

Le Duc - Developer Guide

Target User

- **Problem Scope:** Organize a students school tasks and non-academic tasks.
- **Value Proposition:** A student will be able to better manage their time, and be more productive.

User Stories

User Stories	Priority
As a student, I want to sort my task by type of task/by date/by description/by tag	Must Have
As a student, I want to prioritize different task	Must Have
As a student, I want to have recurrent task	Must Have
As a student, I want to display the task by day/week/month/year	Must Have
As a student, I want to edit a task	Must Have
As a student, I want to a better find feature (fuzzy matching)	Must Have
As a student, I want to postpone a task	Must Have
As a student, I want to have shortcut	Must Have
As a student, I want to display two or more different task list (for example professional and personal)	Must Have
As a student, I want the app to send me an email about my task	Nice-To-Have
As a student, I want to display only the task that hasn't been done yet	Nice-To-Have
As a student, I want the app to alarm me when a deadline is near	Nice-To-Have
As a student, I want to import from other task list	Nice-To-Have
As a student, I want to have subtask	Nice-To-Have
As a student, I want to see which task was done late, which task hadn't been done and which task was done on time	Nice-To-Have
As a student, I want to set a reminder	Nice-To-Have
As a student, I want to see my progression	Nice-To-Have
As a student, I want to add an excepted time	Nice-To-Have
As a student, I want to see the time left until the allocated time for that task is over	Nice-To-Have
As a student, I want to know the location, the address	Nice-To-Have

User Stories	Priority
As a student, I want to combine two tasks	Nice-To-Have
As a student, I want to visualize the task (GUI)	Not Useful
As a student, I want to have a login and a password or have a profile	Not Useful
As a student, I want to customize the welcome message	Not Useful
As a student, I want to have secret task	Not Useful
As a student, I want to have shared task	Not Useful
As a student, I want to delete a profile (like an admin)	Not Useful
As a student, I want to have some statistics	Not Useful
As a student, I want to see others students task	Not Useful
As a student, I want to have a message feature	Not Useful

Use Cases

- **Edit Command:**

- **System:** Le Duc
- **Actor:** High school student
- **Use Case:** Modify task
 - User will type “edit”
 - Le Duc will list the entire task list
 - User type the index of the task
 - Le Duc asks which part will be modified if it is not a Todo task
 - User answer and modify

- **Shortcut:**

- **System:** Le Duc
- **Actor:** High school student
- **Use Case:** Create shortcut
 - User type “shortcut”
 - Le Duc will show the first command to be modified
 - User type the shortcut for that command
 - Le Duc will show the second command to be modified
 - User type the shortcut for that command
 - ...
 - Le Duc will show the k command to be modified

- User type the shortcut for that command
 - Le Duc prompt an error, because there is a conflict between two shortcuts, and will ask to enter a new shortcut
 - User type another shortcut for that command
 - ...
 - Le Duc shows all the shortcuts
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Non-functional requirements

- **Task list size requirement:** The user is a super busy students, so he will have a lot of task. Size of task list possibly infinite (use of ArrayList, depends on the computer and the storage doesn't use much as it is a written file).
 - **Quality requirement:** The system is easy to understand and to be handled by a new user.
 - **Mastery requirement:** The system is easy to be mastered, the typing of new task should be easy and fast.
 - **Disaster recovery requirement:** If the system crash, the user shall find all his tasks in the storage file.
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Glossary

- **Fuzzy matching:** When finding a description with a keyword, if the keyword doesn't fit any description, the fuzzy matching will try to find descriptions that are close to the keyword.
 - **Recurrent task:** A task that repeat every day/week/month...
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Implementation

Shortcut

The shortcut mechanism is done by the `ShortcutCommand`. As every other command, it extends `Command` with a `HashSet` containing all the command's shortcut name and another `HashSet` containing all the default command's shortcut name. Others commands include now a static attribute named `shortcut` that correspond to the command's shortcut. It implements these following methods:

- `ShortcutCommand#setOneShortcut` — set the shortcut of one command
 - `ShortcutCommand#initializedSetShortcut` — initialized the `HashSet` contains all the default command's shortcut name
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There are three cases:

