

## Lab 1 Write-Up: Why Databases?

Jonathan Cheruvellil  
Michael Murdock

### Initial Decisions

For our implementation, we decided to use python. We both had pretty decent experience with this language and were familiar with some libraries that would be helpful in this lab.

### Internal Architecture

Since the students.txt file was given in a CSV format, we used the CSV module for python. This module has the method `.DictReader(file)` that can take in a file and create a dictionary (or associative array) from it. This means we can iterate through each row in the reader and ask for whatever information we need just by supplying the name of the field (ex: `row['Grade']`). This library makes it relatively easy to access all the information in the text file.

For each instruction given, we can simply iterate through the entries in the dictionary, check if it meets the required conditions, and then do whatever else is needed for the instruction.

### Task Log

Task Name	Student	Start Time	End Time	Time (mins)
Project Design	Michael + Jonathan	T 12:15	T 12:40	25
Loading Students into Dictionary	Michael + Jonathan	T 12:40	T 1:00	20
Implementing Instructions R4 - R9	Michael + Jonathan	T 1:00	T 1:30	30
Implementing Instructions R10 - R12	Michael	T 7:00	T 7:30	30
Test Suite	Michael + Jonathan	R 12:00	R 12:40	40
Lab Write-Up	Jonathan	T 4:30	T 4:50	20
README, Test output, Submission	Michael + Jonathan	R 12:40	R 1:00	20

**Total Time: 3 Hr 5 Min**

## Testing Notes

We completed our testing after all of the instructions were implemented. As we wrote each part of the test suite, we visually checked to make sure our output looked good. The main bug we had to figure out was how to get the program to loop (how to keep asking for and executing instructions). Once we got that figured out, we just had to sort out a few formatting issues, and then our program was complete.