

# Example: Depth-First Traversal

**Problem:** Visit every node reachable from  $v$  once, visiting nodes further from start first.

```
Stack<Vertex> fringe;  
  
fringe = stack containing { $v$ };  
while (! fringe.isEmpty()) {  
    Vertex v = fringe.pop ();  
  
    if (! marked(v)) {  
        mark(v);  
        VISIT(v);  
        For each edge (v,w) {  
            if (! marked (w))  
                fringe.push (w);  
        }  
    }  
}
```

# Depth-First Traversal Illustrated

