

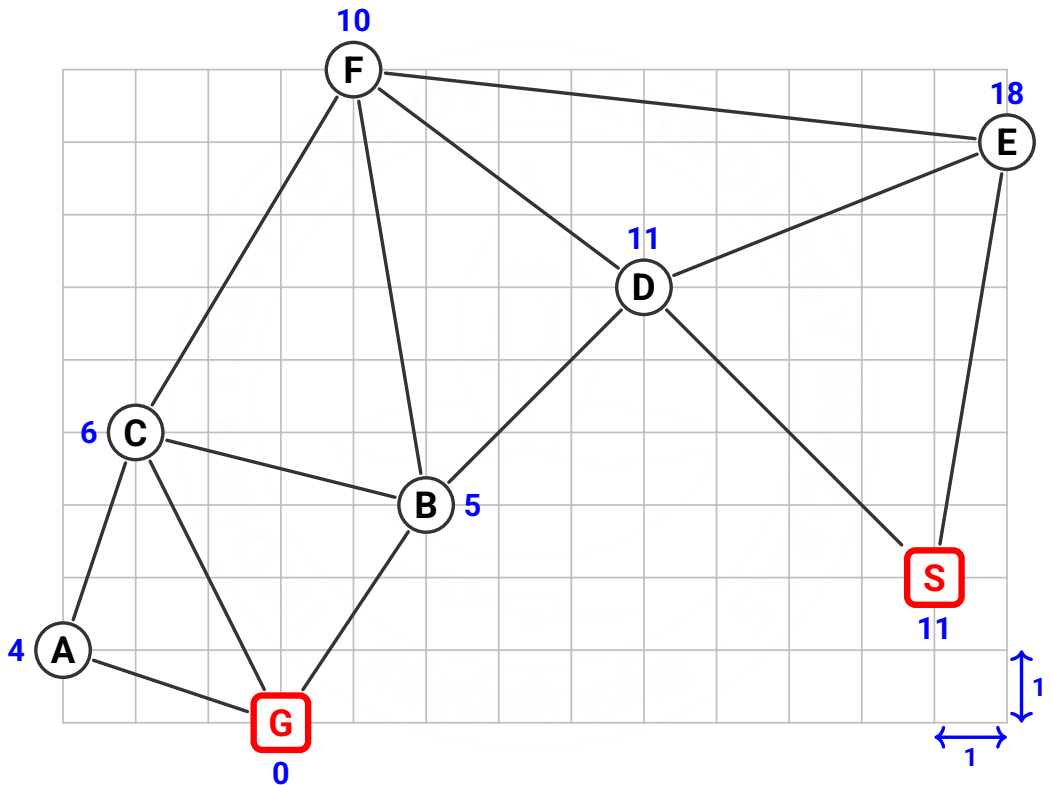
Practice Assignment: City Map Example 2

Best First Search

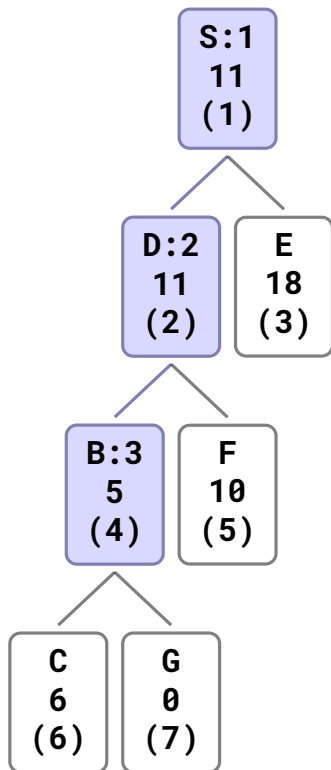
Prepared by S. Baskaran

State Space

MoveGen returns nodes in ALPHABETICAL ORDER.



Search Tree



Solution

OPEN and CLOSED carry triples: (NODE,PARENT,h)

OPEN (S,null,11):[]
CLOSED []

1.
NODE S
close (S,null,11)
moveGen D:E:[]
newNodes D:E:[]
newPairs (D,S,11):(E,S,18):[]

OPEN (D,S,11):(E,S,18):[]

CLOSED (S,null,11):[]

2.
NODE D
close (D,S,11)
moveGen B:E:F:S:[]
newNodes B:F:[]
newPairs (B,D,5):(F,D,10):[]

OPEN (B,D,5):(F,D,10):(E,S,18):[]

CLOSED (D,S,11):(S,null,11):[]

3.
NODE B
close (B,D,5)
moveGen C:D:F:G:[]
newNodes C:G:[]
newPairs (C,B,6):(G,B,0):[]

OPEN (G,B,0):(C,B,6):(F,D,10):(E,S,18):[]

CLOSED (B,D,5):(D,S,11):(S,null,11):[]

4.
NODE G
GOAL G

OPEN (G,B,0):(C,B,6):(F,D,10):(E,S,18):[]

CLOSED (B,D,5):(D,S,11):(S,null,11):[]

PATH S:D:B:G:[]

PATH COST 50