#include<stdio.h>

int dist[50][50],temp[50][50],n,i,j,k,x;

void dvr()

{

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

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

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

if (dist[i][k] + dist[k][j] < dist[i][j])

{

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

temp[i][j] = k;

}

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

{

printf("\n\nState value for Router %d is:",i+1);

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

printf("\t\nNode %d via %d Distance %d",j+1,temp[i][j]+1,dist[i][j]);

}

printf("\n\n");

}

int main()

{

printf("Enter the number of nodes : ");

scanf("%d",&n);

printf("Enter the distance matrix :\n");

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

{

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

{

scanf("%d",&dist[i][j]);

dist[i][i]=0;

temp[i][j]=j;

}

}

dvr();

return 0;

}