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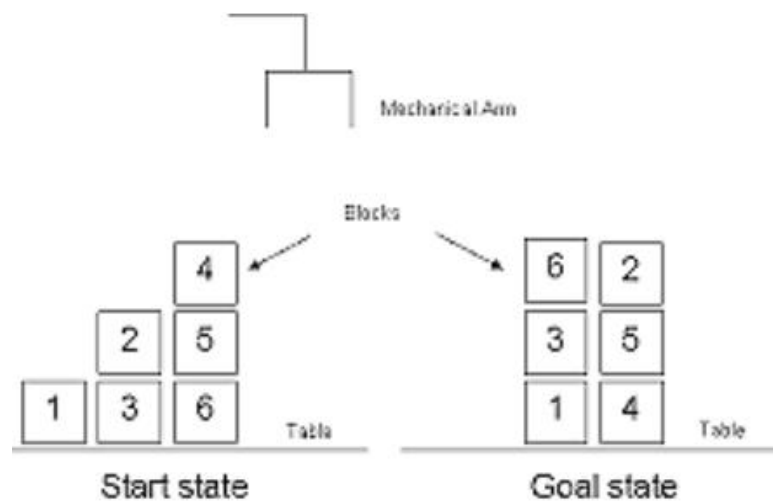
NIM : 2106022

TUGAS 05 – Praktikum Kecerdasan Buatan – Planning AI

Jika ditemukan initial state dan goal state seperti gambar dibawah ini, gunakan metode Goal Stack Planning untuk menyelesaikannya !

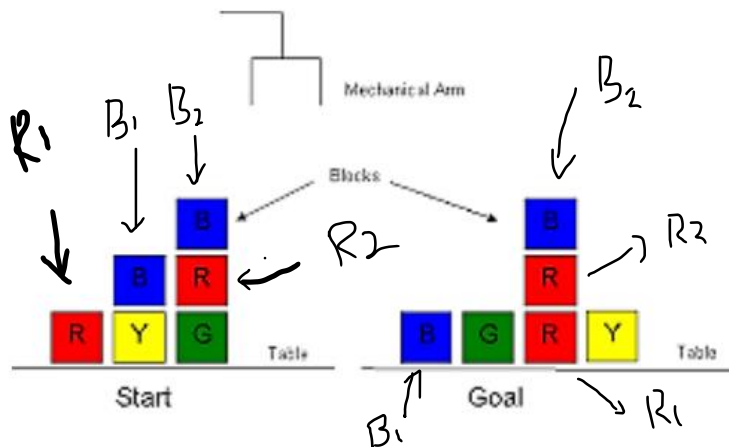
Jawab :

TUGAS 05-1A



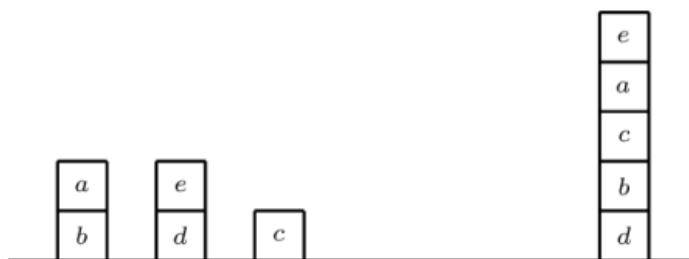
- Initial State :
 $\text{ON}(2,3) \wedge \text{ON}(5,6) \wedge \text{ON}(4,5) \wedge \text{ONTABLE}(1) \wedge \text{ONTABLE}(3) \wedge \text{ONTABLE}(6) \wedge$
 $\text{CLEAR}(1) \wedge \text{CLEAR}(2) \wedge \text{CLEAR}(4) \wedge \text{ARMEMPTY}$
- Goal State :
 $\text{ON}(3,1) \wedge \text{ON}(6,3) \wedge \text{ON}(5,4) \wedge \text{ON}(2,5) \wedge \text{ONTABLE}(1) \wedge \text{ONTABLE}(4) \wedge \text{CLEAR}(6) \wedge$
 $\text{CLEAR}(2) \wedge \text{ARMEMPTY}$
- Goal Stack Planning :
UNSTACK(4,5), PUTDOWN(4), UNSTACK(5,6), PUTDOWN(5), UNSTACK(2,3),
PUTDOWN(2), PICKUP(3), STACK(3,1), PICKUP(6), STACK(6,3), PICKUP(5),
STACK(5,4), PICKUP(2), STACK(2,5)

TUGAS 05-1B



- Initial State :
 $\text{ON}(B1,Y) \wedge \text{ON}(R2,G) \wedge \text{ON}(B2,R2) \wedge \text{ONTABLE}(R1) \wedge \text{ONTABLE}(Y) \wedge \text{ONTABLE}(G) \wedge \text{CLEAR}(R1) \wedge \text{CLEAR}(B1) \wedge \text{CLEAR}(B2) \wedge \text{ARMEMPTY}$
- Goal State :
 $\text{ON}(R2,R1) \wedge \text{ON}(B2,R2) \wedge \text{ONTABLE}(B1) \wedge \text{ONTABLE}(G) \wedge \text{ONTABLE}(R1) \wedge \text{ONTABLE}(Y) \wedge \text{CLEAR}(B1) \wedge \text{CLEAR}(G) \wedge \text{CLEAR}(B2) \wedge \text{CLEAR}(Y) \wedge \text{ARMEMPTY}$
- Goal Stack Planning :
 $\text{UNSTACK}(B1,Y), \text{PUTDOWN}(B1), \text{UNSTACK}(B2,R2), \text{PUTDOWN}(B2), \text{UNSTACK}(R2,G), \text{STACK}(R2,R1), \text{PICKUP}(B2), \text{STACK}(B2,R2)$

TUGAS 05-1C



- Initial State :
 $\text{ON}(a,b) \wedge \text{ON}(e,d) \wedge \text{ONTABLE}(b) \wedge \text{ONTABLE}(d) \wedge \text{ONTABLE}(c) \wedge \text{CLEAR}(a) \wedge \text{CLEAR}(e) \wedge \text{CLEAR}(c) \wedge \text{ARMEMPTY}$
- Goal State :
 $\text{ON}(e,a) \wedge \text{ON}(a,c) \wedge \text{ON}(c,b) \wedge \text{ON}(b,d) \wedge \text{ONTABLE}(d) \wedge \text{CLEAR}(e) \wedge \text{ARMEMPTY}$
- Goal Stack Planning :
 $\text{UNSTACK}(a,b), \text{PUTDOWN}(a), \text{PICKUP}(b), \text{PUTDOWN}(b), \text{UNSTACK}(e,d), \text{PUTDOWN}(e), \text{PICKUP}(b), \text{STACK}(b,d), \text{PICKUP}(c), \text{STACK}(c,b), \text{PICKUP}(a), \text{STACK}(a,c), \text{PICKUP}(e), \text{STACK}(e,a)$