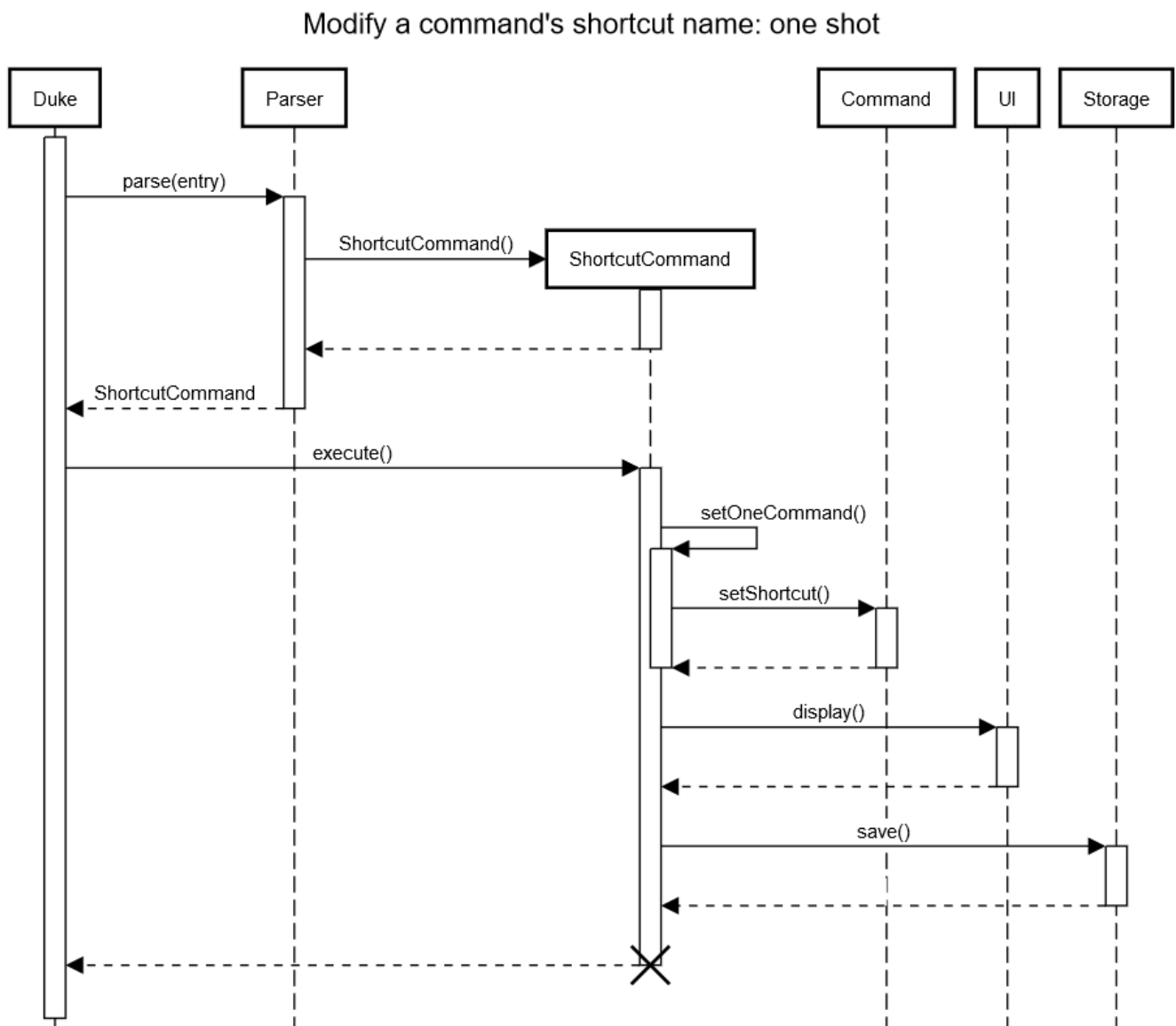
- one shot one command: The user write the command for the shortcut in one line
- multi step one command: The user write which command he wants to add a shortcut to, then the console ask what is the shortcut, and the user write the name of the shortcut
- multi step every command: The user asks the console that he wants to modify all the command, and the console will show one by one every command, and the user will modify one by one each command.

When the user launches the application, the program will read the config file, then set all shortcuts to previous shortcuts that the user has decided. If the user has not decided to customized shortcuts, it will be the default shortcut.

These following diagram show how the 3 cases were implemented:

One shot one command

The user type the "entry" (not shown in the sequence diagram) as `shortcut CommandName ShortcutName`.

