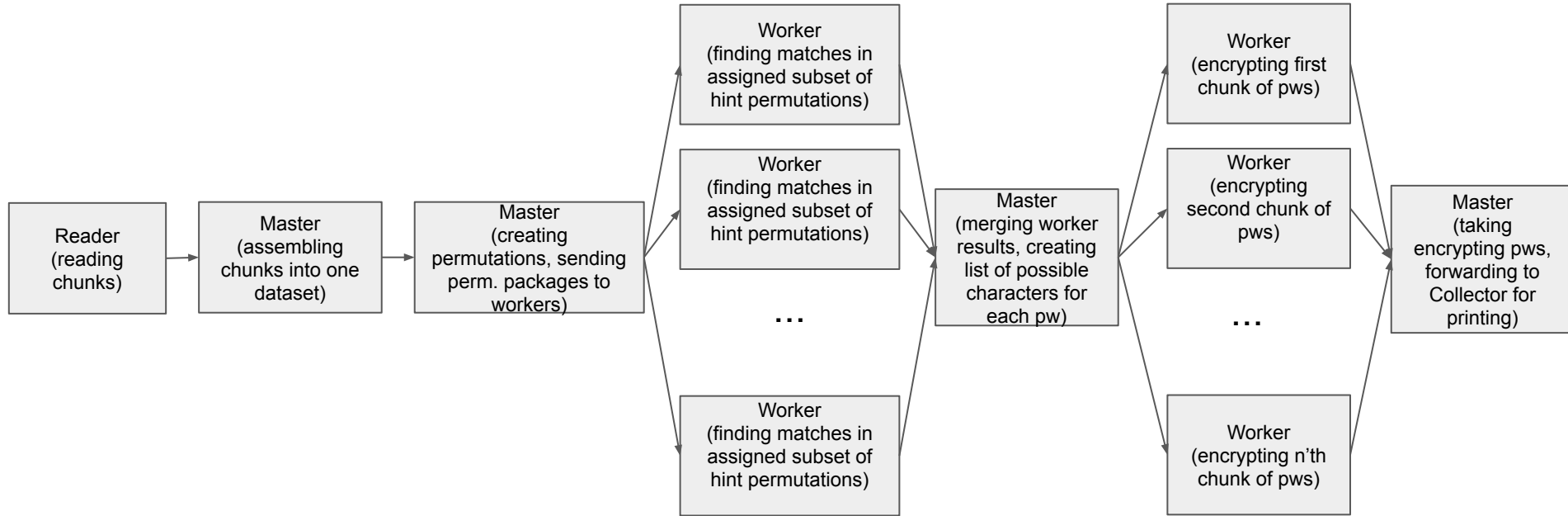


# Distributed Data Exercise 1

Task 3, Tobias Pietz

# General Idea



# Some thoughts

- Hints are permutations >> there are not that many hints possible
  - Generating all possible hints, hashing them and comparing with available hints using a Hashmap is faster than decrypting each hint
- First decrypting all hints before starting to decrypt passwords because hints make pw problem much easier
- Parallelising hint decryption by iterating through all permutations and giving batches of permutations to workers for trying them out (hashing them and comparing to hashed hints in Hashmap)
  - Generating permutations is cheap compared to hashing them -> generating permutations at master and doing the hashing in parallel on the workers
- Assuming that there are not many duplicates in the passwords, finally constrained passwords (some of the characters were eliminated because of hints) are decrypted in parallel by assigning a small batches of pws to workers