

```

dfs(graph, node) {
    state ← Array[n, "undiscovered"]
    finished ← false
    dfs_recur(graph, node)
}

dfs_recur(graph, node) {
    if (finished) return
    state[node] ← "discovered"
    time ← time + 1
    processVertexEarly(node)
    foreach neighbour ∈ Neighbourhood(node) {
        if (state[neighbour] = "undiscovered") {
            parent[neighbour] ← node
            processEdge(node, neighbour)
            dfs_recur(graph, neighbour)
        } else if (state[neighbour] ≠ "processed") {
            processEdge(node, neighbour)
        }
        if (finished) return
    }
    processVertexLate(currentNode)
    state[currentNode] ← "processed"
    time ← time + 1
}

```

node=4      neighbour=nil    time=5

