program-11

#include<stdio.h>

#include<conio.h>

#include<math.h>

int max(int,int);

void warshal(int p[10][10],int n) {

int i,j,k;

for (k=1;k<=n;k++)

for (i=1;i<=n;i++)

for (j=1;j<=n;j++)

p[i][j]=max(p[i][j],p[i][k]&&p[k][j]);

}

int max(int a,int b) {

;

if(a>b)

return(a); else

return(b);

}

void main() {

int p[10][10]= {

0

}

,n,e,u,v,i,j;

clrscr();

printf("\n Enter the number of vertices:");

scanf("%d",&n);

printf("\n Enter the number of edges:");

scanf("%d",&e);

for (i=1;i<=e;i++) {

printf("\n Enter the end vertices of edge %d:",i);

scanf("%d%d",&u,&v);

p[u][v]=1;

}

printf("\n Matrix of input data: \n");

for (i=1;i<=n;i++) {

for (j=1;j<=n;j++)

printf("%d\t",p[i][j]);

printf("\n");

}

warshal(p,n);

printf("\n Transitive closure: \n");

for (i=1;i<=n;i++) {

for (j=1;j<=n;j++)

printf("%d\t",p[i][j]);

printf("\n");

}

getch();

}

output:

.

[shilpa@shilpa-linux ADA\_LAB-PROG-main]$ gcc -o warshal warshal.c

[shilpa@shilpa-linux ADA\_LAB-PROG-main]$ ./warshal

Enter the number of vertices:4

Enter the number of edges:4

Enter the end vertices of edge 1:1 2

Enter the end vertices of edge 2:2 3

Enter the end vertices of edge 3:3 1

Enter the end vertices of edge 4:3 4

Matrix of input data:

0 1 0 0

0 0 1 0

1 0 0 1

0 0 0 0

Transitive closure:

1 1 1 1

1 1 1 1

1 1 1 1

0 0 0 0