Input: Graph $G = \langle V, E \rangle$
Output: List L containing topologically ordered vertices of G, or empty if a topological order does not exist.

```
procedure TOPOLOGICAL_SORT(G)
    S ← ∅   ▷ corresponds to set of vertices containing no incoming edges
    L ← initialize empty List

    for v ∈ G.V do
        if v has no incoming edges then
            S ← S ∪ {v}

    while S ≠ ∅ do
        v ← remove any vertex from S
        Add u to tail of List L

        for e = (v, u) ∈ v.outgoing do
            Remove edge e from graph
            if u has no incoming edges then
                S ← S ∪ {u}

    if |L| = |G.V| then
        return L
    else
        return empty list          ▷ Topological ordering cannot be formed
```