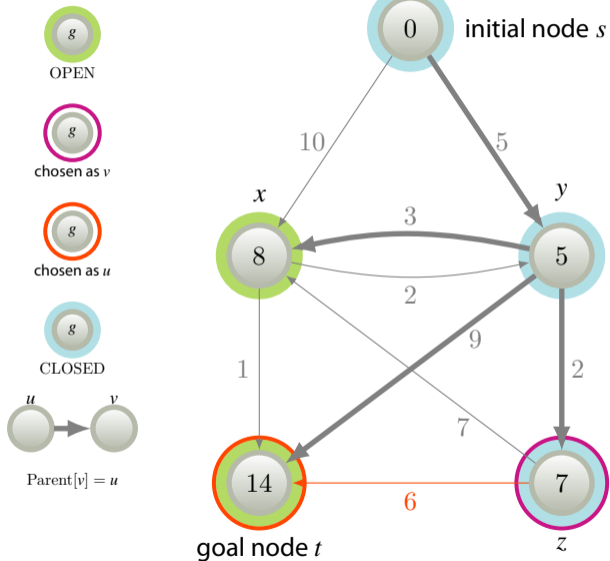
## Iteration 3



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
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5  CLOSED  $\leftarrow \emptyset$ 
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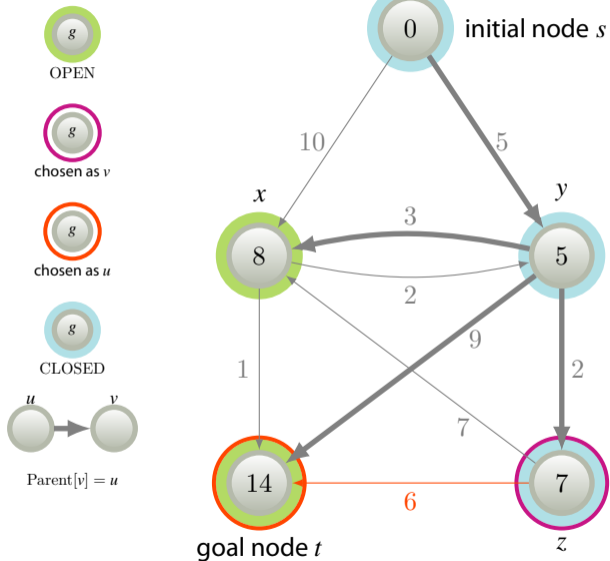
## Iteration 3



