DFS

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| #include<stdio.h> |
|  | #include<conio.h> |
|  | int a[20][20],reach[20],n; |
|  | void dfs(int v) |
|  | { |
|  | int i; |
|  | reach[v]=1; |
|  | for (i=1;i<=n;i++) |
|  | if(a[v][i] && !reach[i]) |
|  | { |
|  | printf("\n %d->%d",v,i); |
|  | dfs(i); |
|  | printf("\n%d",v); |
|  | } |
|  | } |
|  | void main() { |
|  | int i,j,count=0; |
|  | clrscr(); |
|  | printf("\n Enter number of vertices:"); |
|  | scanf("%d",&n); |
|  | for (i=1;i<=n;i++) |
|  | { |
|  | reach[i]=0; |
|  | for (j=1;j<=n;j++) |
|  | a[i][j]=0; |
|  | } |
|  | printf("\n Enter the adjacency matrix:\n"); |
|  | for (i=1;i<=n;i++) |
|  | for (j=1;j<=n;j++) |
|  | scanf("%d",&a[i][j]); |
|  | dfs(1); |
|  | printf("\n"); |
|  | for (i=1;i<=n;i++) |
|  | { |
|  | if(reach[i]) |
|  | count++; |
|  | } |
|  | if(count==n) |
|  | printf("\n Graph is connected"); |
|  | else |
|  | printf("\n Graph is not connected"); |
|  | getch(); |
|  | } |