**Implement All Pair Shortest paths problem using Floyd’s algorithm.**

//C program to implement floyd's algorithm

#include <stdio.h>

int a[10][10],D[10][10],n;

void floyd(int [][10],int);

int min(int,int);

int main()

{

    printf("Enter the no. of vertices:");

    scanf("%d",&n);

    printf("Enter the cost adjacency matrix:\n");

    int i,j;

    for(i=0;i<n;i++){

        for(j=0;j<n;j++){

            scanf("%d",&a[i][j]);

        }

    }

    floyd(a,n);

    printf("Distance Matrix:\n");

    for(i=0;i<n;i++){

        for(j=0;j<n;j++){

            printf("%d ",D[i][j]);

        }

        printf("\n");

    }

    return 0;

}

void floyd(int a[][10],int n){

    int i,j,k;

    for(i=0;i<n;i++){

        for(j=0;j<n;j++){

            D[i][j]=a[i][j];

        }

    }

    for(k=0;k<n;k++){

        for(i=0;i<n;i++){

            for(j=0;j<n;j++){

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

                }

            }

        }

    }

int min(int a,int b){

    if(a<b){

        return a;

    }else{

        return b;

    }

}

Output:

