Assignment 3 – IDE

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1. Requirements Analysis

# Assignment Specification

Show observer design pattern and another behavioral design pattern on an application.

# Functional Requirements

The functional requirements are the following:

* Users can start the app by pressing the icon.
* Users can open a new file.
* Users can save the file.
* Users can open already existing files.
* Users can copy.
* Users can paste.
* Users can cut.
* Users can undo.
* Users can see info about application.

# Non-functional Requirements

The non-functional requirements are the following:

* The application should be scalable. Application starts by pressing the shortcut.

2. Use-Case Model

*A diagram of a person

Description automatically generated with medium confidence*

Use case: Open existing file.

Primary actor: User.

Main success scenario: File exists, and you can open it.

Extensions: The file will not pe displayed by the operating system if it doesn’t exist.

4. UML Sequence Diagrams

A diagram of a user interface

Description automatically generated with low confidence

5. Class Design

**5.1 Design Patterns Description**

* Memento: undo feature after copy, paste or cut.
* Observer pattern: printing in the file that the mail was changed when a new file is opened, or an already existing file is opened.

**5.2 UML Class Diagram**

A picture containing text, diagram, screenshot, parallel

Description automatically generated

6. Data Model

The data model is formed of 4 classes: CUPSA\_IDE, Memento, Observable and the Observer class.

7. Bibliography

* <https://docs.python.org/3/>
* <https://refactoring.guru/design-patterns>
* <https://www.youtube.com/playlist?list=PLzMcBGfZo4-lB8MZfHPLTEHO9zJDDLpYj>
* <https://www.youtube.com/watch?v=sm1mokevMWk&ab_channel=TechWithTim>