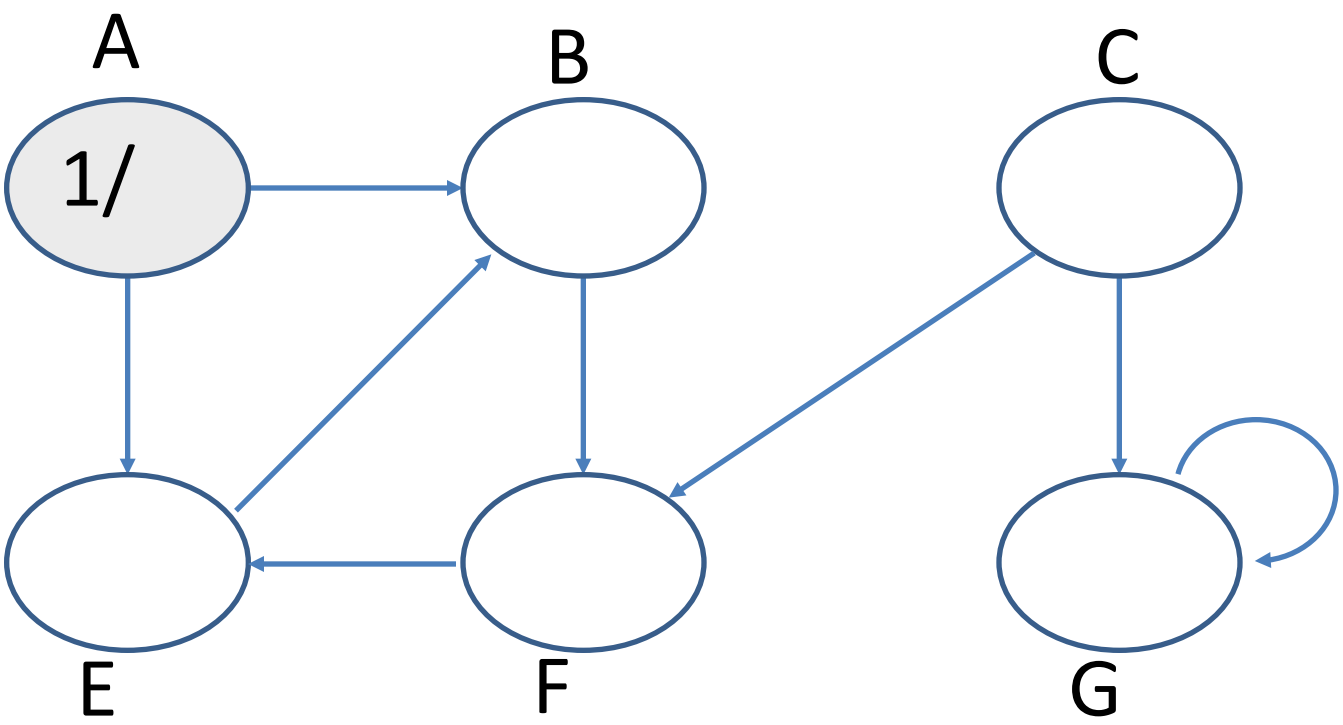
DEPTH-FIRST SEARCH:

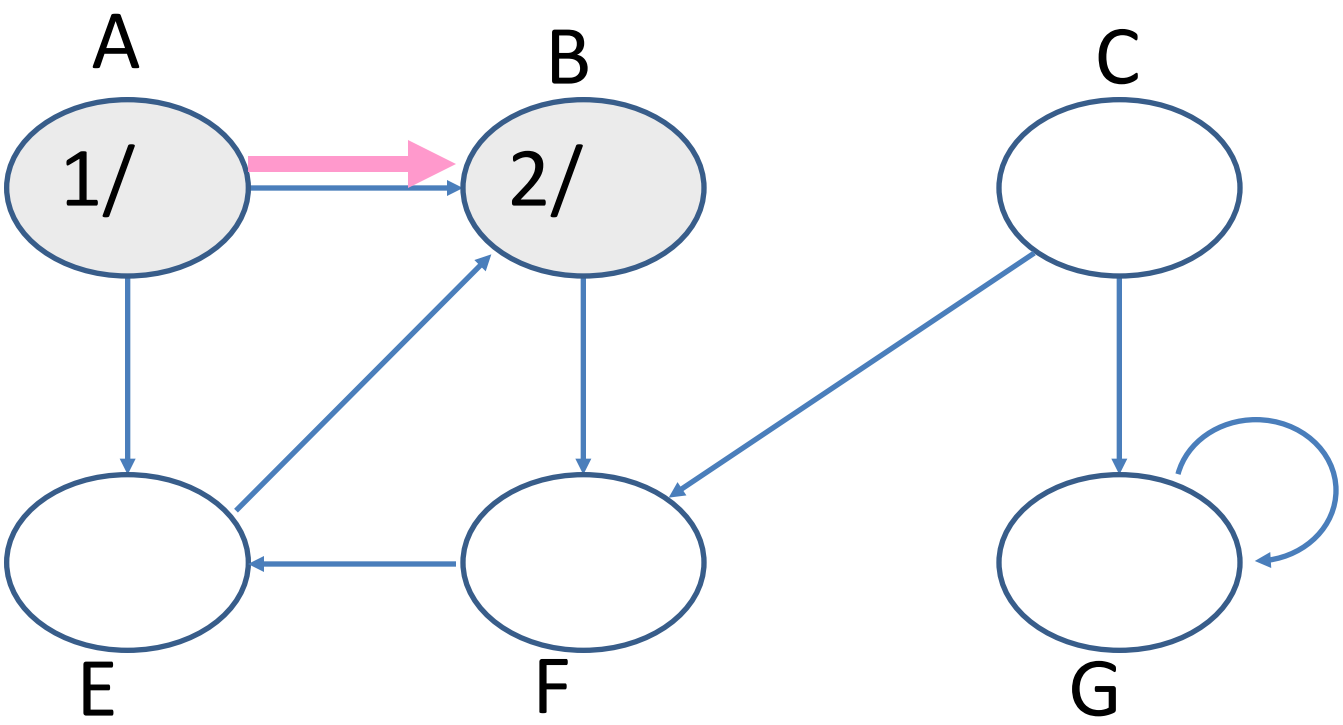
```
     DFS (G)
1    for each vertex u ∈ V [G]
2            do color[u] ← WHITE
3                predecessor[u] ← NIL
4    time ← 0
5    for each vertex u ∈ V [G]
6            do if color[u] =  WHITE
7                        then DFS_VISIT (u)

     DFS_VISIT (u)
1    color [u] ← GRAY            {White vertex u has just been discovered}
2    time ← time + 1
3    discovery_time[u] ← time
4    for each v ∈ Adj[u]         {Explore edge (u,v) }
5            do if color [v] = WHITE
6                        then predecessor[v] ← u
7                             DFS_VISIT (v)
8    color [u] ← BLACK           {Blacken u; it is finished}
9    finishing_time[u] ← time ← time + 1
```

