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#include <iostream> #include <list>

using namespace std;

class Graph

{

int numVertices; list<int> \*adjLists; bool \*visited;

public:

Graph(int V);

void addEdge(int src, int dest); void DFS(int vertex);

};

// Initialize graph Graph::Graph(int vertices) { numVertices = vertices;

adjLists = new list<int>[vertices]; visited = new bool[vertices];

// Add edges

void Graph::addEdge(int src, int dest) { adjLists[src].push\_front(dest);

}

// DFS algorithm

void Graph::DFS(int vertex) { visited[vertex] = true;

list<int> adjList = adjLists[vertex];

cout << vertex << " ";

list<int>::iterator i;

for (i = adjList.begin(); i != adjList.end(); ++i) if (!visited[\*i])

DFS(\*i);

}

int main() { Graph g(4); g.addEdge(0, 1);

g.addEdge(1, 2);

g.addEdge(2, 3);

g.DFS(2);

return 0;

}