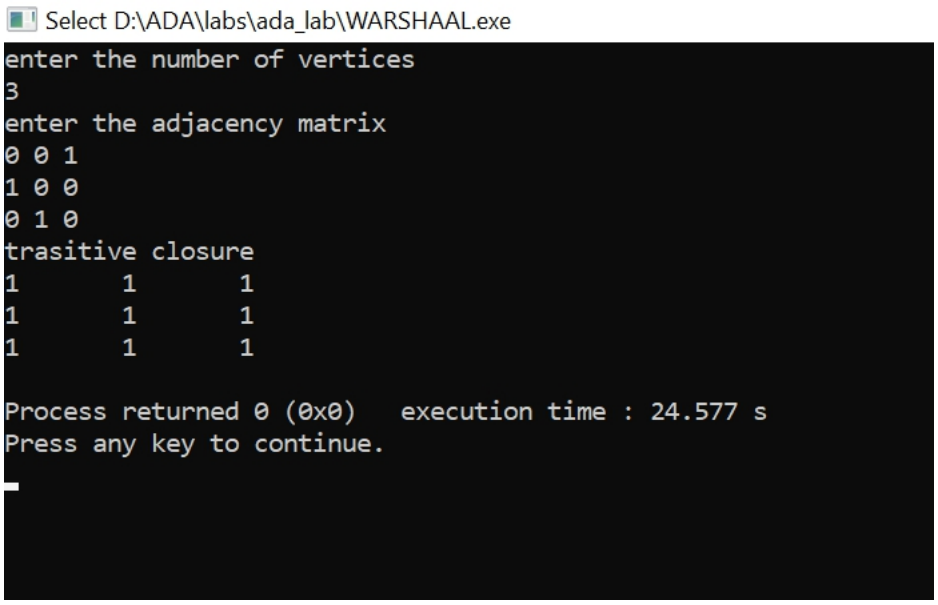
11.Implement Warshall's algorithm using dynamic programming.

Program:

```
#include<stdio.h>
#include<conio.h>
int n,a[10][10],p[10][10];

void warshall(int n,int a[10][10],int p[10][10])
{
int i,j,k;
for(i=0;i<n;i++)
     for(j=0;j<n;j++)
              p[i][j]=a[i][j];

   for(k=0;k<n;k++)
     for(i=0;i<n;i++)
              for(j=0;j<n;j++)
                if((p[i][j]==0) && (p[i][k]==1 && p[k][j]==1))
                        p[i][j]=1;
}
int main()
{
   int i,j;

   printf("enter the number of vertices\n");
   scanf("%d",&n);
   printf("enter the adjacency matrix\n");
   for(i=0;i<n;i++)
   {
     for(j=0;j<n;j++)
     {
              scanf("%d",&a[i][j]);
     }
    }
    warshall(n,a,p);
    printf("trasitive closure\n");
    for(i=0;i<n;i++)
    {
              for(j=0;j<n;j++)
              {
                  printf("%d\t",p[i][j]);
              }
              printf("\n");
    }

    }
```

Output Screenshot:


Select D:\ADA\labs\ada_lab\WARSHAAL.exe
enter the number of vertices
3
enter the adjacency matrix
0 0 1
1 0 0
0 1 0
trasitive closure
1 1 1
1 1 1
1 1 1
Process returned 0 (0x0) execution time : 24.577 s
Press any key to continue.