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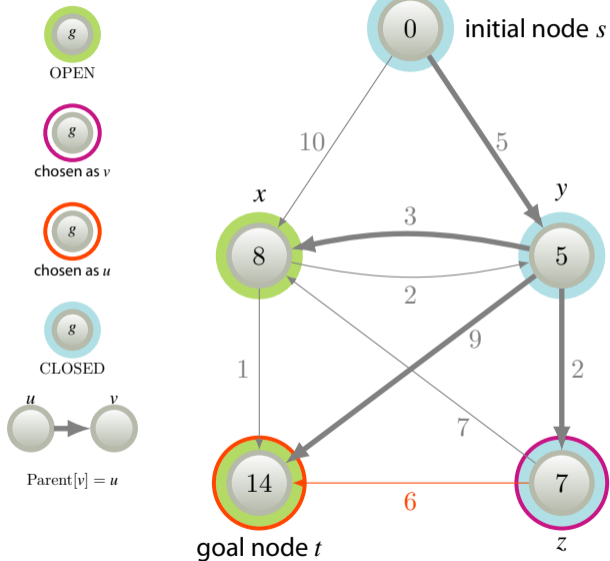
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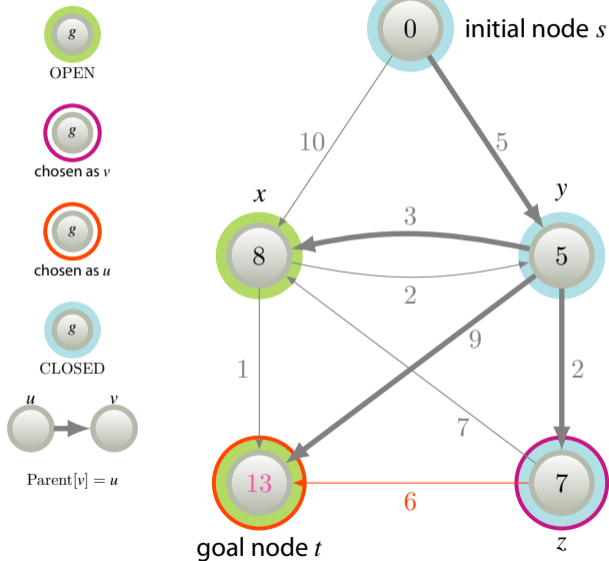
## Iteration 3



```

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23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```

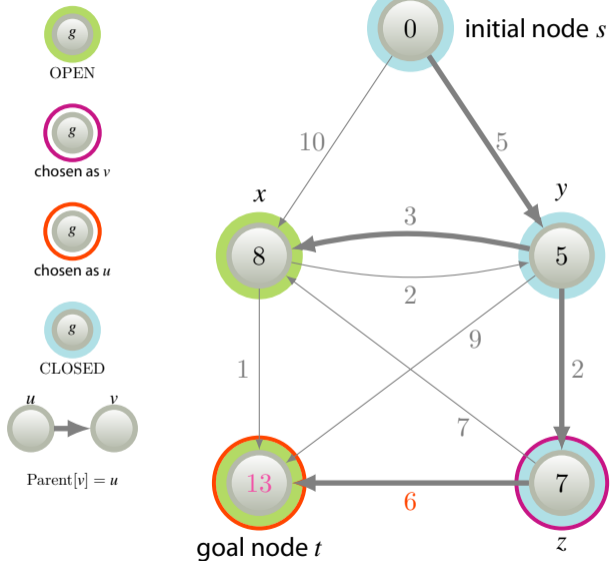
## Iteration 3



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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22 | | | |  $g[u] \leftarrow g[v] + c(v, u)$ 
23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
    
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## Iteration 3

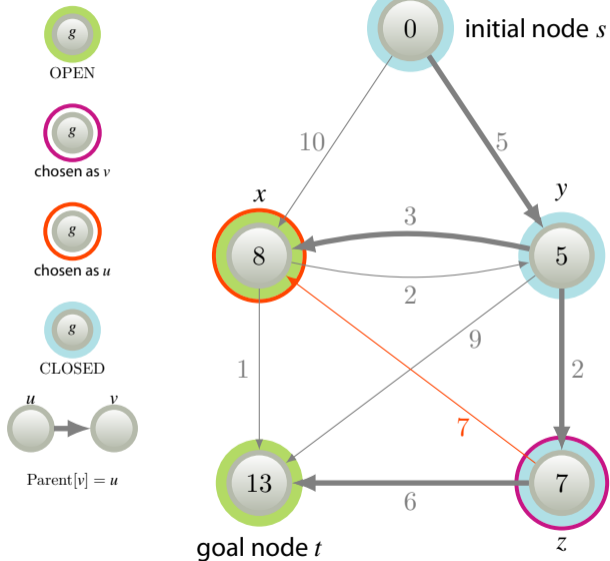


```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
4  Insert $_g$ (OPEN,  $s$ )
5  CLOSED  $\leftarrow \emptyset$ 
6  loop do
7  | if IsEmpty(OPEN) then
8  | | return "failure"
9  |  $v \leftarrow$  DeleteMin $_g$ (OPEN)
10 | CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
11 | if IsGoal( $v$ ) then
12 | | return Solution( $v, s$ )
13 | Expand( $v$ )
14 procedure Expand( $v$ )
15 | foreach  $u \in$  Succ( $v$ ) do
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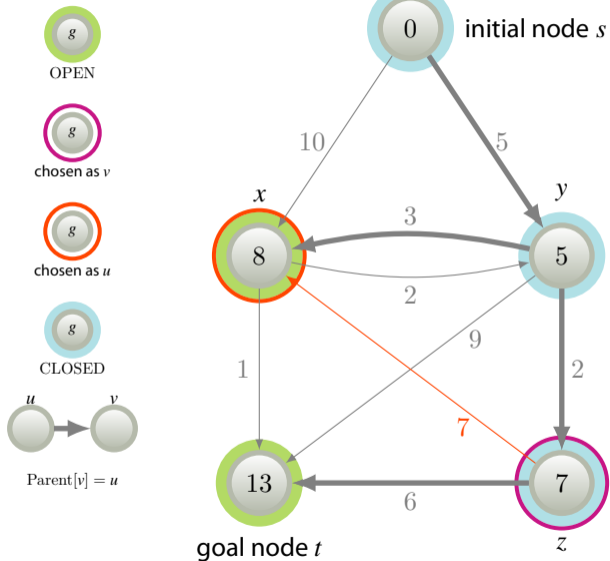
## Iteration 3



```

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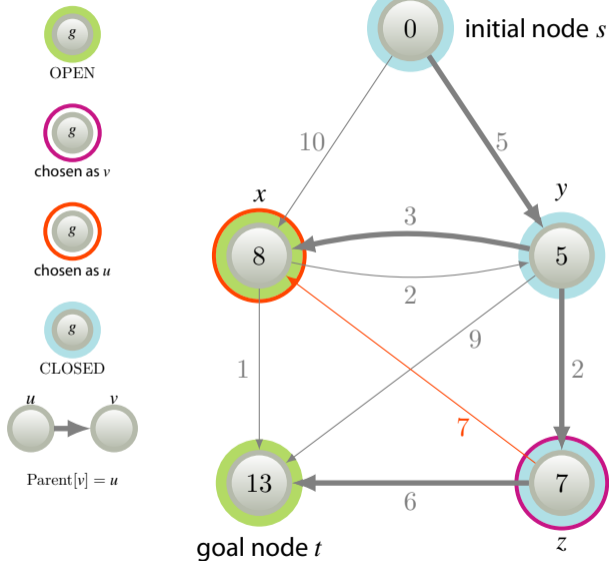
## Iteration 3



