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HA4 ASSIGNMENT ON BFS TRAVERSAL

Performing BFS traversal

Code-

#include<iostream>

#include<stdio.h>

#define MAX 10

class Q

{

int data[30];

int R,F;

public:

Q(){R=F=-1;}

void init()

{

R=F=-1;

}

int empty()

{ if(R==-1)

return 1;

return 0;

}

void insert (int x)

{ if(empty())

R=F=0;

else

R=R+1;

data[R]=x;

}

int Delete()

{

int x=data[F];

if(R==F)

R=F=-1;

else

F=F+1;

return x;

}

};

void BFS(int);

int G[MAX][MAX];

int n;

int main()

{

int i,j,v;

printf("\nEnter No of vertices:");

scanf("%d",&n);

printf("\nEnter the adjacency matrix of graph: \n");

for(i=0;i<n;i++)

{

for(j=0;j<n;j++)

{

scanf("%d",&G[i][j]);

}

}

printf("\nEnter Starting vertex of BFS");

scanf("%d",&v);

BFS(v);

}

void BFS(int v)

{

int visited[MAX],i;

Q q;

for(i=0;i<n;i++)

visited[i]=0;

q.insert(v);

printf("\nvisit %d",v);

visited[v]=1;

while(!q.empty())

{

v=q.Delete();

for(i=0;i<n;i++)

if(visited[i]==0 && G[v][i]!=0)

{

q.insert(i);

visited[i]=1;

printf("\nvisit %d",i);

}

}

}

Output-

