# Apply region growing on the following image.

with initial pt. as (2,12) & threshold as 2.

USE 4- connectivity.

	6	. (	2	3
0	٥	1	2	0
١	2	5	6	1
2	1	9	7	3
3	0	2)	5	1

> T= 2 & Following 4 connectivity from seed pt.

	6°	
4	[7]a	3
	5ª	
	4	4 耳

|7-6|=1 => Traceable |7-5|=1 => Traceable.

17-4) = 3 => Non Traceable

17-31=6=> -11-

step 2 => considering next seed pt- as 68 from 4 connectivity results)

Ī		12		7
r	50	1619	1	]
		70		
· so		5 4		

	5	60		
		70		
1	2	[5]	1	

## step 3 - Considering next seed pt- as 5 (pt. generated from previous result

			T	
2	15	6		
	4	79		
		50		I

4 is not truceable as it is already covered by 4 connection of first seed pt.

## step 4 > Final Answer

0	O	9	Q
0	1	)	0
0	0	)	0
0	0	1	0
	0	0 1	0 1 )

\* Apply region growing on the following with seed pt as 6 & threshold as 3.

					- }				
	5	6	6	ヲ	6	7	6	6	
	6	7	6	7	5	5	4	7	
	6	6	4	4	3	2	5	6	
	5	4	5	4	2	3	4	6	
	0	3	2	3	3	2	4	7	
,	0	0	0	0	2	2	5	6	
	1	1	٥	1	0	3	4	4	T
1	1	0	) )	0	2	3	5	4.	

It connectivity is not given, assume 8 connectivity.

T=3

	50	6	106	70	6	9 7	29	06	6A
	Ea	7	06.	70	5	S	-a	40	70
*	60	6	4	4	3	2	-	50	6 9
	5	4	5	4	2	3		40	6.0
	0	3	2	3	3	2		40	70
ľ	0	O	0	0	2	2	<i> </i> :	50	60
İ	1	1	0	1	0	3		4 4	40
	1	0	1	0	2/3	3 /	5	- }	4
			/						]

Final Ams -

						-	
4	11	11	•	1	1	17	1
+++		,	1	(	1	1)	1
1			CS	U	0	1	1
)		)		0	0	t	1
	]	1	0	0	0	1	1
0	0	0	10	+	10	1	1
0	0	0	10	10	+	1	1
10	0	10	0	10	10	4	1
1	10	10	10	10	10	b	101
10							-

3) Apply negton growing. Assume seed value = 6
with 8 connectivity & threshold = 3. How many
segments are identified?

2 2 | 7 | 2 | 1

•	2	2	7	2	)	
		F	6	6	2	
-	.7	6	6	5	7	l de
1	7	2	5	4	2	
7	$\frac{}{1}$	2	5	)	3	

15	2	Ta	15	1
1	10	7	a	
1a	7	.16]	6	-a
T.	6	6	), a	7
2	4	5	4	2
1	2	5	1	1

T = 3seed value = 6,

Garage .

-

\* Apply region splitting & merging on the 3 foll image with threshold = 3.

+		1							
1	5	6	6	6	7	7	- 6		6
	6	7	6	チ	5	5	4		7
,	6	6	4	4	3	2	5	-	6
	5	4	5	4	2	3	4	6	,
	0	3	2	3	3	2	4	7	L
	0	0	٥,	0	2	2	5	$\mid \epsilon \mid$	ŝ
	1	, ,	0	1	0	3	, 4	4	,
L	1	0	1	0	2	3	5	4	

Cond<sup>n</sup>=> Abs diff bet<sup>n</sup> Min val & max value  $\leq 3$ ,

min val = 0, max val = 7

17-01=773.

into 4. Split regions min= 2 6. 7 max=7 6 7 7 6 7 2 SPlit 6 min=4 2 B3 max = 7 4 5 17-41=3 Nosplitting 7 (02) 2 3 3 2 0 min=0 2 5 6 0 0 0 0 max = 7 17-01=773 (Dy) 1 0 min=0 0 23 max = 3 split 13-01-3 0 0 No splitting

check adjacent regions, if they are within threshold, merge i) Consider A Q B1 regions. max 7, min=4 17-4)=3.

merge, into ABI Consider ABI 2BZ max = 7 min = 4 17-41 = 3Merge into ABIBZ

consider ABIBZ & BY max =7, min =4, 17-41=3 merge into ABIBZB4.

Consider ABIBZB42 DZ. max 27 min = 4, 17-41=3. merge into ABIBZB4D2

5) Consider ABIBZB4DZ & DY max=+, Min=4,

Final

	-					-			
		m	ery	2	int	O F	131B2	2 80	D2D4 more nergin possib
5		· T			V		1	No	more
١	5/6	6	6	7	7	16	6	γ	nergin
	67	6	7	5	5	4	7		possib
	168	4	4	5	2	5	6	,	R
	54	5	4	/2	3	4	6,		
	03	2	3.	3	2	4	7		AB
	00	0	1	2	3	5/	6	_	BI BZB
ı	1/1	0	1/	8	3	4	4	-	
	1/0/	1/0		2	3	5	4	-	
							The same of the sa		

No more merging possible.