```

1  function Dijkstra(s)
2  | OPEN ← new PriorityQueueg
3  | g[s] ← 0
4  | Insertg(OPEN, s)
5  | CLOSED ← ∅
6  | loop do
7  | | if IsEmpty(OPEN) then
8  | | | return "failure"
9  | | v ← DeleteMing(OPEN)
10 | | CLOSED ← CLOSED ∪ {v}
11 | | if IsGoal(v) then
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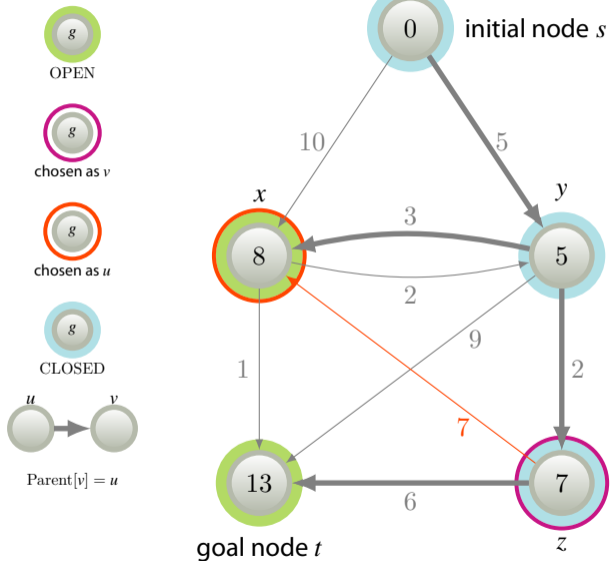
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```

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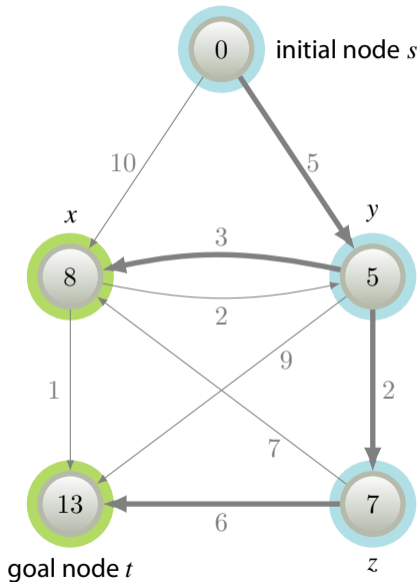
## Iteration 3



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2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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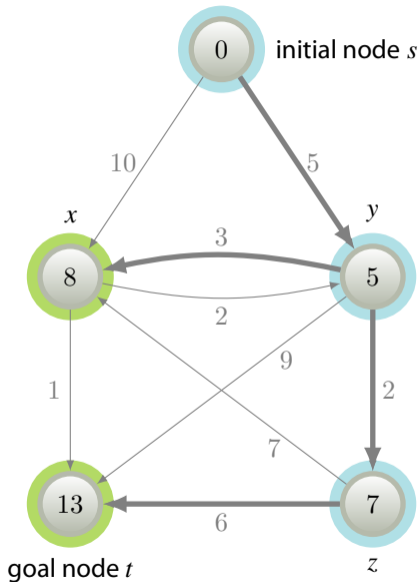
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23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

