

Enter the number of nodes : 7

Enter the cost matrix :

```
0 2 0 3 0 0 0
2 0 5 0 4 0 0
0 5 0 0 0 4 3
3 0 0 0 5 0 0
0 4 0 5 0 2 0
0 0 4 0 2 0 1
0 0 3 0 0 1 0
```

For router 1

```
node 1 via 1 Distance 0
node 2 via 6 Distance 0
node 3 via 3 Distance 0
node 4 via 2 Distance 0
node 5 via 5 Distance 0
node 6 via 6 Distance 0
node 7 via 7 Distance 0
```

For router 2

```
node 1 via 6 Distance 0
node 2 via 2 Distance 0
node 3 via 1 Distance 0
node 4 via 4 Distance 0
node 5 via 1 Distance 0
node 6 via 6 Distance 0
node 7 via 7 Distance 0
```

For router 6

```
node 1 via 1 Distance 0
node 2 via 2 Distance 0
node 3 via 1 Distance 0
node 4 via 4 Distance 0
node 5 via 1 Distance 0
node 6 via 6 Distance 0
node 7 via 1 Distance 0
```

For router 7

```
node 1 via 1 Distance 0
node 2 via 2 Distance 0
node 3 via 1 Distance 0
node 4 via 4 Distance 0
node 5 via 5 Distance 0
node 6 via 1 Distance 0
node 7 via 7 Distance 0
```

For router 3

```
node 1 via 1 Distance 0
node 2 via 1 Distance 0
node 3 via 3 Distance 0
node 4 via 4 Distance 0
node 5 via 5 Distance 0
node 6 via 1 Distance 0
node 7 via 1 Distance 0
```

For router 4

```
node 1 via 2 Distance 0
node 2 via 2 Distance 0
node 3 via 3 Distance 0
node 4 via 4 Distance 0
node 5 via 1 Distance 0
node 6 via 6 Distance 0
node 7 via 7 Distance 0
```

For router 5

```
node 1 via 1 Distance 0
node 2 via 1 Distance 0
node 3 via 3 Distance 0
node 4 via 1 Distance 0
node 5 via 5 Distance 0
node 6 via 1 Distance 0
node 7 via 7 Distance 0
```