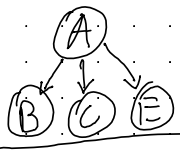
31 Aprofundamento Progressivo

d=0

[A]

d=1



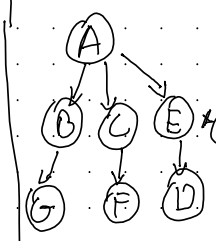
A→B→C→E

A ← [A]

B ← [B, C, E]

C ← [C, F]

d=2



A→B→G

G ← [A, B, G]

A ← [A]

B ← [B, C, E]

G ← [G, B, A]

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8) a) BFS

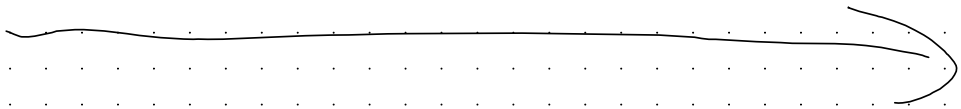
S ← [S]; A ← [A, C]; C ← [C, B, E]; B ← [B, E, D, G2];

E ← [E, D, G2, C', D(2), G1]; ~~D~~ ← [D, G2, C', D(2), G1, G1', G2']

G2 ← [G2, C', D', G1, G1', G2']

visited: S, A, C, B, E, D, G2

path: S, C, G2



(9) a) $S \leftarrow [S]$; $A \leftarrow [A, B, C]$; $E \leftarrow [E, G_1, B, C]$; $^*G_1{}'{}^* \leftarrow [G_1', G_1, B, C]$

vis: S, A, E, G_1 path: [S, A, E, G_1]

(24) A) $A \leftarrow [A]$; $B \leftarrow [B, C]$; $D \leftarrow [D, E, C]$; $E \leftarrow [E, C]$; $C \leftarrow [C]$;

$C \leftarrow [C', F, G]$ (loop) ↑ à esquerda

à direita

↳ $A \leftarrow [A]$; $C \leftarrow [CB]$; $G \leftarrow [GFC'B]$; $^*F^* \leftarrow [FC'B]$

vis: [A, C, G, F] path: [A, C, F]

(9) b) $S \rightarrow \{S(8)\}$; $B \leftarrow \{A(9), B(1), C(3)\}$; $O \leftarrow \{C(3), F(5)\}$

c) $S \leftarrow \{S(0)\}$; $B \leftarrow \{B(1), A(3), C(5)\}$; $A \leftarrow \{A(3), C'(3), F(3), C(5)\}$

$C \leftarrow \{C'(3), F(3), C(5), G_1(13), E(10)\}$; $F \leftarrow \{F(3), C(5), E(10), G_1(13), G_3(14)\}$

$D \leftarrow (D(4), C'(5), E(10), G_1(13), G_3(14)\}$; $C \leftarrow \{C'(5), B'(8), G_2(9), E(10), S(10), G_1(13), G_3(14)\}$

$B \leftarrow \{B'(8), G_2(9), E(10), S(10), G_1(13), G_3(14), G_3'(16)\}$; $^*G_2^* \leftarrow \{G_2(9), \ldots\}$

visited = {S, B, A, C, F, D}

= {G_2, D, F, B, S}.reverse()

(27) d) A* (x_1, x_2, x_3) — x_1: f(n), x_2: g(n), x_3: h(n)

DC = [DC(15; 0; 15)]; P ← [P(10,4,6), G(11,3,8), R(15,5,10), C(16,3,13)];

G ← [G(11;3,8); JM(11,6,5); BF(12,5,7); R(15,5,10), C(16,3,13)]

JM ← [JM(11,6,5); BF(12,5,7); R(15,5,10); BS(15,7,8), C(16,3,13)]

L ← [L(10,8,2]; O(12,8,4); BF(12,5,7); R(15,5,10); BS(15,7,8), C(16,3,13)]

AS ← [...] vis = [DC, P, G, JM, L, AS]

path = [AS, L, JM, P, DC].reverse()

27.2 Não porque a heurística subestimou o custo em BF

(28) A* // A ← [A(3;0,3)]; B ← [B(3,1,2); C(8,5,3)]

E ← [E(5,4,1), C(8,5,3), D(8,3,5)]; *G* ← [(...)]

vis: A, B, E, G = path