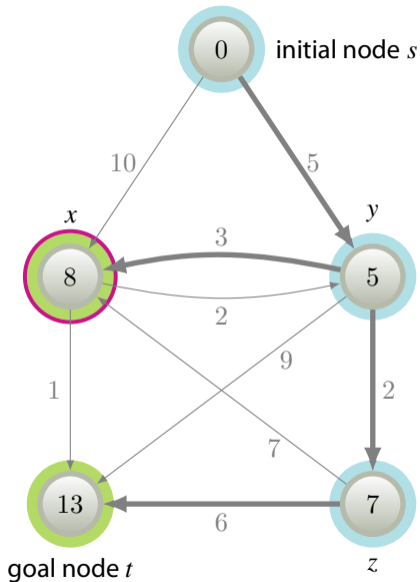
## Iteration 4



```

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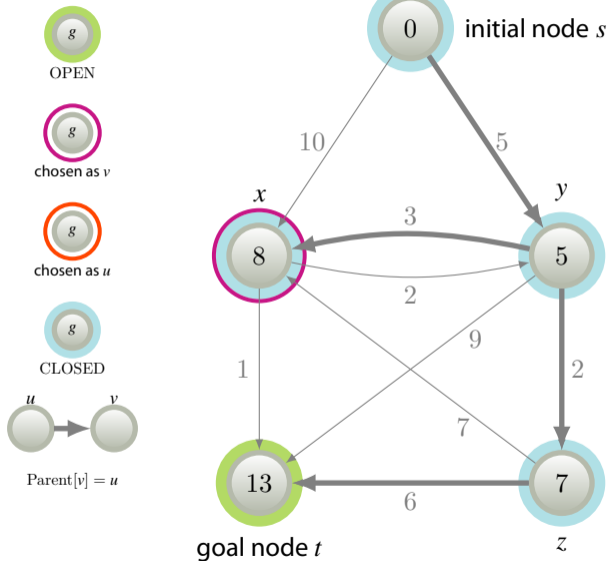
## Iteration 4



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9     v ← DeleteMing(OPEN)
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11    if IsGoal(v) then
12      return Solution(v, s)
13    Expand(v)
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22          g[u] ← g[v] + c(v, u)
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## Iteration 4

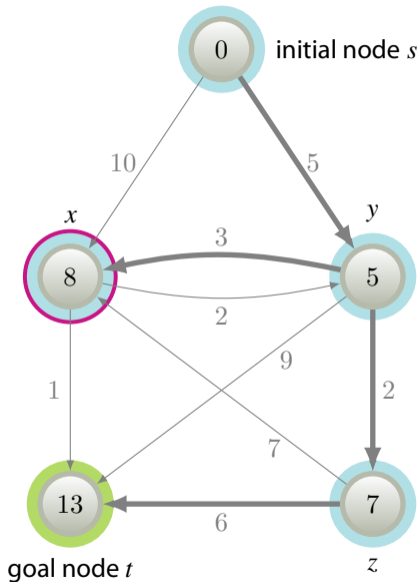


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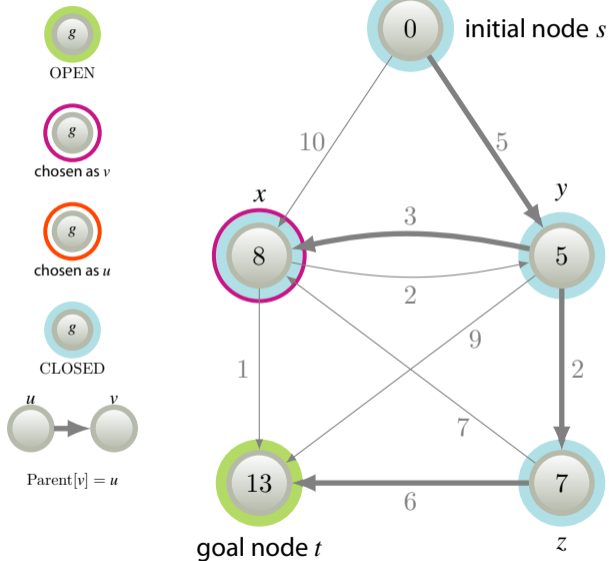
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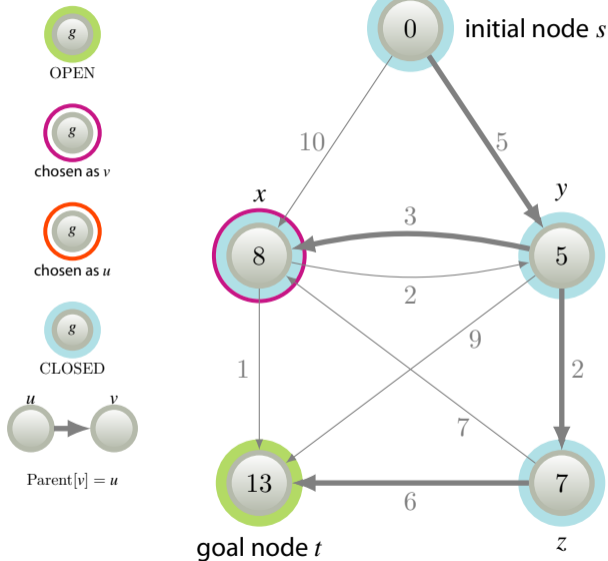
## Iteration 4



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```

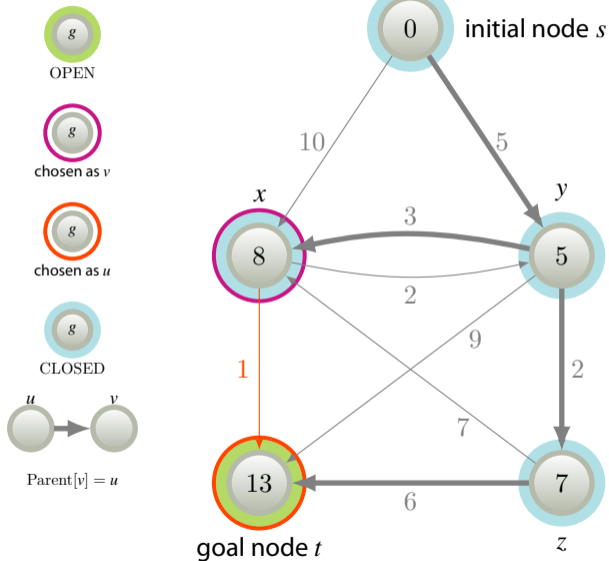
## Iteration 4



