#include <iostream>

using namespace std;

int main()

{int cost[10][10],i,j,k,n;

cout<<"Enter the number of nodes"<<endl;

cin>>n;

cout<<"Enter the cost matrix"<<endl;

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

{

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

cin>>cost[i][j];

}

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

{

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

{

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

{

cost[i][j]=min(cost[i][j] , (cost[i][k]+cost[k][j]));

}

}

}

cout<<"The least cost paths from one vertex to every other vertex is:"<<endl<<endl;

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

{

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

{

if(i!=j)

{

cout<<i<<"--->"<<j<<"==="<<cost[i][j]<<endl;

}

}

}

return 0;

}