DEPTH-FIRST SEARCH



DEPTH-FIRST SEARCH



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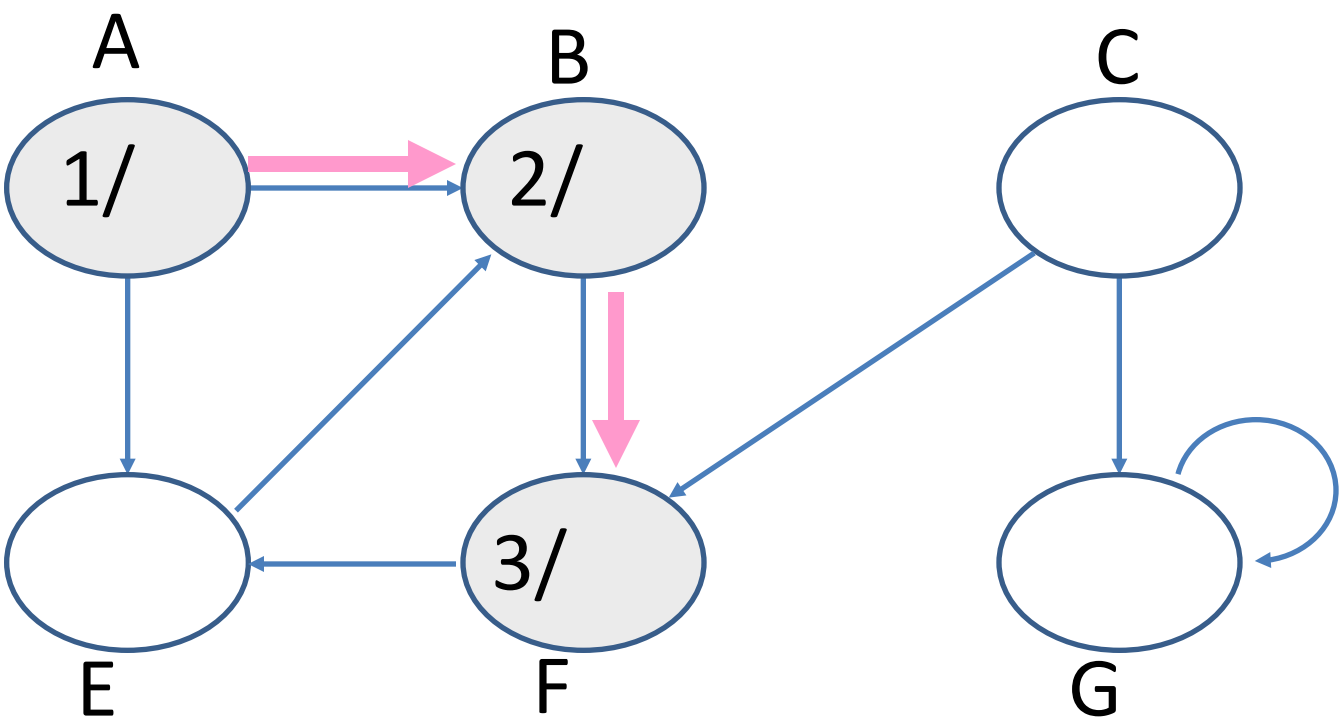

