The attached documents are a bit of a recreation of a database I developed and used during my time as a writing instructor. The goal of this database was to aid in the iterative improvement of my practices as an instructor, through understanding of the relevant data, notably the grades students would receive on assignments. I used Postgres queries to filter information and draw conclusions on what I should alter in my methods, including session length, and length of time spent as a student. Through comparative processes and analysis, I was ultimately able to determine that a combination of shorter, more focused sessions was more conducive to high grade averages for my students’ essay assignments, which were observable after only a short period of time.

Following the distinction of data types, column names and constraints, entity integrity was established through the assignment of a primary key column. This column denoted the unique instances of student data in each row. Referential integrity was maintained through foreign keys, which linked tables together by a commonality. These keys aided in the further understanding of the relationships between the students, their grades, and other internally contributing variables like session length. After the initial insertion of data, the tables in this database were continually updated over time and queries would be used to scan, gain insights, and maintain the overall integrity of the data.

Below are a couple of Postgres queries that would be helpful during this process:

1. What’s the relationship between sessions length and essay grades?

SELECT s.student\_id, s.session\_length\_min, er.grade

FROM essays AS e

INNER JOIN sessions AS s ON e.id = s.essay\_id

INNER JOIN essay\_results AS er ON e.id = er.essay\_id;

1. What courses typically receive the highest grades?

SELECT course.id, course.course\_name, essay\_results.grade

FROM essays, course, essay\_results

WHERE essays.id = essay\_results.essay\_id

AND course.id = essays.id

GROUP BY course.id, course.course\_name, essay\_results.grade

ORDER BY essay\_results.grade;