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数据结构第六章----图

6-16：

6-16-1：

#include "stdio.h"

#include "stdlib.h"

#include "conio.h"

typedef char vextype;

typedef struct node

{

int adjvex;

struct node \* next;

};

typedef struct vexnode

{

vextype vertex;

node \*link;

};

vexnode ga[4];

int visited[4]={0};

void Create(){

int i,j,k;

node \*s;

int N=4;

int M=5;

for(i=0;i<N;i++){

ga[i].vertex = getchar();

ga[i].link = NULL;

}

for(k=0;k<M;k++){

scanf("%d%d",&i,&j);

s = (node\*)malloc(sizeof(node));

s->adjvex = j;

s->next = ga[i].link;

ga[i].link = s;

}

}

void DFSL(int i){

node \*p;

// printf("%c\n",ga[i].vertex );

visited[i] = 1;

p = ga[i].link;

while(p!=NULL){

if(visited[p->adjvex]==0){

DFSL(p->adjvex);

}

p = p->next;

}

}

int main(int argc, char const \*argv[])

{

Create();

int i,j;

scanf("%d%d",&i,&j);

DFSL(i);

if(visited[j]==0){

printf("NO\n");

}else{

printf("YES\n");

}

return 0;

}

6-16-2：

#include "stdio.h"

#include "stdlib.h"

#include "conio.h"

typedef char vextype;

typedef struct node

{

int adjvex;

struct node \* next;

};

typedef struct vexnode

{

vextype vertex;

node \*link;

};

vexnode ga[4];

int visited[4]={0};

void Create(){

int i,j,k;

node \*s;

int N=4;

int M=5;

for(i=0;i<N;i++){

ga[i].vertex = getchar();

ga[i].link = NULL;

}

for(k=0;k<M;k++){

scanf("%d%d",&i,&j);

s = (node\*)malloc(sizeof(node));

s->adjvex = j;

s->next = ga[i].link;

ga[i].link = s;

}

}

void BFSL(int k){

int que[4]={0};

int front = 0;

int rear = 0;

int i;

node \*p;

// printf("%c\n",ga[k].vertex);

visited[k]=1;

que[front]=k;

front++;

while(front!=rear){

i = que[rear];

rear++;

p = ga[i].link;

while(p!=NULL){

if(visited[p->adjvex]!=1){

// printf("%c\n",ga[p->adjvex].vertex );

visited[p->adjvex] = 1;

que[front]=k;

front++;

}

p = p->next;

}

}

}

int main(int argc, char const \*argv[])

{

Create();

int i,j;

scanf("%d%d",&i,&j);

BFSL(i);

if(visited[j]==0){

printf("NO\n");

}else{

printf("YES\n");

}

return 0;

}