

Python Project

Our software, designed for a school, will allow the user to deal with student data and eventually save a "database" to a text file with values separated by commas.

First the program will ask the user to enter the name of the dataset that they want to use. It is also specified to enter the extension .txt.

Then, the software will present the list of tasks that the user can carry out with the dataset.

Specifically:

- 1) Add a new record
- 2) Delete a record
- 3) Edit a record
- 4) Search a student by name
- 5) Sort students by grades
- 6) Save and exit
- 7) Exit without saving

Adding a new record prompts the user to enter the new student's information (i.e name, address, class, and grades).

Deleting a record prompts the user to enter the index of the student to be deleted.

Editing a record prompts the user to enter the index of the student to be edited. Then the user is prompted for the category to be modified and the new information.

Searching a student prompts the user to specify whether they want to search on first or last name, and then prompts for the name to search.

Sorting students by grades prompts the user to enter the subject which they would like to sort on.

After every task the program will show again the seven options, so that the user can carry out multiple tasks.

Once the user is satisfied with all modifications, they can enter 6 to save everything in the text file. On the other hand, if some mistakes have been committed, the user can simply enter 7 to exit without saving.

This program has been implemented by three students, who divided duties in the following way:

- James Khalsa developed the program structure, class basics, and the menu.
- Luca Sipoteanu developed the edit and sort functions, as well as assisting with file I/O.
- Benedetta Felici developed the search and delete functions, and wrote the report.

All of us feel this was a fair division of labor, and that everyone pulled their weight according to their previous skill.