CHAPTER IV
ANALYSIS AND DESIGN

4.1 Analysis

4.1.1 Use Case Diagram

Figure 4.1 Use Case Diagram

Figure 4.1.1 Use Case Diagram
4.2 Design

4.2.1 Class Diagram

First, the launcher will call the main menu class to be opened. Then, user need to browse the pictures for detection and click calculate. After clicking calculate, result class will be opened and call the OCR class. Classes, such as: ImageFiltering, MedianFilter, ImageProc, and MatrixProc will be called several times by OCR during this process to show the detection result in form of text, then result class will call DamerauLevehnstein class to obtain similarity percentage.

![Diagram](image)

*Figure 4.2.1 Full Class Diagram*