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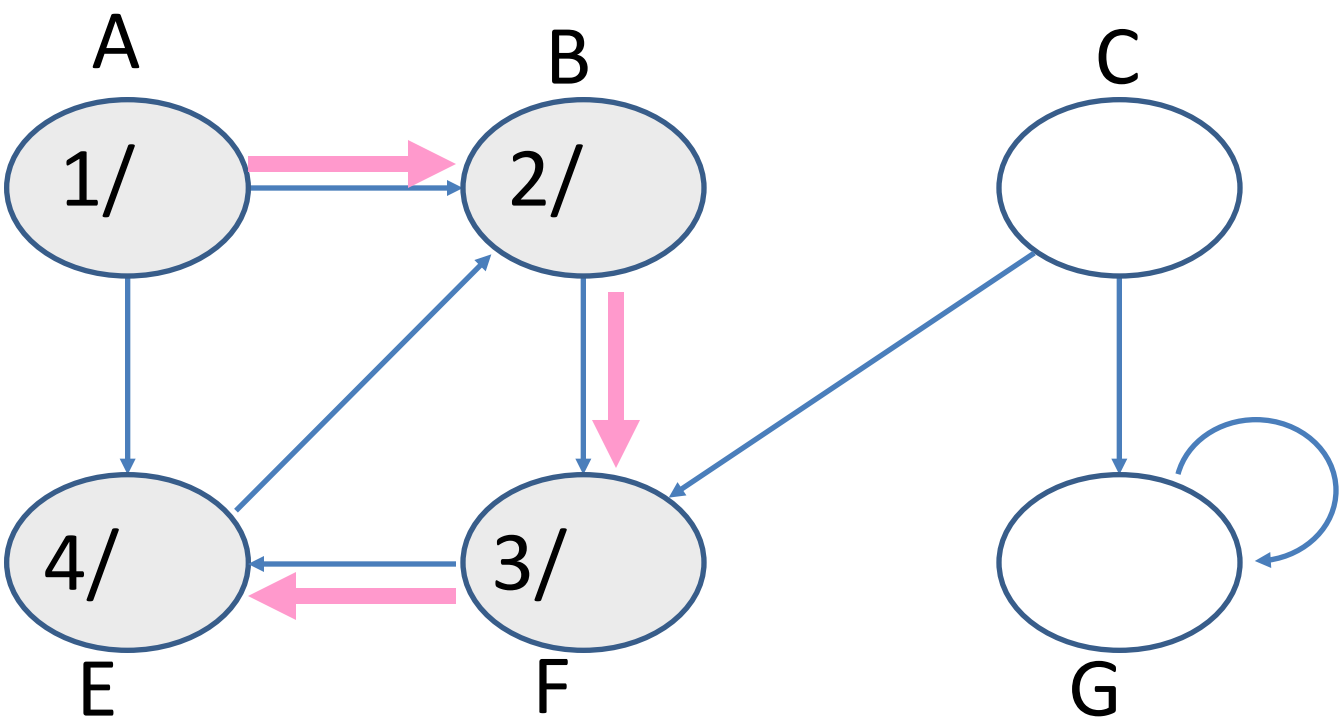

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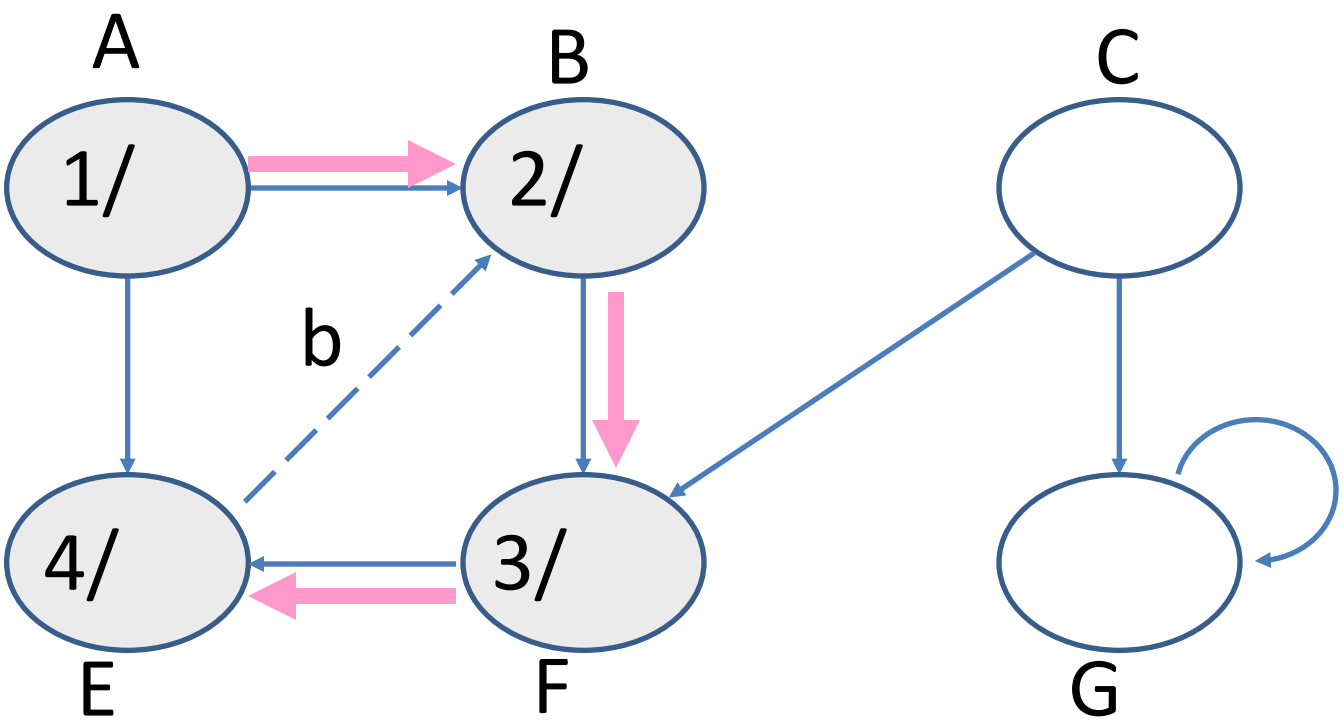

