### **Laporan analisis Goal Stack Planning**

## 1. Goal Stack Planning

Goal Stack Planning adalah Teknik untuk memecahkan suatu tujuan dengan menggunakan stack. Dengan menggunakan stack yang berisi goal/tujuan dan operator yang telah dipilih untuk memenuhi tujuan tersebut. Dan juga bergantung pada basis data yang tergambarkan dalam current state dan satu set operator yang dideskripsikan sebagai daftar precondition, add dan delete atau daftar PAD.

#### 2. Analisis Masalah

Terdapat sebuah perusahaan Transportasi Barang yang beroperasi untuk mengantarkan muatan

Antar sebuah kota. Karena besarnya muatan hanya bisa mengangkut maksimum satu barang dalma sekali pengantaraan.

Perusahaan tersebut kemudian ingin membangun system perencanaan jalur pengantaran setiap kendaraan.Dimana terdapat urutan pengiriman empat barang (B1,B2,B3,B3) yang dilakukan satu mobil (M1) dalam empat kota (k1,k2,k3,k4) tetapi perusahaan tersebut hanya memiliki 1 truk pengangkut.

## 3. Penyelesain Masalah

#### 1. Desain Masalah

5			
6	Daftar State Barang		
7	Nama State	Keterangan	
	onLocation(B,K)	lokasi barang yang ada di variabel B ada di kota K	ġ.
9			
0			
1			9
2			
3			8
4	2	Daftar State Kendaraan	
5	Nama State	Keterangan	
6	onLocationCar(M,K)	Lokasi mobil dengan variabel M yang ada di kota dengan va	irabel K
7	isEmptyCar	Mobil tidak membawa barang	8
	isMove(M,B)	Mobil M membawa barang B untuk dipindahkan	â .

## 2 Desain Operasi

21			aftar PAD		E.
22		Load ( B,M,K)		beolau	( B,M,K)
23		isEmptyCar		isMove(M,B)	
4	PRE	onLocation(B,K)	PRE	LokasMobil(M,K)	iii K
25		onLocationCar(M,K)			in the second
26	ADD	isMove(M,B)	ADD	isEmptyCar	
7			7 700	onLocation(B,K)	Di Di
	DEL	isEmptyCar	DEL	isMove(M,B)	
9		onLocation(B,K)	DEL		E.

## 3. Initial state dan Goal State

	INITIAL STATE	
onLocation(B1,K1)	isEmptyCar	onLocat
onLocation(B2,K2)		onLocati
onLocation(B3,K3)		onLocat
onLocation(B4,K2)		onLocati
onLocationCar(K1)		

	GOALSTATE	
onLocation(B1,K2)		
onLocation(B2,K3)		
onLocation(B3,K1)		
onLocation(B4,K4)	isEmptyCar	

## 4. Tracing

49		TRACING KASUS				
50	11991 00 400000			Î.		
51	STACK		CURRENT STATE			
2	isEmptyCar	onLocation(B1,K1)	onLocation(B4,K2)			
3	Load(B1,M,K1)	onLocation(B2,K2)	onLocationCar(M,K1)	1		
4	isMove(M,B1)	onLocation(B3,K3)	isEmptyCar			
:	onLocationCar(M,K2)			į		
5	unioad(B1,M,K2)		QUEUE LIST	1		
	onLocation(B1,K2)			İ		
	onLocation(B2,K3)			Ĭ		
3	onLocation(B3,K1)					
0	onLocation(B4,K4)			1		
1	onLocationCar(M,K1)			1		
2	onLocation(B1,K1)			l .		
3		200		1		
54				-		
5	STACK		CURRENT STATE			
6	onLocationCar(M,K1)		onLocation(B4,K2)			
7	Travel(M,K1,K2)	onLocation(B2,K2)	onLocationCar(M,K1	0;		
8	onLocationCar(M,K2)	onLocation(B3,K3)				
9	unload(B1,M,K2)	2		1		
0	onLocation(B1,K2)		QUEUE LIST			
1	onLocation(B2,K3)		Load(B1,M,K1)	3		
2	onLocation(B3,K1)	25				
3	onLocation(B4,K4)					
4						
	OTAGY.		OUDDENT OF LET			
	STACK		CURRENT STATE			
	onLocationCar(M,K2)	onLocation(B2,K2)	onLocation(B4,K2)	isMove(M,B1)		
	unload(B1,M,K2)	onLocation(B2,K2)		onLocationCar(M,K2		
	onLocation(B1,K2)	onLocation(B3,K3)				
	onLocation(B2,K3)	(c				
	onLocation(B3,K1)		QUEUE LIST			
	onLocation(B4,K4)		Load(B1,M,K1)	I		
				Į.		

