

# Versioning Control System

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# Data Estructure

- Directed Acyclic Graph = "Tree with merges"
- Array  $|V|$  ( $V$ =states)
- Adjacency List
- Worst case:  $O(d)$ 
  - $d$  = degree of  $V[i]$



# Confluently and Full Persistence

- Path copying  $\dashrightarrow$  Fat node (  $O(\log m)$   $\gg$   $m$  = number of modifications )

- Record all changes without deleting



- Each state has its own version stamp



- Each state allow to save any number of additional fields



# Confluently and Full Persistence

- Combine input of more than one previous version to output a new single version (MERGE)
- Save a reference in each vertex (state) to the next vertex (state)
- Updates and queries are allowed on any version (state) of the data structure



# Dataset

- Each vertex (state) will save a .txt
- Any modification will be saved (INSERT)
- “Delete” will not delete, the deleted state will be use for RESTORING



# Parallelism



**GITHUB**

<https://github.com/alejo17/EDA>

GRACIAS !

Preguntas ?