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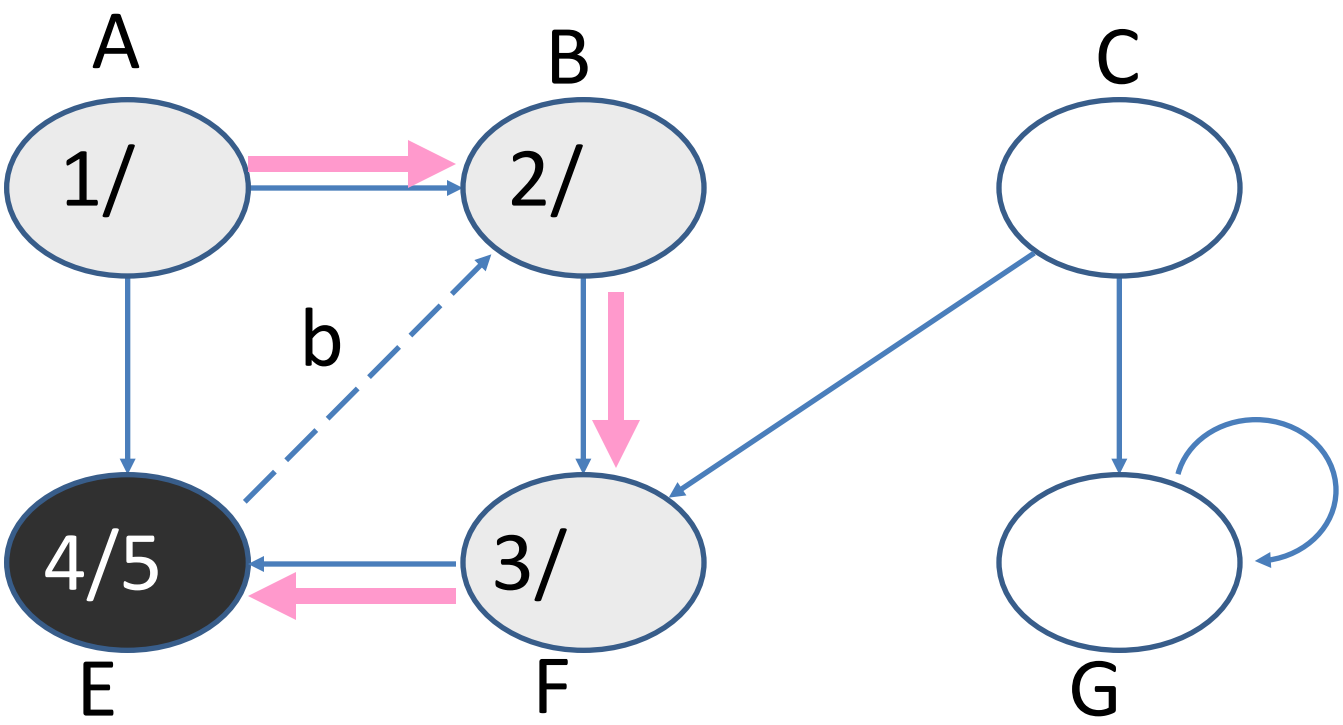

