	Roll - 39 CS-SEDA								PAGE I	10.	
#		09	7177	ומחז	1 1 1	C					
#	US IUTORIAL - 6 Banker's Algorithm										
+	- diam's			DC			,				
#	e deligious desse										
1	# Consider the following enapshot of a system:										
								A me			
	Process	n Al	location	n	Max			Available			
		A A	B	DG.	A	B	Com	A	B	C	
	<u> </u>	9		nio							
	Po	1	1	2	4	3	3			0/11	
	P1	2	1	1	13003	2					
	apetand or		0	01	9,	- X - X	2-11	90	7 -		
	Pa	0	2	0	1 1	5	2	11101	12		
	P4 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1										
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										
	a) Calculate the content of the need matrix										
	b) Is the system in safe mode										
	c) Determin							our	*	of ec	ich fi
	110										
			10	£,	1) =						1
#	(a) Need = max- allocation										
	and the second s										
	Process Need										
		in all	A B C Share & book some								
	Po	4		21	1					0.7	
	P ₁										
	P3			3	The second second second		bass				
	19	Charles III	E. H.	0		DAY Y	1 1 1 1 2 1	1 3	3 (3 + 7		

(b) No. of processes = 5

No. of resources = 3

worsk = available

rince need \twosk = 2,1,0

TI) for P1,

need = 1,10 f iooEk = 2, 1, 0

Since need < work, P1 must be kept in safe sequence.

a symplet fact as a fact to

the following production of the selection of the

new allocation = allocation + need = (2,1,2) + (1,1,0)

= (2, 1, 0) - (1, 1, 0) = (1, 1, 0)

meed = (5,0,1) & work = 4,2,2

since need > 1000k, P2 must wait.

D) for P3, need = 7,33 & work = 4,2,2 Since need > work, P3 must wait. V) for P4.

need = 0,0,0 - f. work = 4,2,2 since heed a coock , Pu must be kept in safe million 2 1702

seguence.

available = available - need = (4,2,2) - (0,0,0)

= (4,2,2) 0 P) =

available for next process after execution of the is new allocation + available

= (1,1,2) + (4,2,2) 80) =

= (5,3,4) Available for next parces after B executions

glantina + andorolla was

11) for Po, (6.00) = need = 3,2,1 & work = 5,3,4 600 since need < work, Po, must be kept in

safe sequence.

new allocation = allocation + need

(1,1,2) + (3,2,1)

= (4,3,3) . and upper 110

available = available - need

= (5,3,4) = (4,3,3)

The open of (1,0,11) = rete date.

Available for next process after Po execution is, = (4,3,3) + (1,0,1)

(5,3,4)

need = 5,0,1 & work = 5,3,4

since need < work, P, must be kept in

soft sequence.

new allocation = allocation + need = (4, 0, 1) + (5, 0, 1) = (9,0,2)

available = available - need = (5,3,4) = (5,0,1) = (0,3,3)

Available for next process after P2 execution,

- new allocation + available

= (9,0,2) + (0,3,3)

= (9,3,5)

need = 7,3,3 and work = 9,3,5

since need < coord p3 must be kept in

sofe sequence.

: C) Total resources = allocated resources + available = (8,5,7) + (2,10) = (10,6,7)