

Q8: write a c program to graph traversal using depth first search.

Aim: to write a c program to graph traversal using depth first search

Algorithm:

- * start.
- * input number of vertices and edges.
- * create adjacency matrix.
- * use recursion to implement dfs.
- * mark visited nodes and print traversal.
- * stop.

program:

```
#include <stdio.h>

int g[5][5] = {  
    {0, 1, 1, 0, 0},  
    {1, 0, 0, 1, 1},  
    {1, 0, 0, 1, 0},  
    {0, 1, 1, 0, 1},  
    {0, 1, 0, 1, 0}  
  
};  
int vis[5] = {0};  
void dfs(int u){  
    vis[u] = 1;  
    printf("v%d", u);  
    for(int v=0; v<5; v++)  
        if(g[u][v] == 1 && !vis[v])  
            dfs(v);  
}  
  
int main(){  
    printf("DFS : ");  
    dfs(0);  
}
```

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Output: DFS: 0 1 3 4 2

Result: thus, the program executed successfully.