Final Project Methodology

Digital Forensics

Professor. Hansen

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Gavin Lau

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1. Introduction

1.1 Purpose of the Document

The document will describe the process architecture of the scripting final project for this class. These process details include how the script will handle its processes, the result that they script will generate, and a detailed explanation of use-cases in all scenarios.

1.2 Scope of Development Project

This methodology report document provides an architectural overview of the script for recovering deleted files on a computer. The script will be developed in Python and will be able to run on Windows systems.

The script will be able to run on command prompt by the user. The user will be able to see a plain-text UI and allows the user to enter some input then recover depends on the input.

2. Architectural Representation

2.1 Overview of Modules and Components

2.1.1 User Interface

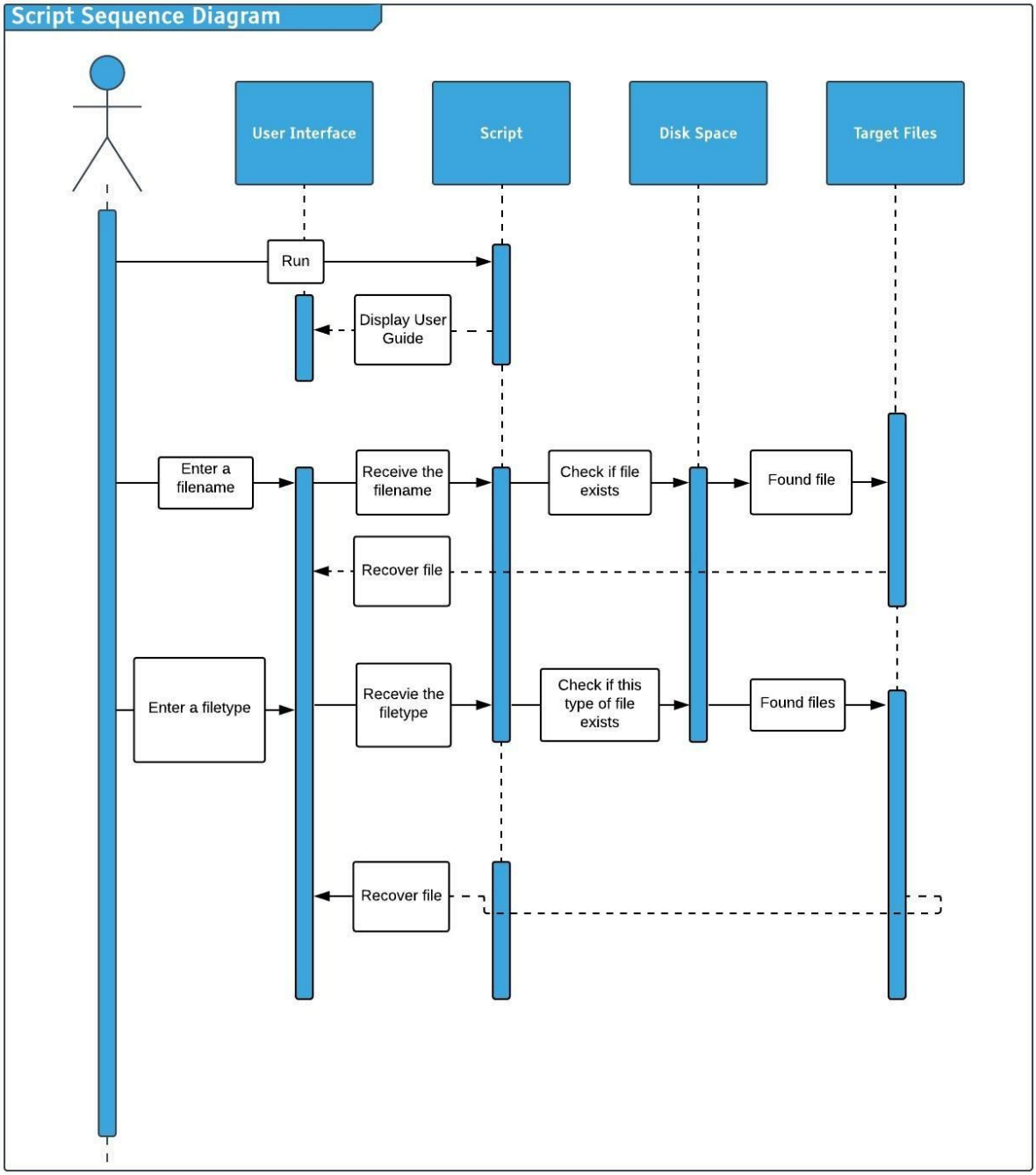
The user interface provides an easy-to-use interface for the user to use the script. The user interface will provide user guides , which gives selections for the user to pick. Then the script will run based on the user's input.

