8.

Refs: Graph Slide P.40

```
DFS(G)
    for each vertex u in G.V
        u.color=WHITE
        u.pi=NIL
    time=0
    for each vertex u in G.V
        if u.color==WHITE
            cycle = DFS-VISIT(G,u)
            if cycle
                return TRUE
    return FALSE
```

```
DFS-VISIT(G,u)
    time=time+1
    u.d=time
    u.color=GRAY
    for each v in G.Adj[u]
        if v.color==WHITE
            v.pi=u
            DFS-VISIT(G,v)
        if v.volor==GRAY
            return TRUE
    u.color=BLACK
    time=time+1
    u.f=time
    return FALSE
```