```

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2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
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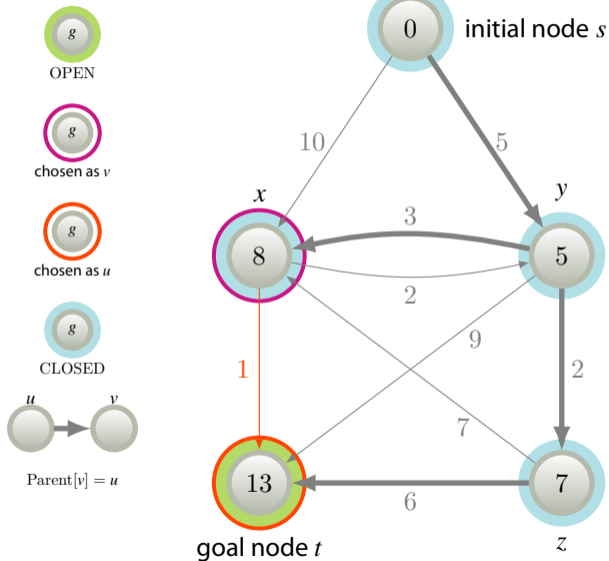
## Iteration 4



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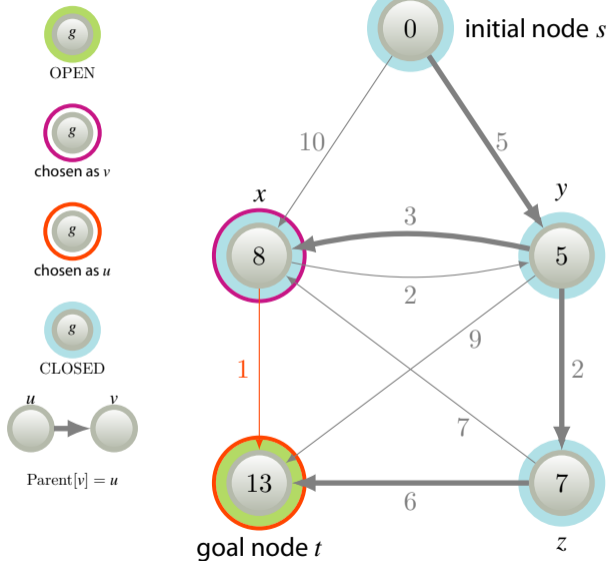
## Iteration 4



```

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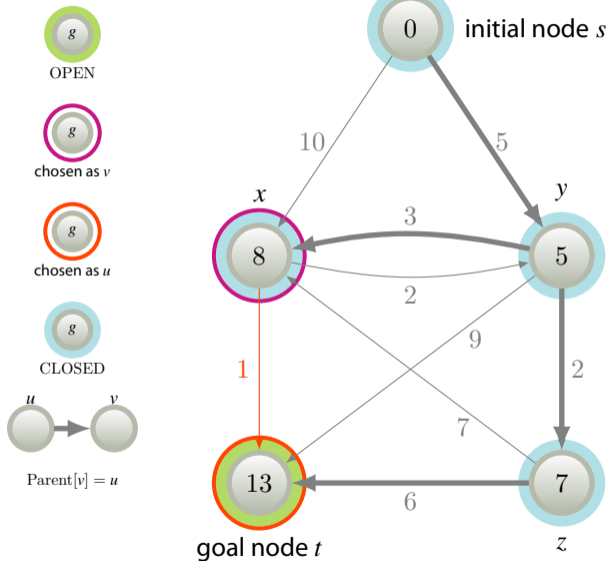
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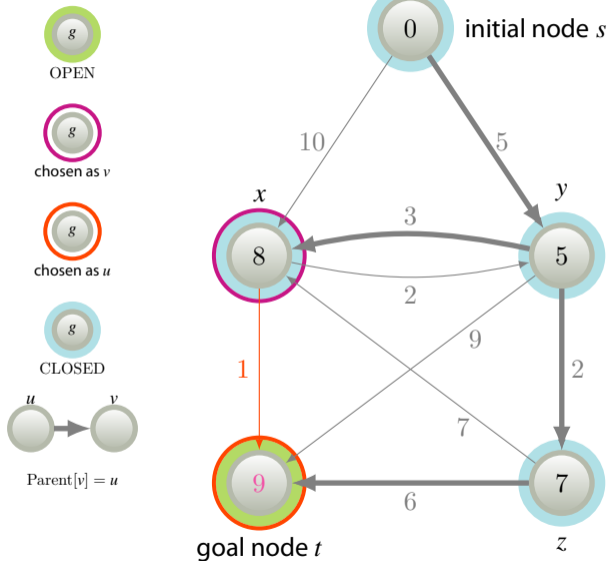
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## Iteration 4

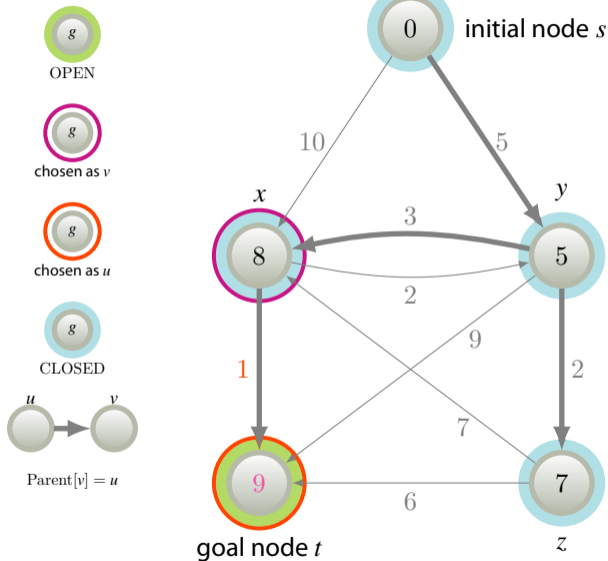


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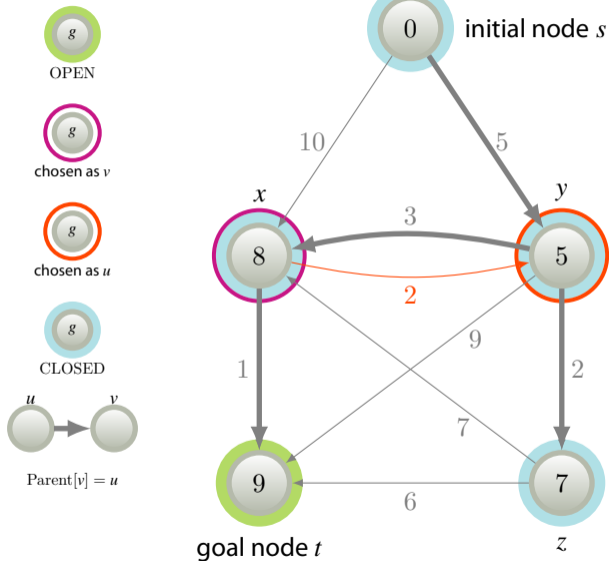
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16 | | if  $u \notin$  OPEN  $\cup$  CLOSED then
17 | | |  $g[u] \leftarrow g[v] + c(v, u)$ 
18 | | | Parent[ $u$ ]  $\leftarrow v$ 
19 | | | Insert $_g$ (OPEN,  $u$ )
20 | | else if  $u \in$  OPEN then
21 | | | if  $g[v] + c(v, u) < g[u]$  then
