

## Experiment No: 8

**Name: Aniket Balendra Tiwari**

**Roll No: 21143285**

**Program:**

**Implement MultiStage Graph**

```
#include<bits/stdc++.h>

using namespace std;

#define N 8

#define INF INT_MAX

int shortestDist(int graph[N][N])
{
    int dist[N];
    dist[N - 1] = 0;
    for (int i = N - 2; i >= 0; i--)
    {
        dist[i] = INF;
        for (int j = i; j < N; j++)
        {
            if (graph[i][j] == INF)
                continue;
            dist[i] = min(dist[i], graph[i][j] + dist[j]);
        }
    }

    cout << "minimum distance between from source node to target node:" << endl;

    return dist[0];
}

int main()
{
    cout << "Name : Aniket Tiwari\n";
```

```

cout << "Roll No : 21143285\n\n";

int graph[N][N] =
{ {INF, 1, 5, 7, INF, INF, INF, INF},
  {INF, INF, INF, INF, 3, 13, INF, INF},
  {INF, INF, INF, INF, 7, 8, 26, INF},
  {INF, INF, INF, INF, INF, INF, 2, INF},
  {INF, INF, INF, INF, INF, INF, INF, 9},
  {INF, INF, INF, INF, INF, INF, INF, 3},
  {INF, INF, INF, INF, INF, INF, INF, 2},
  {INF, INF, INF, INF, INF, INF, INF, INF} };

cout << shortestDist(graph);

return 0;
}

```

## Output:

PROBLEMS	OUTPUT	TERMINAL	JUPYTER	DEBUG CONSOLE
<pre> Microsoft Windows [Version 10.0.22621.521] (c) Microsoft Corporation. All rights reserved.  D:\Programming\College Experiments\TY 5 Sem\DAA Lab&gt;cd "d:\Programming\CollegeGraph &amp;&amp; "d:\Programming\College Experiments\TY 5 Sem\DAA Lab\"MultiSt. Name : Aniket Tiwari Roll No : 21143285  minimum distance between from source node to target node: 11 d:\Programming\College Experiments\TY 5 Sem\DAA Lab&gt; </pre>				