**/\* Create a Graph ADT using Array Representation \*/**

#include<iostream.h>

#include<conio.h>

#include<iomanip.h>

// A function to print the adjacency matrix.

void PrintMat(int mat[][20], int n)

{

int i, j;

cout<<"\n\n"<<setw(4)<<"";

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

cout<<setw(3)<<"("<<i+1<<")";

cout<<"\n\n";

// Print 1 if the corresponding vertexes are connected otherwise 0.

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

{

cout<<setw(3)<<"("<<i+1<<")";

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

{

cout<<setw(4)<<mat[i][j];

}

cout<<"\n\n";

}

}

void main()

{

clrscr();

int i, j, v;

cout<<"GRAPH REPRESENTATION USING ARRAY"<<endl;

cout<<"\nEnter the number of vertexes: ";

cin>>v;

int mat[20][20];

cout<<"\n";

// Take input of the adjacency of each pair of vertexes.

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

{

for(j = i; j < v; j++)

{

if(i != j)

{

cout<<"Enter 1 if the vertex "<<i+1<<" is adjacent to "<<j+1<<", otherwise 0: ";

cin>>mat[i][j];

mat[j][i] = mat[i][j];

}

else

mat[i][j] = 0;

}

}

PrintMat(mat, v);

getch();

}

**OUTPUT:**