22 | | | |  $g[u] \leftarrow g[v] + c(v, u)$ 
23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```

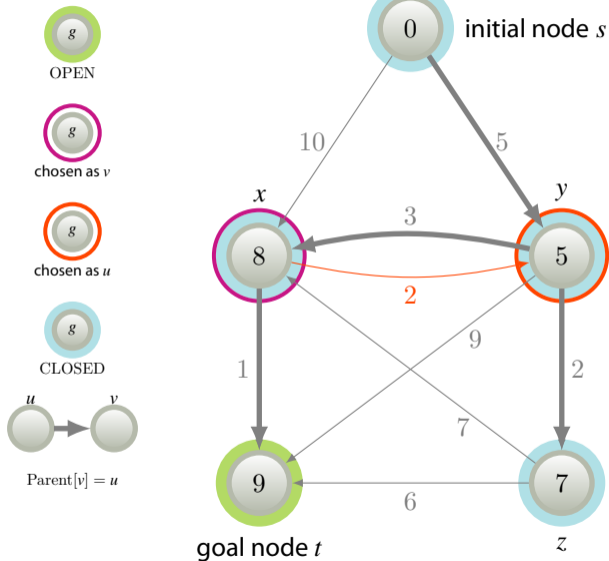
## Iteration 4



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
8       return "failure"
9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup$  { $v$ }
11    if IsGoal( $v$ ) then
12      return Solution( $v$ ,  $s$ )
13    Expand( $v$ )
14  procedure Expand( $v$ )
15    foreach  $u \in$  Succ( $v$ ) do
16      if  $u \notin$  OPEN  $\cup$  CLOSED then
17         $g[u] \leftarrow g[v] + c(v, u)$ 
18        Parent[ $u$ ]  $\leftarrow v$ 
19        Insert $_g$ (OPEN,  $u$ )
20      else if  $u \in$  OPEN then
21        if  $g[v] + c(v, u) < g[u]$  then
22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

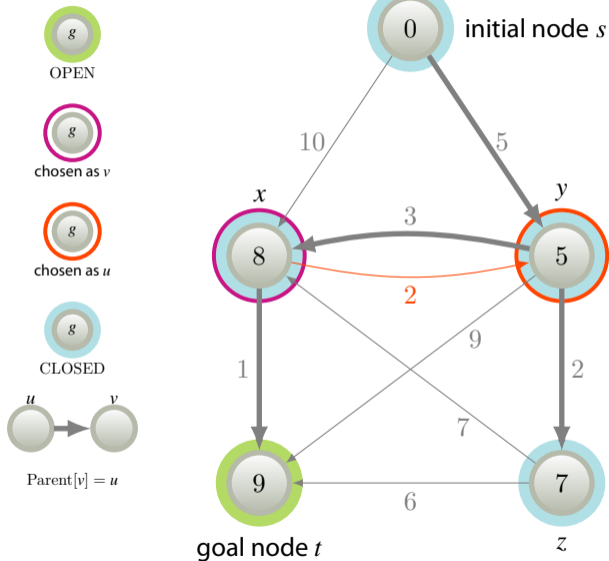
## Iteration 4



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
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9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
11    if IsGoal( $v$ ) then