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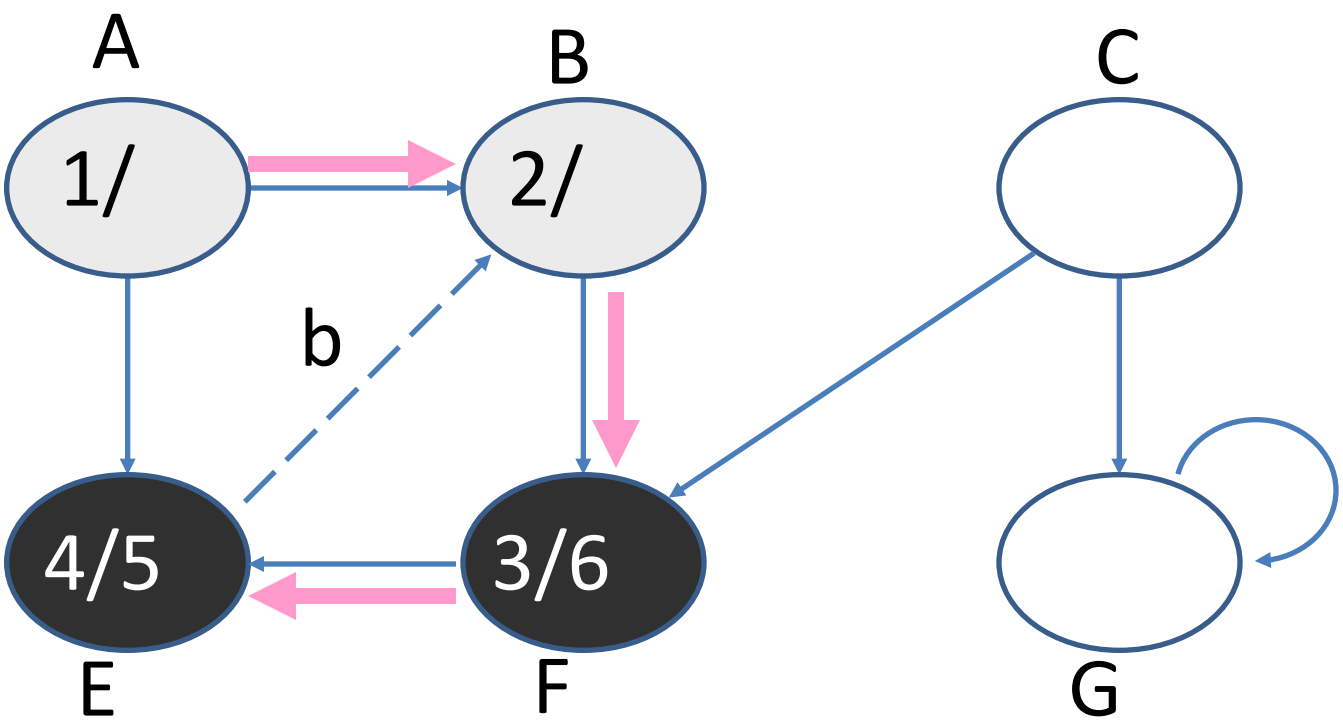

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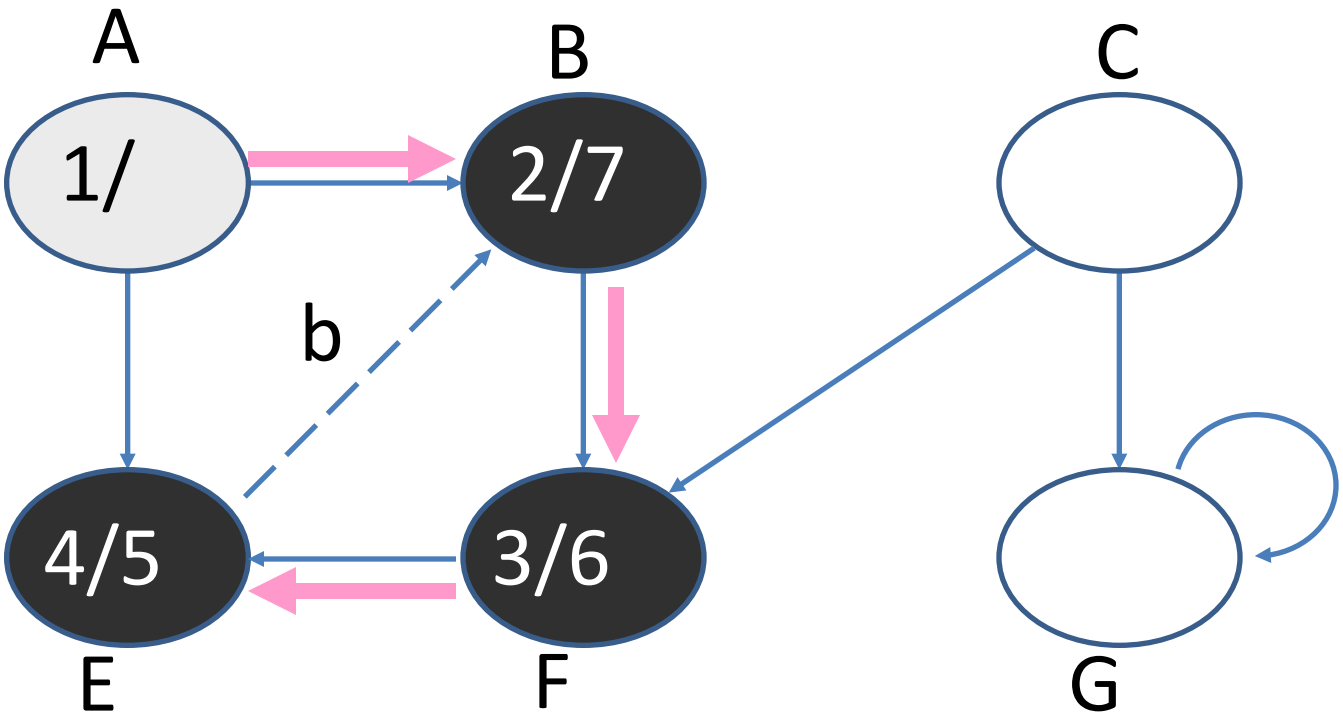

