

Appendix D: Proposal

Database IA: Developing a database that is designed specifically for students in the same grade and school. This database's main function is for a student to compare their courses with other students in a quadmester schedule to see if they have the same course(s) as other student(s). A quadmester schedule is chosen because coronavirus caused most schools to use a quadmester schedule nowadays.

Question about my IA: I feel like people marking my IA in Europe or other parts of the world might not know what a quadmester is, making me think of changing it to something like a semestered schedule for my program.

Client: The students who are in the same grade and school as each other.

- The client finds this program useful because if they can find out which other students share the same courses as them, they can ask them for help on things like homework, projects, etc.

Advisor: The students who are in the same grade and school as each other.

Features in this database IA:

- Allows students in the same grade and school to input their courses for their current quad (Quad 1, Quad 2, Quad 3, Quad 4)
- Allows students to see which other students share the same course(s) as them.

Algorithm used to compare student's courses with each other:

- I am thinking about using an adjacency list with max size 1000, representing the name of the courses. 1000 is a reasonable size because there shouldn't be more than 1000 available courses in a school. To show which other students share the same courses as the student using the database, I will simply print out the contents of the ArrayList of type String for the particular index in the adjacency list.
- I have two ways that I am considering on sorting the names of the students:
1. Using a TreeSet to automatically sort the names of the students in ascending order
 2. Leaving the student names unsorted and including an option to sort the names of the students using Merge Sort.

Note: My final product turned out to be significantly different than my proposal