2.1.2 Script Functionalities

The script will identify whether the input files types or names are found from the deleted files. Then the script will try to recover the deleted files to a location. If none related files are found, the script will return "None found".

2.2 Script Sequence Diagram

Figure 1: Script Sequence Diagram



3. Use-Case View

3.1 Architecturally-Significant Use Cases

A description of the use-case view of the script architecture. The Use Case View is important input to the selection of the set of scenarios and/or use cases that are the focus of an iteration. It describes the set of scenarios and/or use cases that represent some significant, central functionality. It also describes the set of scenarios and/or use cases that have a substantial architectural coverage (that exercise many architectural elements) or that stress or illustrate a specific, delicate point of the architecture.

The script for recovering deleted files use cases are:
- Run Script: the user runs the script.

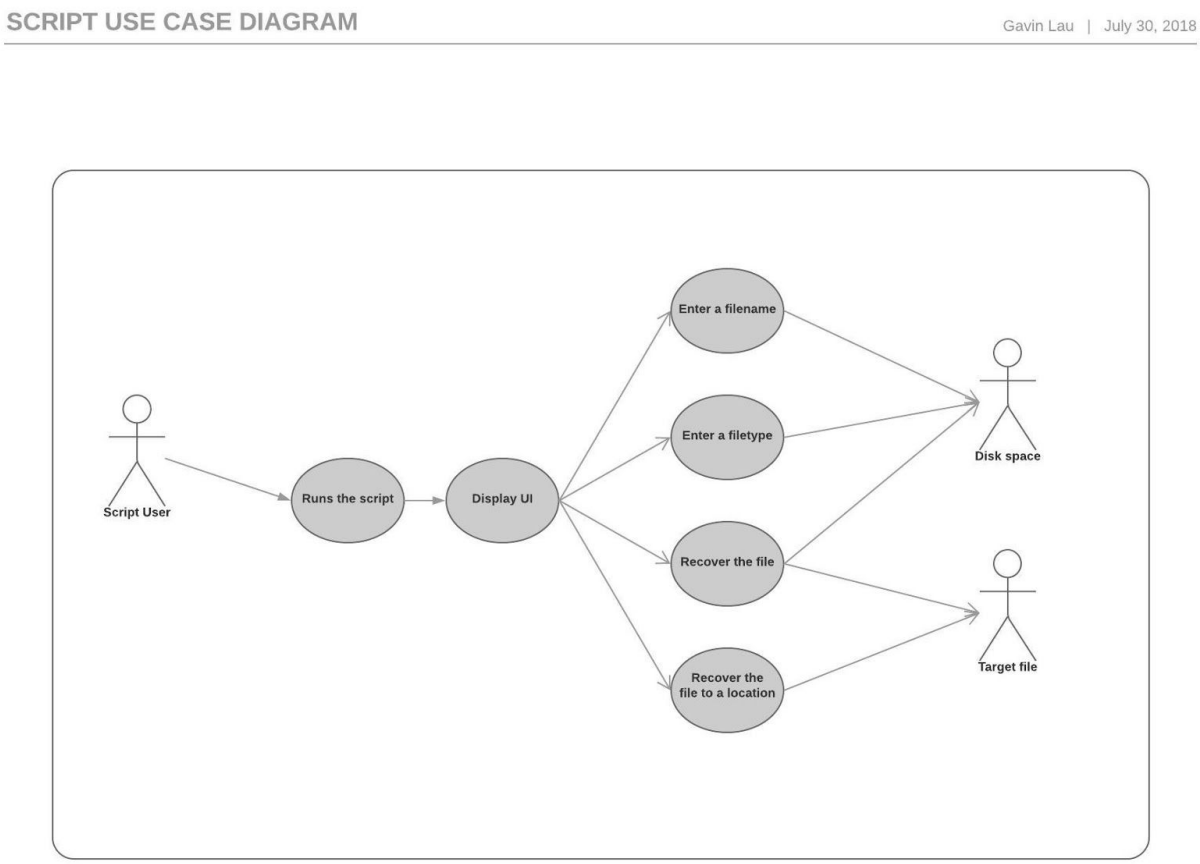
- Display UI: the user runs the script then the UI shows.