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13    Expand( $v$ )
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```

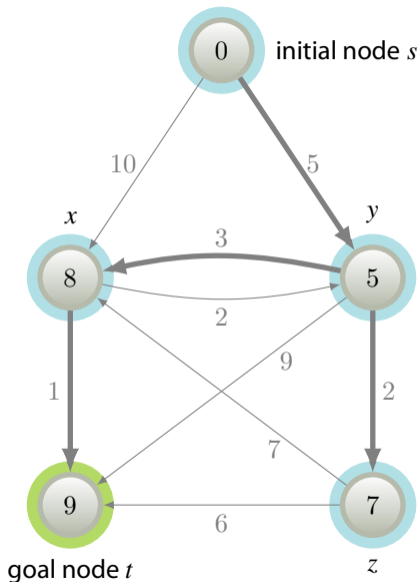
## Iteration 4



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
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```

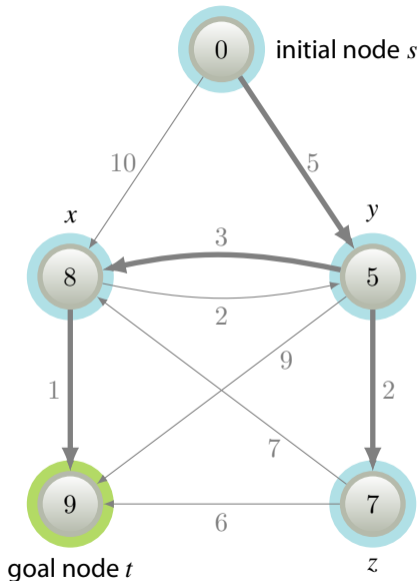
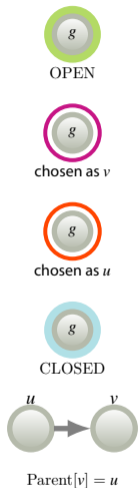
## Iteration 5



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
8       return "failure"
9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup$  { $v$ }
11    if IsGoal( $v$ ) then
12      return Solution( $v$ ,  $s$ )
13    Expand( $v$ )
14  procedure Expand( $v$ )
15    foreach  $u \in$  Succ( $v$ ) do
16      if  $u \notin$  OPEN  $\cup$  CLOSED then
17         $g[u] \leftarrow g[v] + c(v, u)$ 
18        Parent[ $u$ ]  $\leftarrow v$ 
19        Insert $_g$ (OPEN,  $u$ )
20      else if  $u \in$  OPEN then
21        if  $g[v] + c(v, u) < g[u]$  then
22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

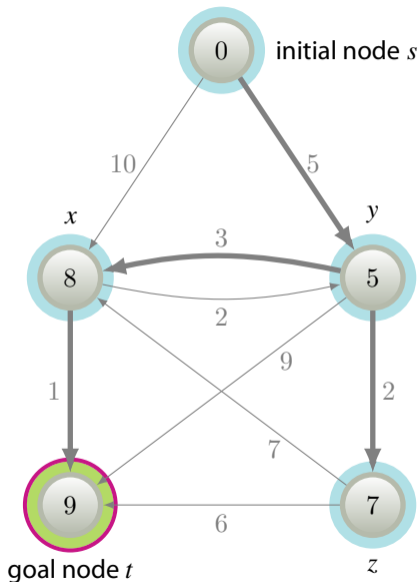
## Iteration 5



