**Lab-Assignment-7**

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Implement-Prim’s-Algorithm.-

CODE-:

/\*

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----Date-:-15-Feb,-2017

----1.-Prim's-Algorithm

----2.-Kruskal's-Algorithm

\*/

#include-<stdio.h>

#include-<stdlib.h>

void-main(){

printf("\n\t-Implement-:\n");

printf("\t-++++++++++++++\n");

printf("\n\t-1.-Prim's-Algorithm\n");

printf("\t-2.-Kruskal's-Algorithm\n");

int-choice;

printf("\n\t-CHOICE-:-");

scanf("%d",&choice);

switch(choice){

case-1:-PrimsFileChose();

break;

case-2-:-printf("\n\t-PENDING\n"-);

break;

default-:-printf("Enter-the-correct-option\n");

break;

}

}

PrimsFileChose(){

printf("\t-Take-input-from-:-\n");

printf("\t-1.-Graph-1-:-Node-=-4\n");

printf("\t-2.-Graph-2-:-Node-=-5-\n");

/\*printf("\t-3.-Graph-3-:-Node-=-6\n");\*/

int-prim\_file;

printf("\n-\t-FILE-NUMBER-:-");

scanf("%d",&prim\_file);

printf("\t-File-Loaded-:-%d\n",prim\_file);

Prim\_Implement(prim\_file);

}

Prim\_Implement(int-file\_number){

FILE-\*file1;

----int-d[50][50];

----int-a[10];

----int-i,j,ch,data,first,zz=0,xx,k,yy,y1=0,y2=0;

--- int-title=0,titlecc=0;

--- int-total\_distance-=0,-p=0;

char-c;

for(i=0;i<10;i++){

-----a[i]=100;

}

switch(file\_number){

case-1:-/\*printf("Case-1\n");\*/

file1=fopen("graph1.txt","r");

----------Implement\_Algorithm(file1);

break;

case-2-:-//printf("Case-2-\n");

--------------file1=fopen("graph2.txt","r");

--------------Implement\_Algorithm(file1);

break;

default-:-printf("File-doesn't-exists\n");

break;

}

}

Implement\_Algorithm(FILE-\*file1){

----int-d[50][50];

----int-a[10];

----int-i,j,ch,data,first,zz=0,xx,k,yy,y1=0,y2=0;

----int-title=0,titlecc=0;

----int-total\_distance-=0,-p=0;

--char-c;

--while((c=getc(file1))!=EOF){

--------------

--------------if(c=='\n'){

-------------------if(titlecc==1){

----------------------first++;-

--------------------}

----------------------data=0;

----------------------ch=0;

----------------------titlecc=1;

----------------------continue;

----------------}

----------------if(c=='\t'){

------------------data++;

------------------ch=0;

-------------------continue;

-----------------}---

-------

------------------if(ch==0){

-------------------if(titlecc==1){

------------------------d[first][data]=c-'0';-

--------------------}

------------------else{

------------------title=c-'0';

----------------}

--------

--------------ch=1;

-------------}else--{

-----------------d[first][data]=(c-'0')+d[first][data]\*10;

--------------}

------}

------fclose(file1);

printf("\t-Number-of-Nodes-=-%d\n\n",title);

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

for(j=0;j<title;j++){

printf("\t-d[%d][%d]=%d\t",i+1,j+1,d[i][j]);

}

printf("\n");

}

printf("\t=========================\n");

//main

for(k=1;k<9;k++){

----for(i=0;i<title;i++){

--------for(j=0;j<title;j++){

-----------------------------

------------if(d[i][j]==k){

------------

------------a[zz]=i+1;

------------a[zz+1]=j+1;-----------------

------------y1=0;

------------y2=0;-

----------------------------

------------/\*for(yy=0;yy<8;yy++){

-----------------if((i+1)==a[yy]){y1=y1+1;}

-----------------if((j+1)==a[yy]){y2=y2+1;}

-----------------printf("a[%d]=%d\n",yy,a[yy]);--------------------------------------

------------}--------------------

------------printf("\n");\*/

------------if(y1==2-&&-y2==2-&&-a[7]==4){

--------------printf("be-a-...loop-\n\n");

------------}

------------else

------------{----------------

----------------//printf("aa=%d\n\n",aa);-

--------------------------

----------------zz=zz+2;----------

----------------total\_distance=total\_distance+k;

----------------

----------------printf("\n\td[%d][%d]=%d\n",i+1,j+1,d[i][j]);

----------------d[j][i]=100;

----------------d[i][j]=100;---------------

----------------printf("\ttotal\_distance-=%d\n\n",total\_distance);

----------------p=p+1;

----------------i=title;

----------------j=title;

----------------if(p==(title-1)){

--------------------k=15;

--------------------printf("\n.................\n");

----------------}

------------}

------------}

--------------------------------------------

----------------------

--------}

----}

----

}

}

Screenshot-:

