CS3205 : COMPUTER NETWORKS
LAB - 5

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Test Case 1:

11 20
1 2 5 11
1 11 9 10
2 4 2 20
2 5 3 9
2 8 6 12
2 9 10 15
3 8 1 2
3 10 1 1
4 5 7 9
4 6 15 20
4 7 2 13
4 8 17 18
5 7 4 5
6 7 9 14
6 9 4 17
6 10 3 9
7 9 11 16
8 10 16 18
9 10 12 13
10 11 2 2

Screenshot 1 — output-1.txt:

```
17   4  1-2-4  23
18   5  1-2-5  19
19   6  1-11-10-6  17
20   7  1-2-5-7  23
21   8  1-11-10-3-8  14
22   9  1-2-9  20
23   10  1-11-10  12
24   11  1-11  10
25   Routing Table for Node No. 1 at Time 6.0
26   Destination|        Path        | Cost
27   2  1-2  6
28   3  1-11-10-3  12
29   4  1-2-4  15
30   5  1-2-5  13
31   6  1-11-10-6  19
32   7  1-2-5-7  17
33   8  1-11-10-3-8  13
34   9  1-2-9  20
35   10  1-11-10  11
36   11  1-11  9
37   Routing Table for Node No. 1 at Time 9.0
38   Destination|        Path        | Cost
39   2  1-2  10
40   3  1-11-10-3  12
41   4  1-2-5-7-4  22
42   5  1-2-5  16
43   6  1-11-10-6  17
44   7  1-2-5-7  20
45   8  1-11-10-3-8  14
46   9  1-2-9  20
47   10  1-11-10  11
48   11  1-11  9
49   Routing Table for Node No. 1 at Time 12.0
50   Destination|        Path        | Cost
51   2  1-2  9
52   3  1-11-10-3  13
53   4  1-2-4  19
```

Ln 7, Col 26   Spaces: 4   UTF-8   LF   Plain Text

Screenshot 2 — output-2.txt:

```
1    Routing Table for Node No. 2 at Time 0
2    Destination|        Path        | Cost
3    1   No path    No Path
4    3   No path    No Path
5    4   No path    No Path
6    5   No path    No Path
7    6   No path    No Path
8    7   No path    No Path
9    8   No path    No Path
10   9   No path    No Path
11   10   No path    No Path
12   11   No path    No Path
13   Routing Table for Node No. 2 at Time 3.0
14   Destination|        Path        | Cost
15   1  2-1  5
16   3  2-8-3  7
17   4  2-4  3
18   5  2-5  4
19   6  2-8-3-10-6  13
20   7  2-5-7  8
21   8  2-8  6
22   9  2-9  10
23   10  2-8-3-10  8
24   11  2-8-3-10-11  10
25   Routing Table for Node No. 2 at Time 6.0
26   Destination|        Path        | Cost
27   1  2-1  11
28   3  2-8-3  9
29   4  2-4  8
30   5  2-5  4
31   6  2-8-3-10-6  18
32   7  2-5-7  8
33   8  2-8  8
34   9  2-9  14
35   10  2-8-3-10  10
36   11  2-8-3-10-11  12
37   Routing Table for Node No. 2 at Time 9.0
```

Ln 1, Col 1   Spaces: 4   UTF-8   LF   Plain Text

EXPLORER ··· OSPF.py output-3.txt × input1.txt input2.txt input.txt run_routers.py UDPEchoClient.py

∨ LAB5
output-3.txt

```
14    Destination|        Path        | Cost
15     1  3-10-11-1   13
16     2  3-8-2   9
17     4  3-8-4   19
18     5  3-8-2-5   18
19     6  3-10-6   6
20     7  3-10-6-7   20
21     8  3-8   2
22     9  3-10-9   14
23    10  3-10   1
24    11  3-10-11   3
25    Routing Table for Node No. 3 at Time 6.0
26    Destination|        Path        | Cost
27     1  3-10-11-1   12
28     2  3-8-2   14
29     4  3-8-4   20
30     5  3-8-2-5   21
31     6  3-10-6   9
32     7  3-10-6-7   22
33     8  3-8   2
34     9  3-10-9   13
35    10  3-10   1
36    11  3-10-11   3
37    Routing Table for Node No. 3 at Time 9.0
38    Destination|        Path        | Cost
39     1  3-10-11-1   13
40     2  3-8-2   11
41     4  3-8-4   19
42     5  3-8-2-5   17
43     6  3-10-6   7
44     7  3-10-6-7   18
45     8  3-8   1
46     9  3-10-9   13
47    10  3-10   1
48    11  3-10-11   3
49    Routing Table for Node No. 3 at Time 12.0
50    Destination|        Path        | Cost
51     1  3-10-11-1   12
```

Run Testcases ⊗ 0 ⚠ 0 Live Share   Ln 121, Col 1   Spaces: 4   UTF-8   LF   Plain Text

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EXPLORER ··· OSPF.py output-4.txt × input1.txt input2.txt input.txt run_routers.py UDPEchoClient.py