```

1 function Dijkstra( $s$ )
2   OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3    $g[s] \leftarrow 0$ 
4   Insert $_g$ (OPEN,  $s$ )
5   CLOSED  $\leftarrow \emptyset$ 
6   loop do
7     if IsEmpty(OPEN) then
8       return "failure"
9      $v \leftarrow$  DeleteMin $_g$ (OPEN)
10    CLOSED  $\leftarrow$  CLOSED  $\cup \{v\}$ 
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13    Expand( $v$ )
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20      else if  $u \in$  OPEN then
21        if  $g[v] + c(v, u) < g[u]$  then
22           $g[u] \leftarrow g[v] + c(v, u)$ 
23          Parent[ $u$ ]  $\leftarrow v$ 
  
```

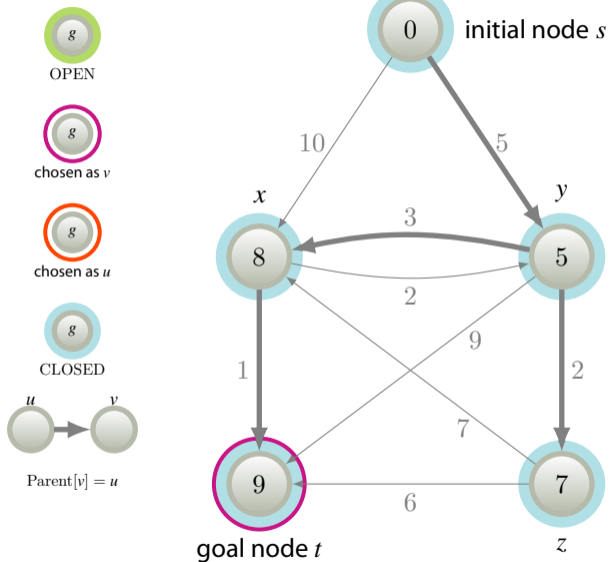
## Iteration 5



```

1  function Dijkstra( $s$ )
2  | OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3  |  $g[s] \leftarrow 0$ 
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```

## Iteration 5

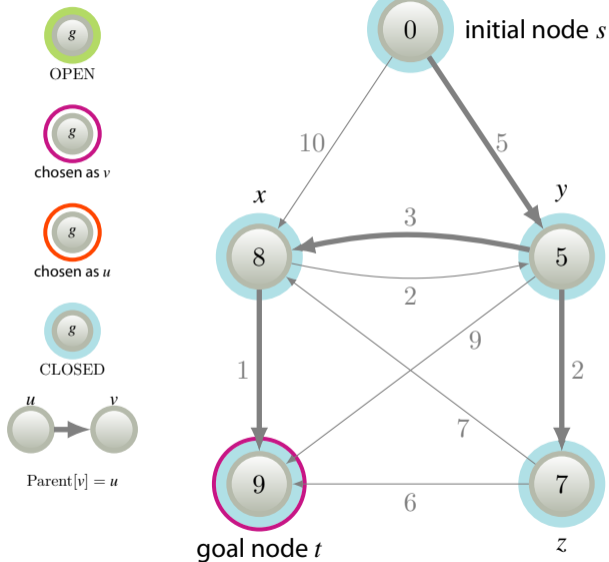


```

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22 | | | |  $g[u] \leftarrow g[v] + c(v, u)$ 
23 | | | | Parent[ $u$ ]  $\leftarrow v$ 
  
```



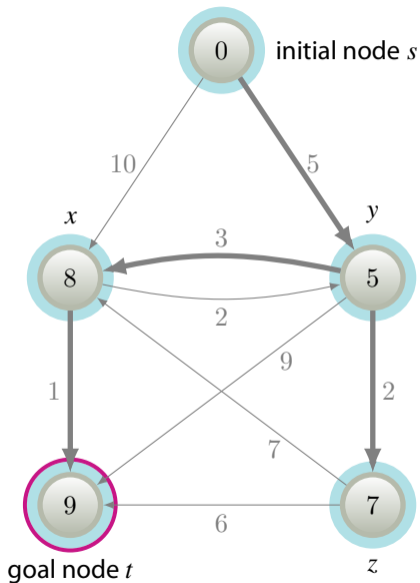
## Iteration 5



```

1  function Dijkstra( $s$ )
2  OPEN  $\leftarrow$  new PriorityQueue $_g$ 
3   $g[s] \leftarrow 0$ 
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## Iteration 5



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```