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ADA LAB

DFS Traversal

```
#include <bits/stdc++.h>
using namespace std;
class Graph
{
public:
	map<int, bool> visited;
	map<int, list<int>> adj;
	void addEdge(int v, int w)
	{
		adj[v].push_back(w); // Add w to v's list.
	}
	void DFS(int v)
	{
		visited[v] = true;
		cout << v << " ";
		list<int>::iterator i;
		for (i = adj[v].begin(); i != adj[v].end(); ++i)
			if (!visited[*i])
				DFS(*i);
	}
};
int main()
{
	Graph g;
	g.addEdge(0, 1);
	g.addEdge(0, 9);
	g.addEdge(1, 2);
```

```
        g.addEdge(2, 0);
        g.addEdge(2, 3);
        g.addEdge(9, 3);
        cout << "Following is Depth First Traversal (starting from vertex 2) \n";
        g.DFS(2);
        return 0;
}
```

Output:

stdin copy

```
Standard input is empty
```

stdout copy

```
Following is Depth First Traversal (starting from vertex 2)
2 0 1 9 3
```