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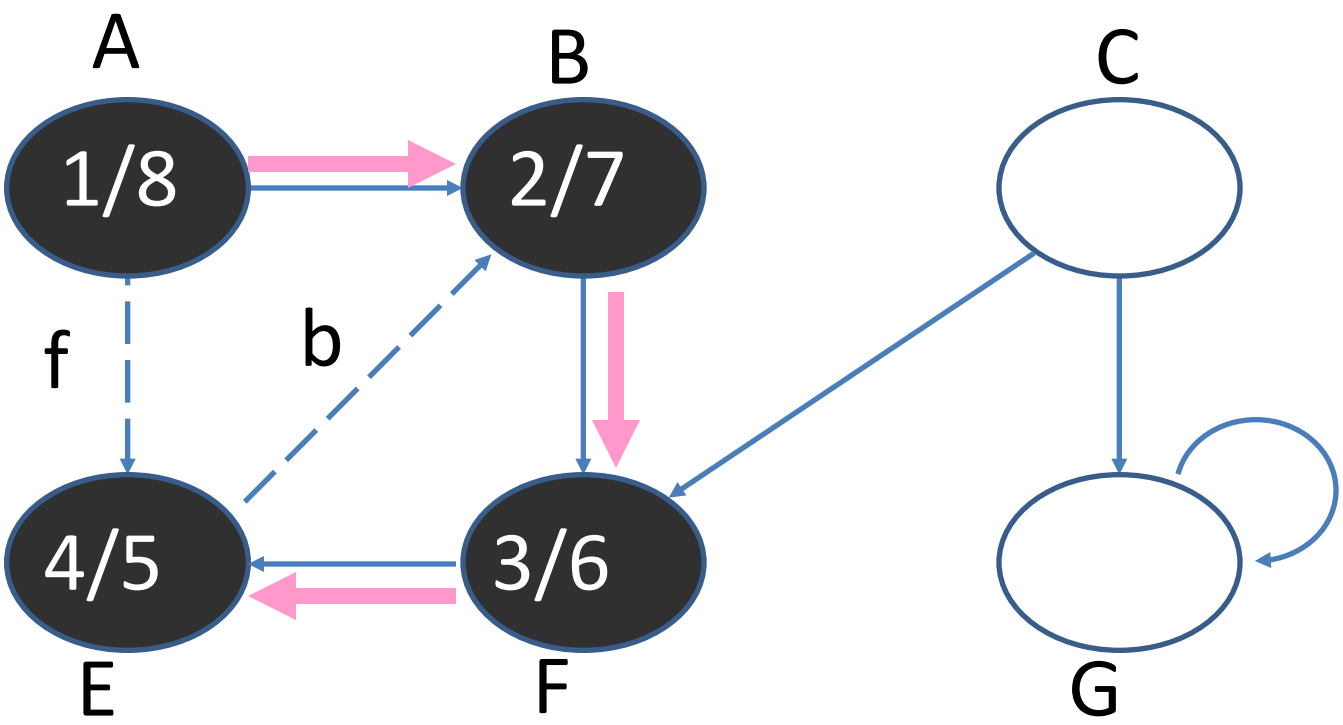

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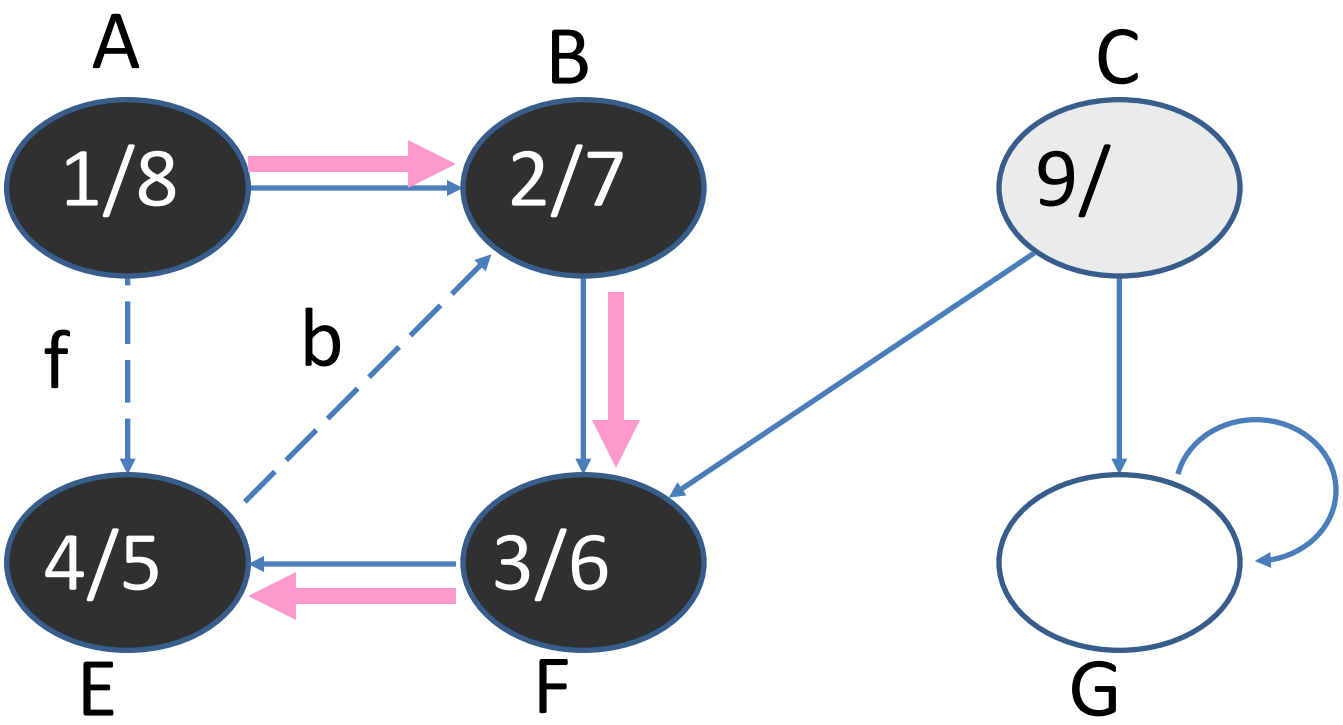

