

## **2.1: Record of Tasks**

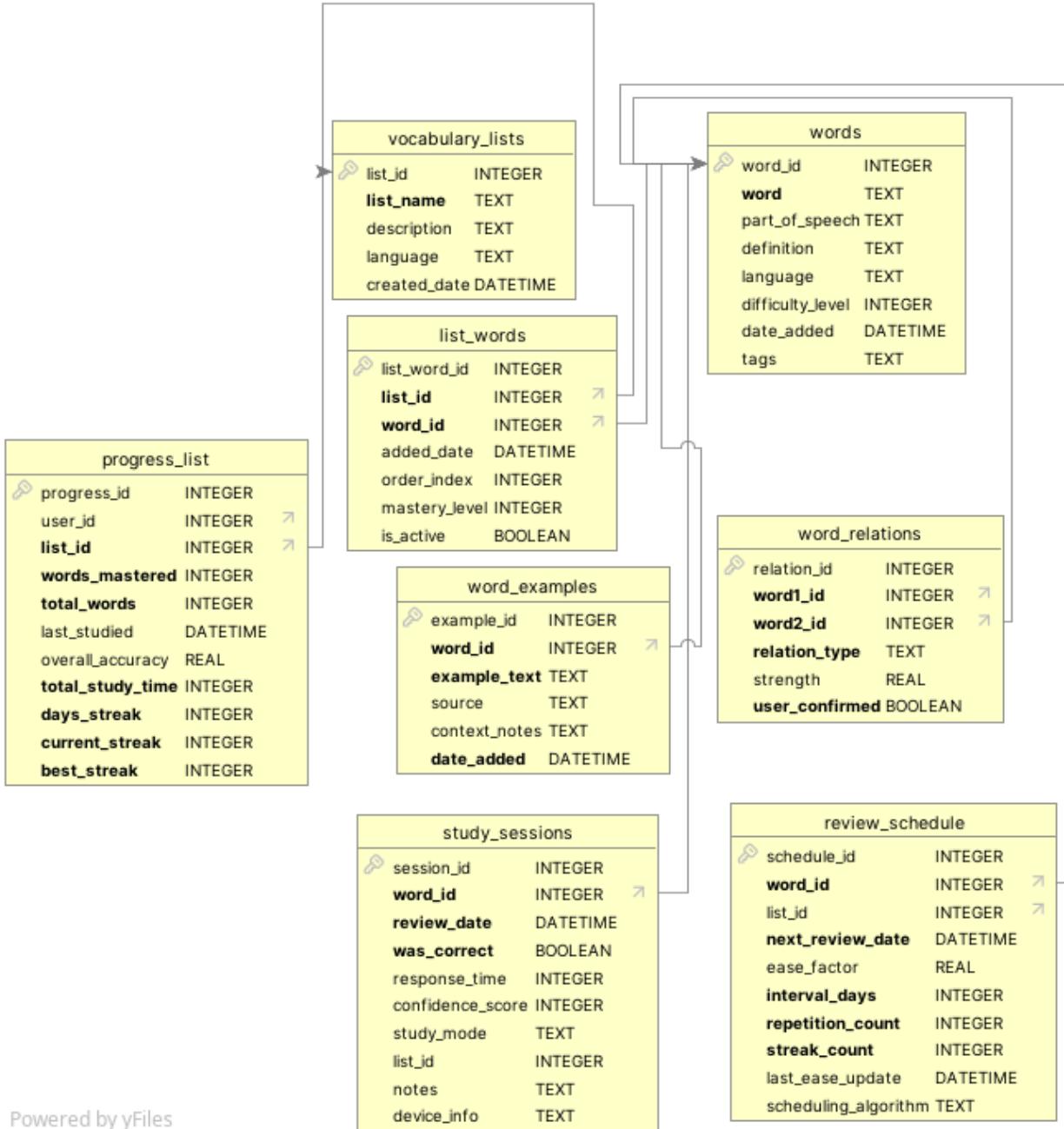
<b>Task #</b>	<b>Date</b>	<b>Phase</b>	<b>Description</b>	<b>Duration</b>
1	Nov 21	Planning	First interview to establish problem and gather requirements from client	10 minutes
2	Nov 29	Planning	Finalized success criteria according to the first interview with client.	30 minutes
3	Nov 30	Development	Set up git, github, Qt Creator, and core project structure for program	30 minutes
4	Dec 4	Development	Added sqlite3 as a library to the project. Ran into several errors due to existing library conflicts, linkage errors, and syntax	3 hours
5	Dec 7	Development	Finished database class constructor. Ran into some SQL syntax errors, but the added error handling made it trivials	1 hour
6	Dec 8	Design	Designed UI for the different windows in my application. Then implemented it into code without any actual back-end functionality	1 hour
7	Dec 8	Development	Began implementing the ability to add vocabulary lists. Ran into several issues with pointers and being able to hand over a member variable of a class	2 hours
8	Dec 9	Development	Finished implementing adding vocabulary lists. Ran into more issues with class variables and pointers. Resolved by making the database variable a pointer	1 hour
9	Dec 10	Development	Began adding the ability to add words to a list. Also began adding the supermemo algorithm.	1 hour
10	Dec 14	Design Planning	Added more structure to the project directory. Made sure everything uploaded to github correctly	1 hour

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11	Dec 15	Development	Added functionality for studying words such as displaying lists, getting the words, etc. Ran into issue making a new window as Qt has specifications within the file that need to be met and I forgot about them.	3 hours
12	Dec 16	Development	Added more than one study method. Ran into issue when switching between multiple panels in the main window of the project.	2 hours
13	Dec 16	Development	Ensured the easiness factor was always in the accepted range so that it wouldn't throw an error when attempting to add to the sql database	30 minutes
14	Dec 17	Development	Added the option to view all the words and definitions in a list	1 hour
15	Dec 17	Development	Began adding the ability to use ai for the creation of a list. Ran into issues with using environmental variables for the api key. Also added the ability to delete a list.	3 hours
16	Dec 18	Development	Added two distinct themes for the user to be able to use. Ran into issues with style sheets because of the new syntax. Took some rereading to get it to work again	2 hours
17	Dec 18	Development	Worked on making sure the user can't add multiple of the same word to the same list	1 hour
18	Dec 18	Development	Cleaned up the ui so it wouldn't look so jagged. Again had to look into how to use style sheets and different Qt methods to get everything to work smoothly	1 hour
19	Dec 19	Development	Tried to work more API keys for ai. Could not get google gemini to work	1 hour

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			and OpenAI is paid so I left it for the future	
20	Dec 26	Development	Added another study method for the user. Ran into issues displaying whether the user was correct. Figured it out eventually, it an issue with order of the code	2 hours
21	Dec 26	Development	Made sure everything displayed was in the correct order, including the ui. Fixed a bug where the ui was inconsistent when starting the application	1 hour
22	Dec 26	Development	Made sure bug/error handling is done through native Qt methods to make sure they work all the time	30 minutes
23	Dec 31	Design	Worked on UML diagram for all of the classes in my program	1 hour
24	Jan 1	Design	Added the ERD diagram of the sql database after generating it with Database Visualizer	30 minutes

## 2.2: Data Structures

ERD Diagram



## 2.4: Algorithms:

### UML Diagram

