

# Report CS3205 LAB 5

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CS20B040

So we are going to take two different inputs and print the respective Routing tables for the Node Identifier at different time instances.

## INPUT 1:

It contains 8 nodes and 20 links.

Format : Num of routers, Number of links

(i, j, MinCij, MaxCij) for all the subsequent rows

```
8 20
0 1 10 20
1 2 10 20
2 4 10 20
4 5 10 20
5 6 10 20
6 7 10 20
7 0 10 20
0 3 10 20
1 3 10 20
2 3 10 20
3 4 10 20
3 5 10 20
3 6 10 20
3 7 10 20
4 6 10 20
```

5 7 10 20

6 0 10 20

7 1 10 20

0 2 10 20

1 4 10 20

## Routing Tables :

Routing Table for node number 0 at time 20

Destination	Path	Cost
1	[0, 1]	17
2	[0, 2]	11
3	[0, 3]	17
4	[0, 2, 4]	24
5	[0, 6, 5]	22
6	[0, 6]	11
7	[0, 7]	15

Routing Table for node number 0 at time 40

Destination	Path	Cost
1	[0, 1]	17
2	[0, 2]	11
3	[0, 3]	17
4	[0, 2, 4]	24
5	[0, 6, 5]	22
6	[0, 6]	11
7	[0, 7]	15

Routing Table for node number 0 at time 60

Destination	Path	Cost
1	[0, 1]	17
2	[0, 2]	11
3	[0, 3]	17
4	[0, 2, 4]	24
5	[0, 6, 5]	22
6	[0, 6]	11
7	[0, 7]	15

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Routing Table for node number 1 at time 20

Destination	Path	Cost
0	[1, 0]	15
2	[1, 2]	19
3	[1, 3]	10
4	[1, 4]	12
5	[1, 3, 5]	22
6	[1, 3, 6]	20
7	[1, 7]	20

Routing Table for node number 1 at time 40

Destination	Path	Cost
0	[1, 0]	15
2	[1, 2]	19
3	[1, 3]	10
4	[1, 4]	12

5	[1, 3, 5]	20
6	[1, 3, 6]	20
7	[1, 7]	20

Routing Table for node number 1 at time 60

Destination	Path	Cost
0	[1, 0]	15
2	[1, 2]	19
3	[1, 3]	10
4	[1, 4]	12
5	[1, 3, 5]	20
6	[1, 3, 6]	20
7	[1, 7]	20

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Routing Table for node number 2 at time 20

Destination	Path	Cost
0	[2, 0]	18
1	[2, 1]	10
3	[2, 3]	10
4	[2, 4]	16
5	[2, 3, 5]	22
6	[2, 3, 6]	20
7	[2, 1, 7]	25

Routing Table for node number 2 at time 40

Destination	Path	Cost
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0	[2, 0]	18
1	[2, 1]	10
3	[2, 3]	10
4	[2, 4]	16
5	[2, 3, 5]	20
6	[2, 3, 6]	20
7	[2, 1, 7]	25

Routing Table for node number 2 at time 60

Destination	Path	Cost
0	[2, 0]	18
1	[2, 1]	10
3	[2, 3]	10
4	[2, 4]	16
5	[2, 3, 5]	20
6	[2, 3, 6]	20
7	[2, 1, 7]	25

-----

Routing Table for node number 3 at time 20

Destination	Path	Cost
0	[3, 0]	19
1	[3, 1]	11
2	[3, 2]	15
4	[3, 4]	11
5	[3, 5]	10
6	[3, 6]	12
7	[3, 7]	20

Routing Table for node number 3 at time 40

Destination	Path	Cost
0	[3, 0]	19
1	[3, 1]	11
2	[3, 2]	15
4	[3, 4]	11
5	[3, 5]	10
6	[3, 6]	12
7	[3, 7]	20

Routing Table for node number 3 at time 60

Destination	Path	Cost
0	[3, 0]	19
1	[3, 1]	11
2	[3, 2]	15
4	[3, 4]	11
5	[3, 5]	10
6	[3, 6]	12
7	[3, 7]	20

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Routing Table for node number 4 at time 20

Destination	Path	Cost
0	[4, 2, 0]	25
1	[4, 1]	16
2	[4, 2]	11

3	[4, 3]	17
5	[4, 5]	18
6	[4, 6]	17
7	[4, 5, 7]	30

Routing Table for node number 4 at time 40

Destination	Path	Cost
0	[4, 2, 0]	25
1	[4, 1]	16
2	[4, 2]	11
3	[4, 3]	17
5	[4, 5]	18
6	[4, 6]	17
7	[4, 5, 7]	30

Routing Table for node number 4 at time 60

Destination	Path	Cost
0	[4, 2, 0]	25
1	[4, 1]	16
2	[4, 2]	11
3	[4, 3]	17
5	[4, 5]	18
6	[4, 6]	17
7	[4, 5, 7]	30