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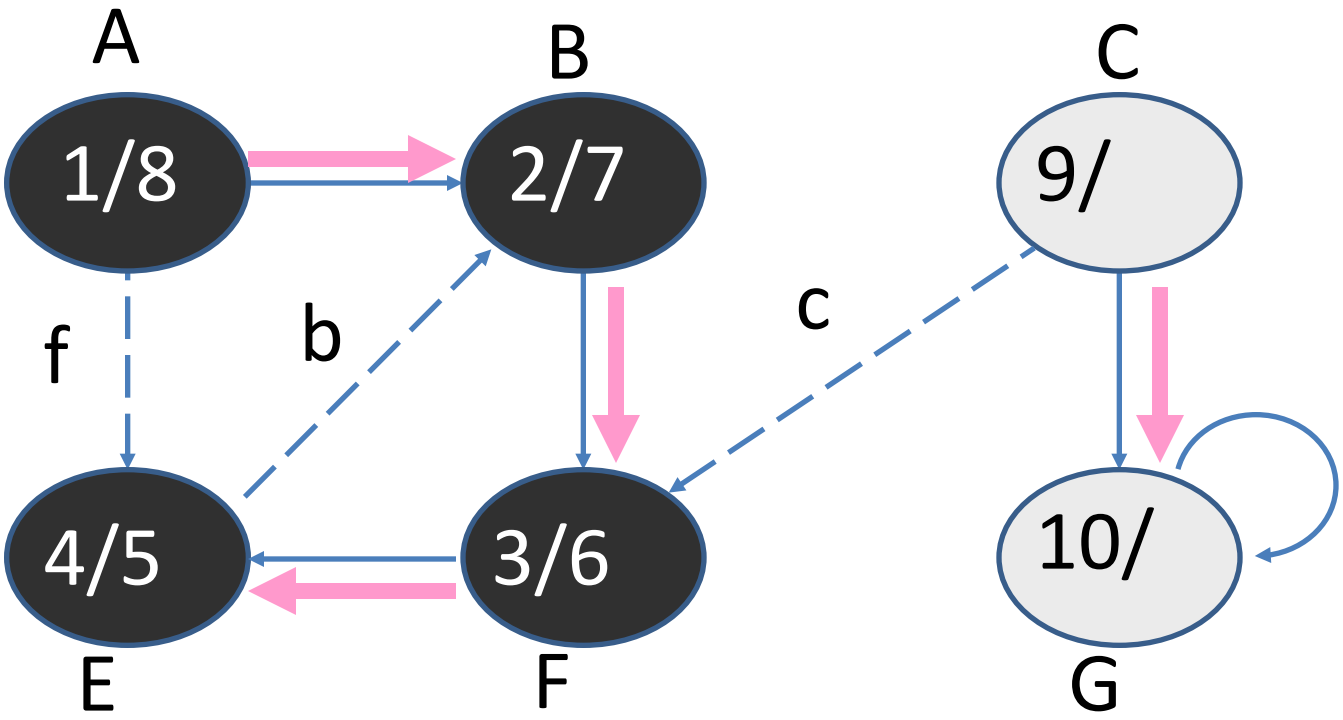