- Enter a filename or a filetype: the user enters a filename or a filetype for the script to recover.

- Script returns files: if a related file is found, then the script will recover to a location. If none, returns none.

These use cases are initiated by the user.

Figure 2: Use Case Diagram

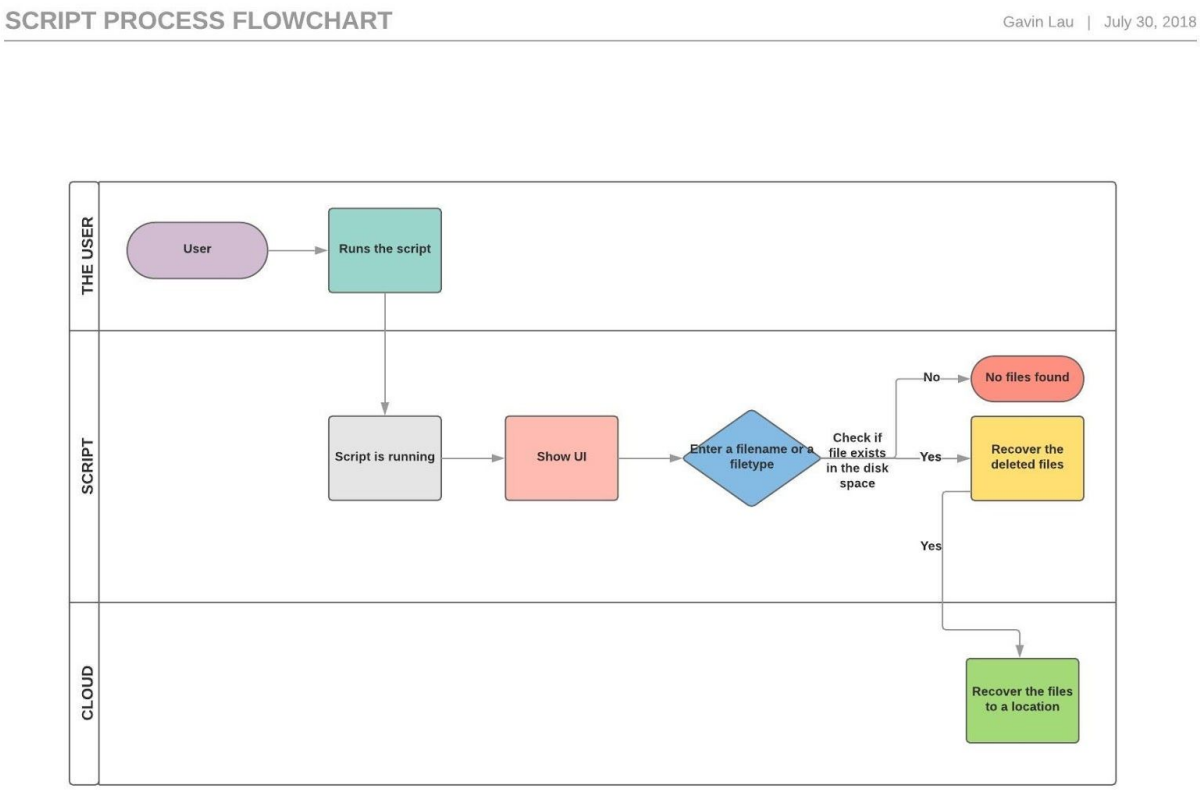


4. Process View

4.1 Process Flow Chart Diagram

As described above, the script will react based on the user's selection. Below is the process flowchart that shows what the script does based on the user's action.

Figure 3: Script process flowchart



5. Conclusion

In conclusion, the user can use the script to try to recover the targeted file by entering the filename or the filetype.