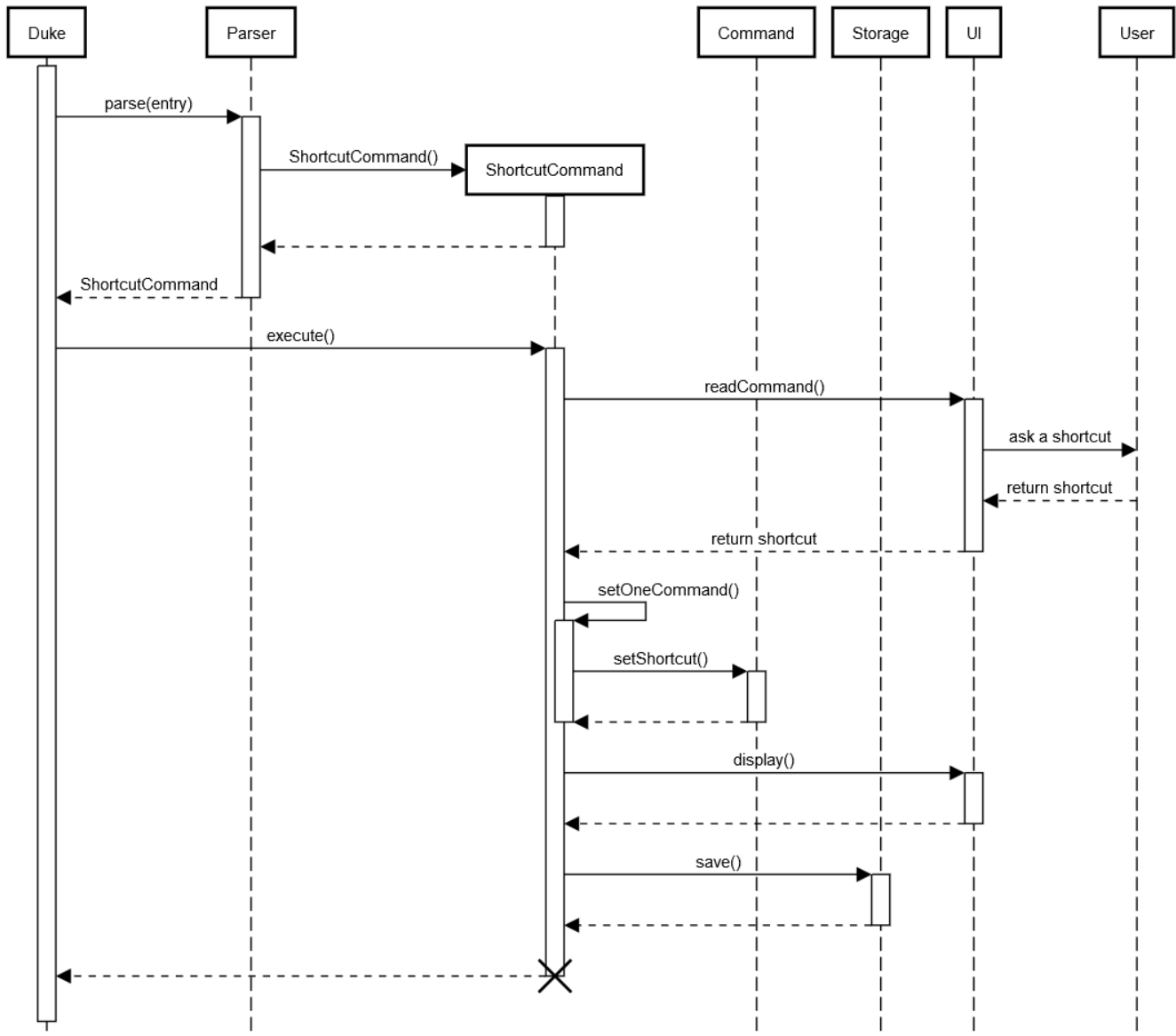


The method `setShortcut` is static, thus an object `Command` won't be created

Multi-step one command

The user type the "entry" (not shown in the sequence diagram) as `shortcut CommandName`. Then the console will ask what will be the new name for the shortcut.