5	STACK		CURRENT STATE	
6	onLocation(B2,K2)		onLocation(B4,K2)	
7		and number (B2 I/2)	Oncocation(B4,K2)	and newton Control MANA
8	isEmptyCar	onLocation(B2,K2)		onLocationCar(M,K2
33	Load(M,K2)	onLocation(B3,K3)	isEmptyCar	onLocation(b1,K2)
90	isMove(M,B2)	D.		!
91	onLocationCar(M,K3)		QUEUE LIST	
32	unload(B2,M,K3)		Load(B1,M,K1)	
93	onLocation(B2,K3)		Travel(M,K1,K2)	
94	onLocation(B3,K1)		unload(B1,M,K2)	i
95	onLocation(B4,K4)		i i	
96		100 mg	ž.	
91	STACK		CURRENT STATE	
98	onLocationCar(M,K2)	isMove(M,B2)	onLocation(B4,K2)	1
99	Travel(M,K2,K3)	(SITIOVE(ITI,DE)	Onecodion(E+,ne)	onLocationCar(M,K2
100	onLocationCar(M,K3)	onLocation(B3,K3)		onLocation(b1,K2)
101	unload(B2,M,K3)	Oneocation(BS,KS)		Oncocation(bi,ix2)
102	onLocation(B2,K3)	100 mg	QUEUE LIST	
103	onLocation(B3,K1)	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	QUEUE LIST	-
104	onLocation(B4,K4)	Load(B1,M,K1)		<u> </u>
105	GILOGAIGI(E+,K+)	Travel(M,K1,K2)		1
106		unload(B1,M,K2)		-
107		Load(B2,M,K2)		
108		93		
6				
	STACK		CURRENT STATE	
	onLocationCar(M,K3)	isMove(M,B2)	onLocation(B4,K2)	
	unload(B2,M,K3)	onLocationCar(M,K3)		
8	onLocation(B2,K3)	onLocation(B3,K3)		onLocation(b1,K2)
	onLocation(B3,K1)	\$2		
	onLocation(B4,K4)		QUEUE LIST	
		Load(B1,M,K1)	Travel(M,K2,K3)	1
		Travel(M,K1,K2)		
		unload(B1,M,K2)		
		Load(B2,M,K2)		

120	STACK	CURRENT ST	ATE
121	onLocationCar(M,K3)	onLocation(B	
122	onLocation(B3,K3)	onLocationCar(M,K3) isEmptyCa	
123	isEmptyCar		The second second
124	Load(B3,M,K3)	onLocation(B3,K3) onLocation(B	2,K3) onLocation(b1,K)
125	isMove(M,B3)	QUEUE LIS:	- 1
126	onLocationCar(M,K1)		274
127	unload(B3,M,K1)	Edd(Bijirijiki)	
128	onLocation(B3,K1)	117530 41053	Koj
129	onLocation(B4,K4)	unload(B1,M,K2)	i i
130	UNECCANON(B4,K4)	Load(B2,M,K2)	
132	and the second second		1
133	STACK	CURRENT STA	VTE .
134	onLocationCar(M,K3)	isMove(M,B3) onLocation(B4	,K2)
135	Travel(M,K3,K1)	onLocationCar(M,K3)	
136	onLocationCar(M,K1)	onLocation(B2	(K3) onLocation(b1,K2
137	unload(B3,M,K1)		
138	onLocation(B3,K1)	QUEUE LIST	
139	onLocation(B4,K4)	Load(B1,M,K1) Travel(M,K2,F	terminal (s)
140		Travel(M,K1,K2) unload(B2,M,	(3)
141		unload(B1,M,K2) Load(B3,M,K	3)
142		Load(B2,M,K2)	
143			1
145	STACK	CURRENT ST.	ATE
147	onLocationCar(M,K1)	isMove(M,B3) onLocation(B	I,K2)
148	unload(B3,M,K1)		
149	onLocation(B3,K1)	onLocationCar(M,K1) onLocation(B	2,K3) onLocation(b1,K2
150	onLocation(B4,K4)		
151		QUEUE LIS*	(i.e. 10)
152		Load(B1,M,K1) Travel(M,K2,	285 ()
153		Travel(M,K1,K2) unload(B2,M	
154		unload(B1,M,K2) Load(B3,M,I	(3)
155		Load(B2,M,K2) Travel(M,K3,	K1)
156			N.
157	STÄCK	CURRENT STA	TE
158	Travel(M,K1,K2)	isEmptyCar onLocation(B4	,K2)
159	onLocationCar(M,K2)	onLocationil(B3,K1)	
160	onLocation(B4,K2)	onLocationCar(M,K1) onLocation(B2	,K3) onLocation(b1,K2
161	isEmptyCar	1	· ·
162	load(B4,M,K2)	QUEUE LIST	T T
163	isMove(M,B4)	Load(B1,M,K1) Travel(M,K2,F	(3) unload(B3,M,K1)
164	onLocationCar(M,K4)	Travel(M,K1,K2) unload(B2,M,I	(3)
165	unload(B4,M,K4)	unload(B1,M,K2) Load(B3,M,K	3)
	onLocation(B4,K4)	Load(B2,M,K2) Travel(M,K3,I	4
166			