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Routing Table for node number 5 at time 20

Destination	Path	Cost
0	[5, 6, 0]	26
1	[5, 4, 1]	26
2	[5, 3, 2]	30
3	[5, 3]	16
4	[5, 4]	16
6	[5, 6]	15
7	[5, 7]	18

Routing Table for node number 5 at time 40

Destination	Path	Cost
0	[5, 6, 0]	26
1	[5, 4, 1]	26
2	[5, 3, 2]	30
3	[5, 3]	16
4	[5, 4]	16
6	[5, 6]	15
7	[5, 7]	18

Routing Table for node number 5 at time 60

Destination	Path	Cost
0	[5, 6, 0]	26
1	[5, 4, 1]	26
2	[5, 3, 2]	30
3	[5, 3]	16
4	[5, 4]	16
6	[5, 6]	15
7	[5, 7]	18



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Routing Table for node number 6 at time 20

Destination	Path	Cost
0	[6, 0]	12
1	[6, 0, 1]	23
2	[6, 3, 2]	26
3	[6, 3]	12
4	[6, 4]	15
5	[6, 5]	16
7	[6, 7]	19

Routing Table for node number 6 at time 40

Destination	Path	Cost
0	[6, 0]	12
1	[6, 0, 1]	23
2	[6, 3, 2]	26
3	[6, 3]	12
4	[6, 4]	15
5	[6, 5]	16
7	[6, 7]	19

Routing Table for node number 6 at time 60

Destination	Path	Cost
0	[6, 0]	12
1	[6, 0, 1]	23
2	[6, 3, 2]	26
3	[6, 3]	12

4	[6, 4]	15
5	[6, 5]	16
7	[6, 7]	19

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Routing Table for node number 7 at time 20

Destination	Path	Cost
0	[7, 0]	20
1	[7, 1]	17
2	[7, 3, 2]	25
3	[7, 3]	11
4	[7, 3, 4]	28
5	[7, 5]	12
6	[7, 6]	18

Routing Table for node number 7 at time 40

Destination	Path	Cost
0	[7, 0]	20
1	[7, 1]	17
2	[7, 3, 2]	25
3	[7, 3]	11
4	[7, 3, 4]	22
5	[7, 5]	12
6	[7, 6]	18

Routing Table for node number 7 at time 60

Destination	Path	Cost
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0	[7, 0]	20
1	[7, 1]	17
2	[7, 3, 2]	25
3	[7, 3]	11
4	[7, 3, 4]	22
5	[7, 5]	12
6	[7, 6]	18

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Similarly we have another input which also has 8 nodes and 20 links.

## INPUT 2 :

8 20  
 0 1 3 5  
 1 2 4 6  
 2 4 5 7  
 4 5 3 6  
 5 6 4 8  
 6 7 5 7  
 7 0 2 5  
 0 3 4 9  
 1 3 5 6  
 2 3 1 9  
 3 4 4 6  
 3 5 6 9  
 3 6 1 8  
 3 7 4 8  
 4 6 2 6

5 7 3 4  
6 0 2 4  
7 1 3 8  
0 2 4 5  
1 4 4 8

## Routing Tables :

Routing Table for node number 0 at time 20

Destination	Path	Cost
1	[0, 1]	3
2	[0, 2]	5
3	[0, 3]	4
4	[0, 6, 4]	6
5	[0, 7, 5]	5
6	[0, 6]	2
7	[0, 7]	2

Routing Table for node number 0 at time 40

Destination	Path	Cost
1	[0, 1]	3
2	[0, 2]	5
3	[0, 3]	4
4	[0, 6, 4]	6
5	[0, 7, 5]	5
6	[0, 6]	2
7	[0, 7]	2

Routing Table for node number 0 at time 60

Destination	Path	Cost
1	[0, 1]	3
2	[0, 2]	5
3	[0, 3]	4
4	[0, 6, 4]	6
5	[0, 7, 5]	5
6	[0, 6]	2
7	[0, 7]	2

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Routing Table for node number 1 at time 20

Destination	Path	Cost
0	[1, 0]	3
2	[1, 2]	4
3	[1, 3]	6
4	[1, 4]	8
5	[1, 7, 5]	6
6	[1, 0, 6]	6
7	[1, 7]	3

Routing Table for node number 1 at time 40

Destination	Path	Cost
0	[1, 0]	3
2	[1, 2]	4
3	[1, 3]	6
4	[1, 4]	8

5	[1, 7, 5]	6
6	[1, 0, 6]	6
7	[1, 7]	3

Routing Table for node number 1 at time 60

Destination	Path	Cost
0	[1, 0]	3
2	[1, 2]	4
3	[1, 3]	6
4	[1, 4]	8
5	[1, 7, 5]	6
6	[1, 0, 6]	6
7	[1, 7]	3

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Routing Table for node number 2 at time 20

