Canonical Group Project Analysis

Alyssa-Maritza V Rondón

Jéssica Helena Soares de Pina

Danté Lukasz Wilbrink

Fontys University of Applied Sciences

# Functional and Non-Functional Requirements

For this project the functional and non-functional requirements go as follows:

## Functional Requirements

* The user can generate PDFs with a custom number of bytes for testing.
* The generated image has a very low error rate: from 0 to 10%.
* Optionally user can generate custom images.

## Non-Functional Requirements

* The program is a robust application available offline,
* The program works without crashes,
* The program is responsive and optimized,
* PDF generation should not take longer than 5 seconds,
* PDF file is recognized by Adobe Acrobat.

# Use Cases

## Use Case: User Opens the Program

* Primary Actor: User
* Scope: PDF Generator
* Level: User goal

### Stakeholder & Interests:

* User wants to open the program to use it

### Preconditions:

* User has the program installed in his machine

### Guarantees:

* Application works correctly and does not crash the computer

### Main success scenario:

* User double clicks the Icon
* System runs the application
* The application is ready for use

### Extensions:

#### Application crashes

* Error message is displayed

## Use Case: User generates a custom PDF file

* Primary Actor: User
* Scope: PDF Generator
* Level: User goal

### Stakeholder & Interests:

* User will create a PDF file with a custom size.

### Preconditions:

* User has the program installed in his machine
* User has the application running

### Guarantees:

* Application works correctly and does not crash by itself
* Application does not slow down the computer while generating a large file

### Main success scenario:

* User fills the form where they specify the size and unit (Bytes, Kilobytes etc.),
* User presses the generate button,
* In less than 5 seconds, the application will prompt the generated PDF location on screen,
* User can save PDF in desired location.

### Extensions:

#### Application does not generate a PDF

* Error message is displayed with an option to retry

#### Application crashes while generating a PDF

* Error message is displayed with information about the crash

#### User attempts to generate a pdf that is too small

* Application will highlight the number and prevent the PDF from being generated

## Conceptual Diagram

Acceptance Testing

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| **STEP ID** | **STEP DESCRIPTION** | **TEST DATE** | | **EXPECTED RESULTS** | | | **ACTUAL RESULTS** | | **PASS / FAIL** | | **ADDITIONAL NOTES** | |
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