0	STACK	2 2	CURRENT STATE	
	travel(M,K1,K2)	isEmptyCar	onLocation(B4,K2)	
2	onLocationCar(M,K2)	onLocationil(B3,K1)		
3	onLocation(B4,K2)	onLocationCar(M,K1)	onLocation(B2,K3)	onLocation(b1,K2)
	isEmptyCar			
	Load(B4,M,K2)		QUEUE LIST	i i
	isMove(M,B4)	Load(B1,M,K1)	Travel(M,K2,K3)	unload(B3,M,K1)
	onLocationCar(M,K4)	Travel(M,K1,K2)	unload(B2,M,K3)	
7	unload(B4,M,K4)	unload(B1,M,K2)	Load(B3,M,K3)	
8	onLocation(B4,K4)	Load(B2,M,K2)	Travel(M,K3,K1)	
9	and the second of the second of	200(02), (10)	Tracei(i-ipropri)	-
0	p			1 
81	07100	1	CUPPENT CTATE	
82	STACK onLocation(B4,K2)		CURRENT STATE	
83		isEmptyCar onLocationil(B3,K1)	onLocation(B4,K2)	
84	isEmptyCar	OnLocationii(B3,K1)		onLocationCar(M,K2)
85	Load(B4,M,K2)		onLocation(B2,K3)	onLocation(b1,K2)
86	isMove(M,B4)			
37	onLocationCar(M,K4)		QUEUE LIST	
88	unload(B4,M,K4)	Load(B1,M,K1)	Travel(M,K2,K3)	unload(B3,M,K1)
89	onLocation(B4,K4)	Travel(M,K1,K2)	unload(B2,M,K3)	Travel(M,K1,K2)
90		unload(B1,M,K2)	Load(B3,M,K3)	
91		Load(B2,M,K2)	Travel(M,K3,K1)	
13		4 4		
4		-		1
5	STACK	\$ 12.	CURRENT STATE	
6	onLocationCar(M,K2)			
	Travel(M,K2,K4)	onLocationil(B3,K1)		onLocationCar(M,K2
17	onLocationCar(M,K4)	isMove(M,B4)	onLocation(B2,K3)	onLocation(b1,K2)
	unload(B4,M,K4)	3,33,50,00,00,00		1
9	onLocation(B4,K4)	Page 1	QUEUE LIST	1
00	Tobacca a formació en la constitución	Load(B1,M,K1)	Travel(M,K2,K3)	unload(B3,M,K1)
01			unload(B2,M,K3)	Travel(M,K1,K2)
02		Travel(M,K1,K2)		
03		unload(B1,M,K2)	Load(B3,M,K3)	unload(B3,M,K1)
04		Load(B2,M,K2)	Travel(M,K3,K1)	1
15	<del></del>			1
206	0745%		CURRENT OTATE	1
207	STACK onLocationCar(M,K4)	V. 19 V.	CURRENT STATE	1
208	unload(B4,M,K4)	onLocationCar(M,K4)		
209		onLocationil(B3,K1)	2/ 2/25/26/00	1
210	onLocation(B4,K4)	isMove(M,B4)	onLocation(B2,K3)	onLocation(b1,K2)
211		8		
212			QUEUE LIST	1
213		Load(B1,M,K1)	Travel(M,K2,K3)	unload(B3,M,K1)
214		Travel(M,K1,K2)	unload(B2,M,K3)	Travel(M,K1,K2)
888		unload(B1,M,K2)	Load(B3,M,K3)	unload(B3,M,K1)
215		amoda(Bijirijika)		4

19				
20	STACK	Ž Ž	CURRENT STATE	
22		onLocationCar(M,K4) onLocationil(B3,K1) isMove(M,B4)	isEmptyCar onLocation(B4,K4) onLocation(B2,K3)	onLocation(b1,K2)
23		Briote(in,br)	onesodion(Delivo)	one obdition(printe)
25		Ü	QUEUE LIST	
26		Load(B1,M,K1)	unload(B2,M,K3)	unload(B3,M,K1)
27		Travel(M,K1,K2)	Load(B3,M,K3)	Travel(M,K2,K4)
28		unload(B1,M,K2)	Travel(M,K3,K1)	unload(B4,M,K4)
29		Load(B2,M,K2)	unload(B3,M,K1)	
30		Travel(M,K2,K3)	Travel(M,K1,K2)	

# 5. Kesimpulan

Dari proses tracing diatas solusi yang didapat adalah sebagai berikut :

Load (B1,M,K1)

Travel(M,K1,K2)

unload(B1,M,K2)

Travel(M,K2,K3)

unload(B2,M,K3)

Load(B3,M,K3)

Travel(M,K3,K1)

Unload(B3,M,K1)

Travel(M,K1,K2)

Unload(B3,M,K1)

Travel(M,K2,K4)

Unload(B4,M,K4)