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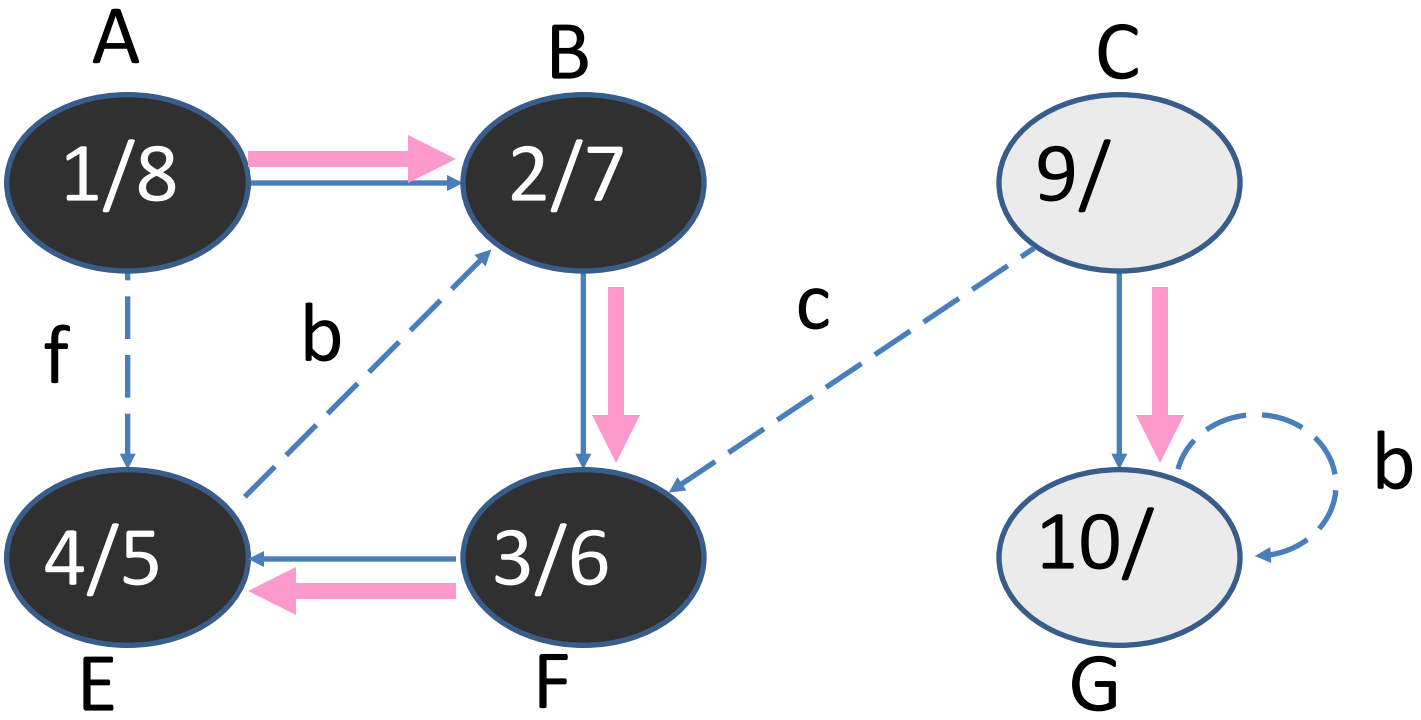

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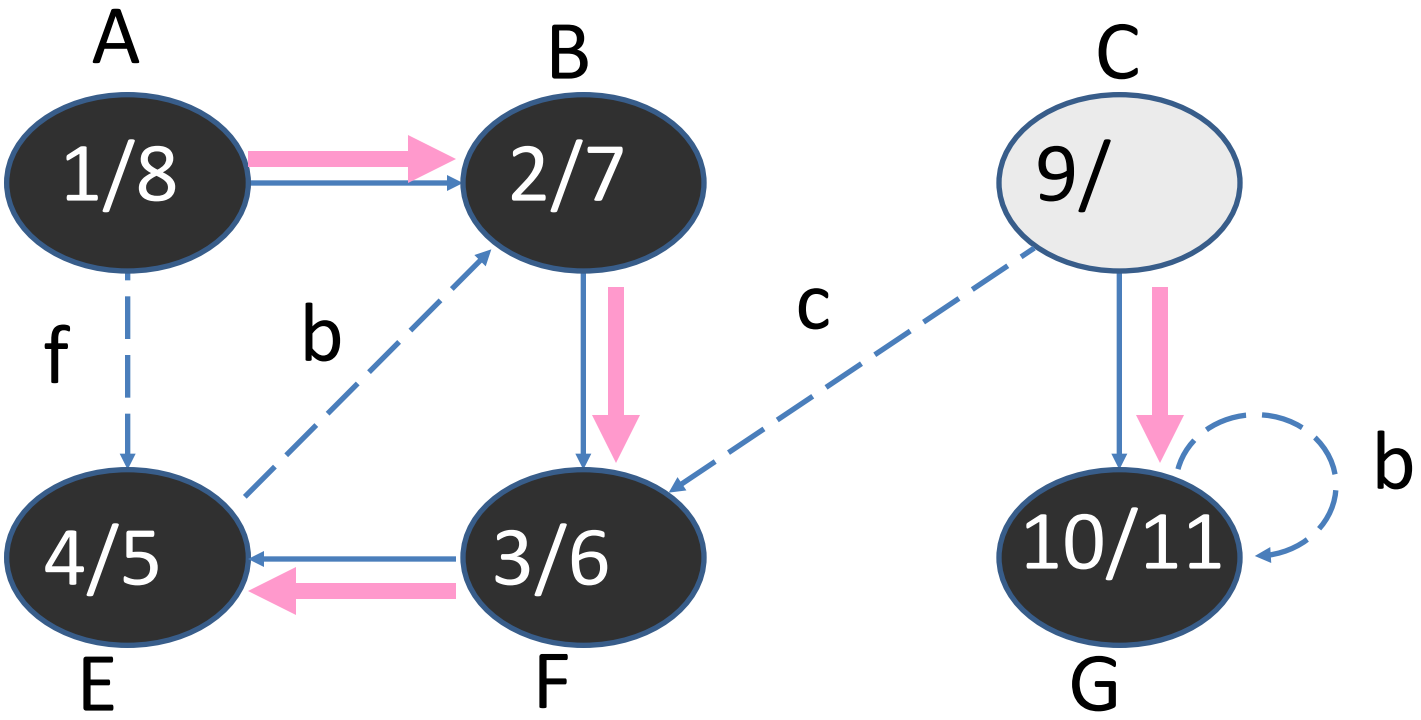

DEPTH-FIRST SEARCH