

Lab 1 Part 2 Write-Up: Why Databases?

Jonathan Cheruvellil
Michael Murdock

Initial Decisions

For this part of the lab, we continued to use python. In fact, we used a lot of the same code as part 1, with some minor adjustments to accommodate both files.

Internal Architecture

Instead of reading a single file into a dictionary as we did in the last lab, we had to read two files into their own, separate dictionaries. Although we had to deal with two different files, the process of retrieving values was still very similar. If we had to get information from both dictionaries, we simply had to use two for-loops instead of just one. The new instructions we were tasked with implementing weren't too different from the previous ones. It just involved understanding how the dictionaries were structured and how they related to each other.

Task Log

| Task Name | Student | Start Time | End Time | Time (mins) |
|--|--------------------|------------|----------|-------------|
| Project design + planning | Michael + Jonathan | R 1:15 | R 1:30 | 15 |
| Altering old instructions | Jonathan | F 3:00 | F 3:30 | 30 |
| Implementing Instructions NR1-NR4 | Jonathan | F 3:30 | F 4:00 | 30 |
| Implementing Instruction NR5 (Analytics) | Michael | M 6:00 | M 6:15 | 15 |
| Adding to Test Suite | Michael + Jonathan | T 12:00 | T 12:20 | 20 |
| Lab Write-Up | Jonathan | T 11:00 | T 11:30 | 30 |
| README, Test output, Submission | Michael + Jonathan | T 12:20 | T 12:40 | 20 |

Total Time: 2 hours 40 mins

Testing Notes

Just like in the last lab, we tested as we wrote each instruction, and then confirmed our implementations at the end when writing the test suite. We didn't have to deal with as many formatting issues this time since we hammered most of that out in Part 1 of the lab.

Modifications from Part I

The modifications weren't too hard to do. The main thing was simply adding a new dictionary (one for students, one for the teachers). Most of the previous instructions were barely changed (just changing the name of the dictionary), but some we had to add some new logic for finding the values we needed in BOTH dictionaries (as opposed to just using one). For example, instead of just searching through a single dictionary looking for the value we want, we had to find the value we wanted in the students dictionary, and then find the corresponding values in the teachers dictionary.