Destination	Path	Cost
0	[2, 0]	5
1	[2, 1]	5
3	[2, 3]	8
4	[2, 4]	5
5	[2, 4, 5]	10
6	[2, 0, 6]	8
7	[2, 0, 7]	8

Routing Table for node number 2 at time 40

Destination	Path	Cost
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0	[2, 0]	5
1	[2, 1]	5
3	[2, 3]	8
4	[2, 4]	5
5	[2, 4, 5]	10
6	[2, 0, 6]	8
7	[2, 0, 7]	8

Routing Table for node number 2 at time 60

Destination	Path	Cost
0	[2, 0]	5
1	[2, 1]	5
3	[2, 3]	8
4	[2, 4]	5
5	[2, 4, 5]	10
6	[2, 0, 6]	8
7	[2, 0, 7]	8

-----

Routing Table for node number 3 at time 20

Destination	Path	Cost
0	[3, 1, 0]	8
1	[3, 1]	5
2	[3, 2]	7
4	[3, 4]	5
5	[3, 5]	8
6	[3, 6]	5
7	[3, 7]	8

Routing Table for node number 3 at time 40

Destination	Path	Cost
0	[3, 1, 0]	8
1	[3, 1]	5
2	[3, 2]	7
4	[3, 4]	5
5	[3, 5]	8
6	[3, 6]	5
7	[3, 7]	8

Routing Table for node number 3 at time 60

Destination	Path	Cost
0	[3, 1, 0]	8
1	[3, 1]	5
2	[3, 2]	7
4	[3, 4]	5
5	[3, 5]	8
6	[3, 6]	5
7	[3, 7]	8

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Routing Table for node number 4 at time 20

Destination	Path	Cost
0	[4, 6, 0]	6
1	[4, 1]	8
2	[4, 3, 2]	5



3	[4, 3]	4
5	[4, 5]	6
6	[4, 6]	3
7	[4, 6, 7]	8

Routing Table for node number 4 at time 40

Destination	Path	Cost
0	[4, 6, 0]	6
1	[4, 1]	8
2	[4, 3, 2]	5
3	[4, 3]	4
5	[4, 5]	6
6	[4, 6]	3
7	[4, 6, 7]	8

Routing Table for node number 4 at time 60

Destination	Path	Cost
0	[4, 6, 0]	6
1	[4, 1]	8
2	[4, 3, 2]	5
3	[4, 3]	4
5	[4, 5]	6
6	[4, 6]	3
7	[4, 6, 7]	8

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Routing Table for node number 5 at time 20

Destination	Path	Cost
0	[5, 7, 0]	6
1	[5, 4, 1]	8
2	[5, 3, 2]	8
3	[5, 3]	7
4	[5, 4]	4
6	[5, 6]	5
7	[5, 7]	3

Routing Table for node number 5 at time 40

Destination	Path	Cost
0	[5, 7, 0]	6
1	[5, 4, 1]	8
2	[5, 3, 2]	8
3	[5, 3]	7
4	[5, 4]	4
6	[5, 6]	5
7	[5, 7]	3

Routing Table for node number 5 at time 60

Destination	Path	Cost
0	[5, 7, 0]	6
1	[5, 4, 1]	8
2	[5, 3, 2]	8
3	[5, 3]	7
4	[5, 4]	4
6	[5, 6]	5
7	[5, 7]	3

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Routing Table for node number 6 at time 20

Destination	Path	Cost
0	[6, 0]	3
1	[6, 0, 1]	7
2	[6, 3, 2]	6
3	[6, 3]	5
4	[6, 4]	3
5	[6, 5]	6
7	[6, 7]	6

Routing Table for node number 6 at time 40

Destination	Path	Cost
0	[6, 0]	3
1	[6, 0, 1]	7
2	[6, 3, 2]	6
3	[6, 3]	5
4	[6, 4]	3
5	[6, 5]	6
7	[6, 7]	6

Routing Table for node number 6 at time 60

Destination	Path	Cost
0	[6, 0]	3
1	[6, 0, 1]	7
2	[6, 3, 2]	6
3	[6, 3]	5
4	[6, 4]	3
5	[6, 5]	6

7            [6, 7]            6

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Routing Table for node number 7 at time 20

Destination	Path	Cost
0	[7, 0]	4
1	[7, 1]	6
2	[7, 3, 2]	6
3	[7, 3]	5
4	[7, 5, 4]	8
5	[7, 5]	4
6	[7, 6]	7

Routing Table for node number 7 at time 40

Destination	Path	Cost
0	[7, 0]	4
1	[7, 1]	6
2	[7, 3, 2]	6
3	[7, 3]	5
4	[7, 5, 4]	8
5	[7, 5]	4
6	[7, 6]	7

Routing Table for node number 7 at time 60

Destination	Path	Cost
0	[7, 0]	4
1	[7, 1]	6

2	[7, 3, 2]	6
3	[7, 3]	5
4	[7, 5, 4]	8
5	[7, 5]	4
6	[7, 6]	7

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