

## DFS(G)

for each vertex  $u$

color[ $u$ ]  $\leftarrow$  white

$\pi[u] \leftarrow \text{NIL}$

time  $\leftarrow 0$

for each vertex  $u$

if color[ $u$ ] = white

DFS-VISIT( $G, u$ )

## DFS-VISIT( $G, u$ )

color[ $u$ ]  $\leftarrow$  grey

time ++

$d[u] \leftarrow$  time

for each  $v \in \text{Adj}[u]$

if color[ $v$ ] = white

$\pi[v] \leftarrow u$

DFS-VISIT( $G, v$ )

color[ $u$ ]  $\leftarrow$  black

time ++

$f[u] \leftarrow$  time

}  $\theta(1) - \text{ialt } \theta(v)$

}  $\theta(|\text{Adj}[u]|)$   
- ialt  $\theta(E)$

}  $\theta(1) - \text{ialt } \theta(v)$   
 $\theta(V+E)$