∨ LAB5
output-4.txt

```
14    Destination|        Path        | Cost
15     1  4-2-1   25
16     2  4-2   16
17     3  4-8-3   18
18     5  4-5   8
19     6  4-6   18
20     7  4-7   9
21     8  4-8   17
22     9  4-7-9   25
23    10  4-8-3-10   19
24    11  4-8-3-10-11   21
25    Routing Table for Node No. 4 at Time 6.0
26    Destination|        Path        | Cost
27     1  4-5-2-1   22
28     2  4-5-2   13
29     3  4-8-3   19
30     5  4-5   9
31     6  4-7-6   18
32     7  4-7   4
33     8  4-8   18
34     9  4-7-9   17
35    10  4-8-3-10   20
36    11  4-8-3-10-11   22
37    Routing Table for Node No. 4 at Time 9.0
38    Destination|        Path        | Cost
39     1  4-5-2-1   22
40     2  4-5-2   14
41     3  4-8-3   19
42     5  4-5   8
43     6  4-6   19
44     7  4-7   10
45     8  4-8   17
46     9  4-7-9   24
47    10  4-8-3-10   20
48    11  4-8-3-10-11   22
49    Routing Table for Node No. 4 at Time 12.0
50    Destination|        Path        | Cost
51     1  4-2-1   18
```

Run Testcases ⊗ 0 ⚠ 0 Live Share   Ln 1, Col 1   Spaces: 4   UTF-8   LF   Plain Text

TEST CASE 2:

10 15

1 3 8 10

1 4 7 20

2 4 11 12

2 5 8 8

2 6 10 20

3 5 3 50

3 7 4 10

4 6 3 3

4 7 3 10

5 10 3 8

6 7 4 4

6 8 8 10

7 8 2 4

7 9 4 9

9 10 9 15

Screenshot 1 — output-1.txt:

```
10    9    No path     No Path
11   10    No path     No Path
12   Routing Table for Node No. 1 at Time 3.0
13   Destination|       | Path        | Cost
14    2   1-4-2   19
15    3   1-3   8
16    4   1-4   7
17    5   1-4-2-5   27
18    6   1-4-6   10
19    7   1-4-7   10
20    8   1-4-7-8   14
21    9   1-4-7-9   16
22   10   1-4-7-9-10   26
23   Routing Table for Node No. 1 at Time 6.0
24   Destination|       Path        | Cost
25    2   1-4-2   28
26    3   1-3   8
27    4   1-4   16
28    5   1-4-2-5   36
29    6   1-3-7-6   19
30    7   1-3-7   15
31    8   1-3-7-8   19
32    9   1-3-7-9   21
33   10   1-3-7-9-10   34
34   Routing Table for Node No. 1 at Time 9.0
35   Destination|       Path        | Cost
36    2   1-4-2   19
37    3   1-3   8
38    4   1-4   7
39    5   1-3-5   23
40    6   1-4-6   10
41    7   1-4-7   10
42    8   1-4-7-8   14
43    9   1-4-7-9   15
44   10   1-4-7-9-10   24
45   Routing Table for Node No. 1 at Time 12.0
46   Destination|       Path        | Cost
```

Screenshot 2 — output-2.txt:

```
 9    8    No path     No Path
10    9    No path     No Path
11   10    No path     No Path
12   Routing Table for Node No. 2 at Time 3.0
13   Destination|       Path        | Cost
14    1   2-4-1   30
15    3   2-4-7-3   24
16    4   2-4   12
17    5   2-5   8
18    6   2-4-6   15
19    7   2-4-7   15
20    8   2-4-7-8   19
21    9   2-5-10-9   20
22   10   2-5-10   11
23   Routing Table for Node No. 2 at Time 6.0
24   Destination|       Path        | Cost
25    1   2-4-1   23
26    3   2-5-3   23
27    4   2-4   11
28    5   2-5   8
29    6   2-4-6   14
30    7   2-4-7   15
31    8   2-4-7-8   19
32    9   2-4-7-9   21
33   10   2-5-10   16
34   Routing Table for Node No. 2 at Time 9.0
35   Destination|       Path        | Cost
36    1   2-4-1   18
37    3   2-4-7-3   21
38    4   2-4   11
39    5   2-5   8
40    6   2-4-6   14
41    7   2-4-7   14
42    8   2-4-7-8   18
43    9   2-4-7-9   19
44   10   2-5-10   16
45   Routing Table for Node No. 2 at Time 12.0
```

```
 9    No path      No Path
10    9   No path      No Path
11    10   No path      No Path
12    Routing Table for Node No. 3 at Time 3.0
13    Destination|           Path        | Cost
14    1  3-1  8
15    2  3-7-6-2  26
16    4  3-7-4  15
17    5  3-7-9-10-5  29
18    6  3-7-6  12
19    7  3-7  8
20    8  3-7-8  12
21    9  3-7-9  14
22    10  3-7-9-10  24
23    Routing Table for Node No. 3 at Time 6.0
24    Destination|           Path        | Cost
25    1  3-1  10
26    2  3-7-6-2  22
27    4  3-7-6-4  13
28    5  3-7-6-2-5  30
29    6  3-7-6  10
30    7  3-7  6
31    8  3-7-8  10
32    9  3-7-9  12
33    10  3-7-9-10  25
34    Routing Table for Node No. 3 at Time 9.0
35    Destination|           Path        | Cost
36    1  3-1  9
37    2  3-5-2  13
38    4  3-7-4  12
39    5  3-5  5
40    6  3-7-6  9
41    7  3-7  5
42    8  3-7-8  9
43    9  3-7-9  10
44    10  3-5-10  13
45    Routing Table for Node No. 3 at Time 12.0
46    Destination|           Path        | Cost
```

Random costs will get set to edges using HELLO and HELLOREPLY and then LSA packets send adjacent weights of every node to every node. After a LSA packet reaches every node it gets dropped due to the restrictions on sequence numbers