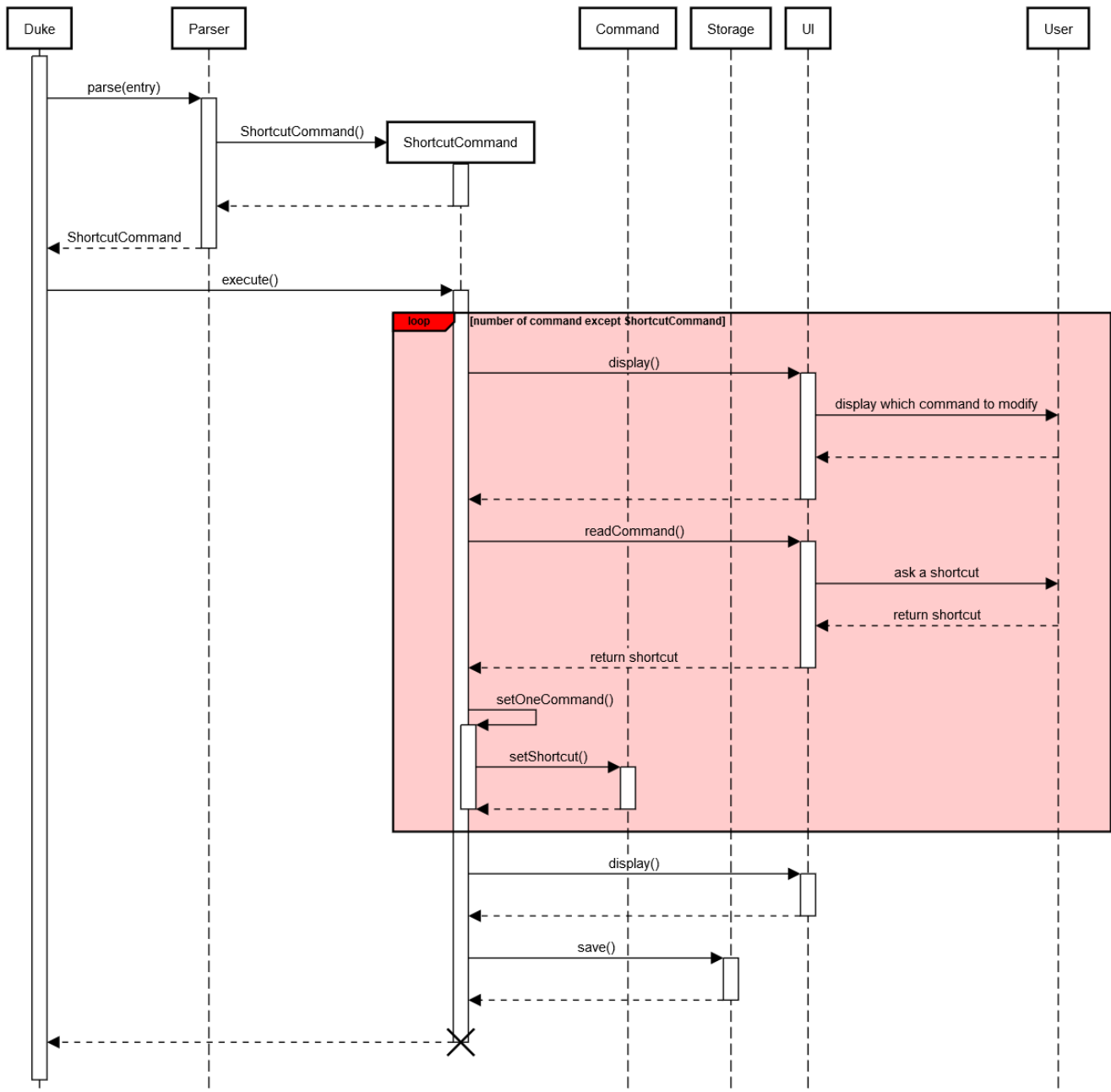
Modify a command's shortcut name: one command



Multi-step every command

The user type the "entry" (not shown in the sequence diagram) as `shortcut`. The console will display one command's name, then the console will ask what will be the new name for the shortcut. The console will repeat until every command have a shortcut.

Modify a command's shortcut name: every command



Consideration

- The config file that contains all the name for the shortcut can be edit by hand, because it is faster to edit the config file than doing it via the application.
- When a command's shortcut is set, the default shortcut can still be used