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**ROLL NO. – 1906137**

**SUBJECT NAME – DESIGN AND ANALYSIS OF ALGORITHMS LAB**

**SUBJECT CODE – CSL4403**

**DATE – 22ND FEB, 2021**

**BRANCH – CSE 2**

**ASSIGNMENT-9**

**Q9. WAP to implement Shortest Path using Floyd-Warshall’s Algorithm.**

**Source Code in C++ Language:**

#include <iostream>

#define N 100

using namespace std;

int b[N][N];

void floyds(int n)

{

int i, j, k;

for (k = 0; k < n; k++)

{

for (i = 0; i < n; i++)

{

for (j = 0; j < n; j++)

{

if ((b[i][k] \* b[k][j] != 0) && (i != j))

{

if ((b[i][k] + b[k][j] < b[i][j]) || (b[i][j] == 0))

b[i][j] = b[i][k] + b[k][j];

}

}

}

}

for (i = 0; i < n; i++)

{

for (j = 0; j < n; j++)

cout<<"Distance from "<<i<<" to "<<j<<"="<<b[i][j]<<"\n";

}

}

int main()

{

cout<<"Enter the number of nodes in the graph.\n";

int n;

cin>>n;

cout<<"Enter the costs of edges in the form of adjacecy matrix.\n";

for (int i=0;i<n;i++)

{

for (int j=0;j<n;j++)

cin>>b[i][j];

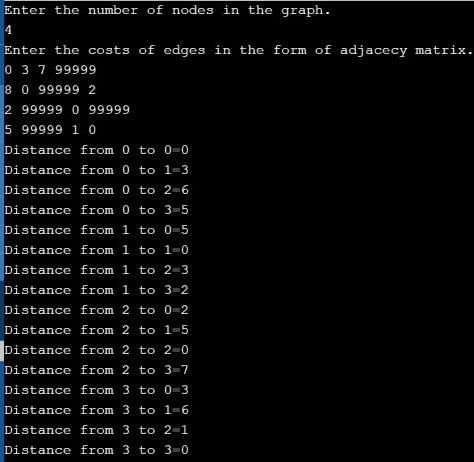
}

floyds(n);

return 0;

}

**Output Screenshot:**

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