using System;

public class abc

{

readonly static int infinite = 99999, a = 4;

void law(int[,] graph)

{

int[,] list = new int[a,a];

int i, j, k;

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

{

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

{

list[i, j] = graph[i, j];

}

}

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

{

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

{

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

{

if (list[i, k] + list[k, j] < list[i, j])

{

list[i, j] = list[i, k] + list[k, j];

}

}

}

}

print(list);

}

void print(int[,] list)

{

Console.WriteLine("distances between every pair of vertices");

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

{

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

{

if (list[i, j] == infinite)

{

Console.Write("infinite ");

}

else

{

Console.Write(list[i, j] + " ");

}

}

Console.WriteLine();

}

}

public static void Main(string[] args)

{

int[,] graph = {

{0, 10, infinite, 13},

{infinite, 0, 12, infinite},

{infinite, infinite, 0, 16},

{infinite, infinite, infinite, 0}

};

abc a = new abc();

a.law(graph);

}

}