

Try it Yourself!

Type	Definition	When is (u, v) that edge type?
Tree	Edges forming the DFS tree (or forest).	v was not seen before we processed (u, v) .
Forward	From ancestor to descendant in tree.	u and v have been seen, and $u.start < v.start < v.end < u.end$
Back	From descendant to ancestor in tree.	u and v have been seen, and $v.start < u.start < u.end < v.end$
Cross	Edges going between vertices without an ancestor relationship.	u and v have not been seen, and $v.start < v.end < u.start < u.end$

DFSWrapper (G)

counter = 0

For each vertex u of G

If u is not "seen"

DFS (u)

End If

End For

DFS (u)

Mark u as "seen"

$u.start = counter++$

For each edge (u, v) //leaving u

If v is not "seen"

DFS (v)

End If

End For

$u.end = counter++$

