

A	B	C	D	E
F	H	I	J	K
L	<b>S</b> start	M	N	O
P	Q	R	T	U
V	W	X	<b>G</b> goal	Y

Hill-climbing – Manhattan heuristic

Expanded nodes

S  
M  
R

Open nodes

S(4)

H(5), M(3)

I(4), R(2)

no solution

A	B	C	D	E
F	H	I	J	K
L	<b>S</b> start	M	N	O
P	Q	R	T	U
V	W	X	<b>G</b> goal	Y

A\* - Manhattan Heuristic

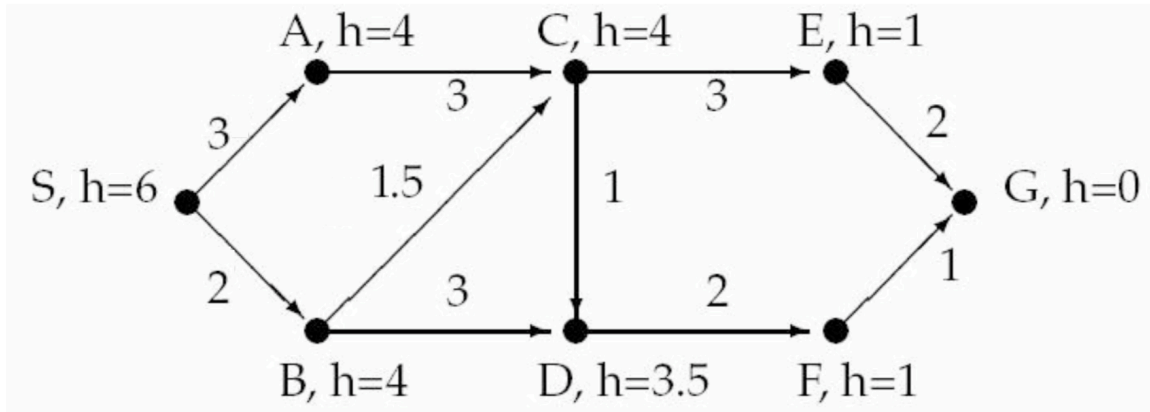
Expanded nodes

S  
M  
R  
H  
I  
J  
B  
C  
D  
F  
L  
P  
Q  
V  
W  
X  
G

Open

S(0+4)  
H(1+5), M(1+3)  
H(1+5), I(2+4), R(2+2)  
H(1+5), I(2+4)  
I(2+4), B(2+6), F(2+6)  
B(2+6), F(2+6), C(3+5), J(3+3)  
B(2+6), F(2+6), C(3+5), D(4+4)  
F(2+6), C(3+5), D(4+4), A(3+7)  
F(2+6), D(4+4), A(3+7)  
F(2+6), A(3+7), E(5+5)  
A(3+7), E(5+5), L(3+5)  
A(3+7), E(5+5), P(4+4)  
A(3+7), E(5+5), Q(5+3), V(5+3)  
A(3+7), E(5+5), WfromQ(6+2), WfromV(6+2)  
A(3+7), E(5+5), X(7+1)  
A(3+7), E(5+5), G(8+0)

solution: G-X-W-Q-P-L-F-H-S



A\*

Expanded Nodes

Open

S

S(0+6)

B

A(3+4), B(2+4)

A

A(3+4), CfromB(3.5+4), DfromB(5+3.5)

CfromB

CfromB(3.5+4), DfromB(5+3.5), CfromA(6+4)

E

DfromB (5+3.5), CfromA(6+4), DfromC(4.5+3.5), E(6.5+1)

DfromC

DfromB (5+3.5), CfromA(6+4), DfromC(4.5+3.5), G(8.5+0)

F

DfromB (5+3.5), CfromA(6+4), G(8.5+0), F(6.5+1)

GfromF

DfromB (5+3.5), CfromA(6+4), G(8.5+0), GfromF(7.5+0)

solution: G-F-D-C-B-S

Hill-Climbing

S A C E G