main.c

```c

#include<stdio.h>
#include<conio.h>
int a[10][10],n;
void floyds();
int min(int,int);
void floyds(){
    int i,j,k;
    for(k=1;k<=n;k++){
        for(i=1;i<=n;i++){
            for(j=1;j<=n;j++){
                a[i][j]=min(a[i][j],a[i][k]+a[k][j]);
            }
        }
    }
    printf("\nAll pair shortest path matrix is:\n");
    for(i=1;i<=n;i++){
        for(j=1;j<=n;j++){
            printf("%d\t",a[i][j]);
        }
        printf("\n\n");
    }
}
int min(int x,int y){
    if(x<y){
        return x;
    }
    else{
        return y;
    }
```

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```c
    printf("\nAll pair shortest path matrix is:\n");
    for(i=1;i<=n;i++){
        for(j=1;j<=n;j++){
            printf("%d\t",a[i][j]);
        }
        printf("\n\n");
    }
}
int min(int x,int y){
    if(x<y){
        return x;
    }
    else{
        return y;
    }
}
void main(){
    int i,j;
    printf("\nEnter the no. of vertices:\t");
    scanf("%d",&n);
    printf("\nEnter the cost matrix:\n");
    for(i=1;i<=n;i++){
        for(j=1;j<=n;j++){
            scanf("%d",&a[i][j]);
        }
    }
    floyds();
    getch();
}

```