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SubsidiariesExplanation

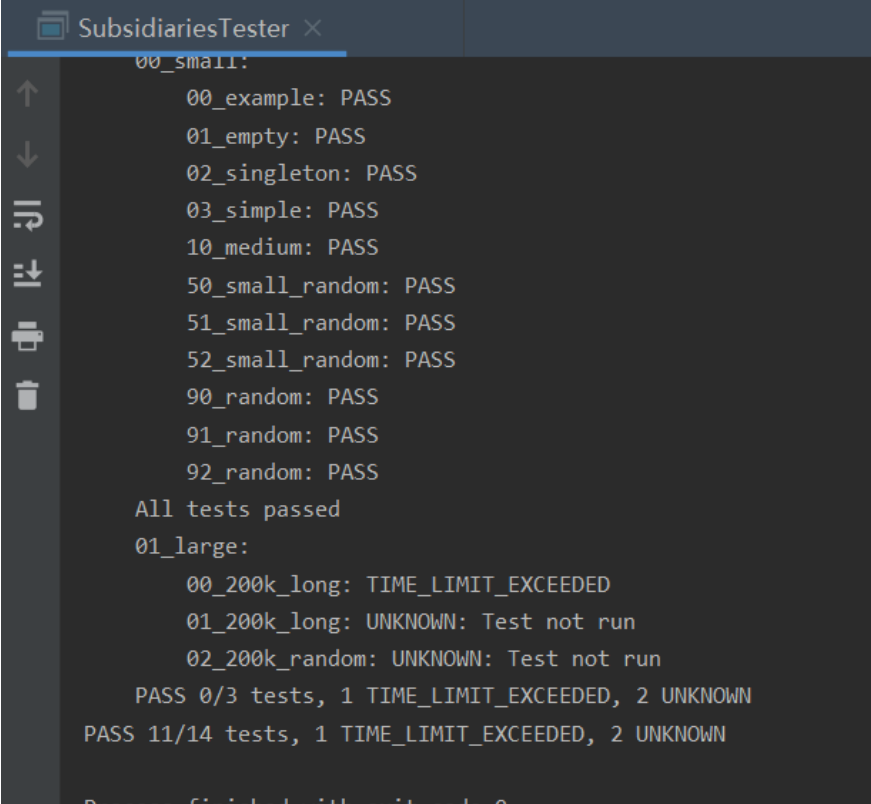
Build all companies and other subsidiaries into a tree structure, the problem becomes the nearest common parent node of the two subsidiary nodes.

First we create a new Company object, which stores the id of the company, and root and height of the tree, the parent of the company and the list of the child company. In the algorithm, we will continue to update these values.

First, we build the tree and get all the maps of each company id and company.

Then we want to find the smallest parent company. The two subsidiaries start looking for the parent company level by level until they find a parent company that belongs to both companies.

Next, we group all companies and their subsidiaries into a tree structure. The root of all subsidiaries of the same top-level parent company is set to the same parent company id.



```
SubsidiariesTester X
00_small:
  00_example: PASS
  01_empty: PASS
  02_singleton: PASS
  03_simple: PASS
  10_medium: PASS
  50_small_random: PASS
  51_small_random: PASS
  52_small_random: PASS
  90_random: PASS
  91_random: PASS
  92_random: PASS
All tests passed
01_large:
  00_200k_long: TIME_LIMIT_EXCEEDED
  01_200k_long: UNKNOWN: Test not run
  02_200k_random: UNKNOWN: Test not run
PASS 0/3 tests, 1 TIME_LIMIT_EXCEEDED, 2 UNKNOWN
PASS 11/14 tests, 1 TIME_LIMIT_EXCEEDED, 2 UNKNOWN
Process finished with exit code 0
```