

Use Case 0: Display Menu

Primary Actor: User

Preconditions: The application is running.

Main Success Scenario:

1. The system displays a text-based menu with numeric options for the different functionalities.
2. The user views the options and selects one by entering the corresponding number.
3. The system acknowledges the selection and proceeds to the selected functionality.

Postconditions: The system is ready to perform the user-selected functionality.

Use Case 1: Load File into Memory

Primary Actor: User

Preconditions: The display menu has been shown to the user.

Main Success Scenario:

1. The user selects the option to load a file.
2. The system prompts the user to enter the filename.
3. The user enters the filename and confirms the action.
4. The system loads the file into memory.

Extensions: 4a. If the file does not exist or cannot be read:

- The system informs the user of the error.
- The system prompts the user to enter a new filename.

Postconditions: The file content is stored in the system's memory.

Use Case 2: Sort by Last Name

Primary Actor: User

Preconditions: A file has been loaded into memory.

Main Success Scenario:

1. The user selects the option to sort the file by the last name.
2. The system prompts the user to choose ascending or descending order.
3. The user selects the desired order.
4. The system sorts the records by last name in the specified order.

Postconditions: The records in the file are sorted as per the user's selection.

Use Case 3: Save the Sorted File

Primary Actor: User

Preconditions: The file has been sorted by the last name.

Main Success Scenario:

1. The user selects the option to save the sorted file.
2. The system prompts the user to enter a filename for the sorted file.
3. The user enters the filename and confirms the action.
4. The system saves the sorted records to the specified file.

Extensions: 4a. If there is an issue saving the file (e.g., insufficient permissions, disk space):

- The system informs the user of the error.

- The system prompts the user to enter a new filename or cancel the save operation.

Postconditions: The sorted file is saved on the system.

Use Case 4: Exit

Primary Actor: User

Preconditions: The application is running.

Main Success Scenario:

1. The user selects the option to exit the application.
2. The system checks if there are any unsaved changes.
3. If unsaved changes are detected, the system prompts the user to save them before exiting.
4. The user decides whether to save the changes or exit without saving.
5. The system performs the action as per the user's decision and then exits.

Postconditions: The application is closed.