Silesian University of Technology

Binary file handling tool

Test Plan

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Table of Contents

1. Document History

Version	Date	Author	Approved by	Additional information
0.1.0	2020/11/24	Anna Brzezina, Katarzyna Chowańska, Artur Porębski	Anna Brzezina, Katarzyna Chowańska, Artur Porębski	creating the document, logical division of the document
0.2.0	2020/11/26	Anna Brzezina	Anna Brzezina, Katarzyna Chowańska	adding the scope table, adding a flowchart for the testing schedule
1.0.0	2020/11/27	Anna Brzezina, Katarzyna Chowańska	—	release candidate

2. Introduction

The scope of this document is to present the test plan regarding the project, which has been drawn up during a meeting conducted on November 24, 2020. This document includes the team members responsible for software testing, a table summarizing all the tests which are to be performed, as well as a strategy and a schedule of the tests in form of a flow chart.

2.1. Dictionary

The following notions will be used in this document:

Term	Explanation	Synonyms
Batch processing	Processing of several input files in a parallel manner (at the same time).	parallel processing
Binary file	A file stored in binary format	input file
GUI	Graphical User Interface — A form of user interface that allows users to interact with electronic devices through graphical icons.	interface
Input data	Data provided by the User which will provide additional information regarding processing of the input file.	–
Input file	A binary file which will be uploaded to the program in order to be processed and transformed into a readable text file.	input
Output file	A result given by the program, provided that proper input data and a proper input file (or files) are given.	output
Software	The product developed by our Team.	program
TP	Testing Plan — abbreviation of the document's name.	–
User	Any person using the produced software for their or their own business purposes.	person

3. Testing Team

QA Manager: Artur Porębski
Testers: Anna Brzezina, Mateusz Urbanek

4. Scope of testing

SCOPE			
Functional Testing	Testing Controller	(**REQ 1** - func (a,b)) File uploading	(**REQ 1.1**) Single file upload
			(**REQ 1.2**) Multiple file upload
		(**REQ 1** - func (c)) File saving	(**REQ 1.3**) Single file saving
			(**REQ 1.3**) Multiple file saving
	Testing View / GUI	(**REQ 2.2** - func (c)) Input / Output file displaying	
		(**REQ 1**, **REQ 2** - func (a,b)) File validation	(**REQ 1.2b**) Handling non-binary files
Non Functional Testing		(**REQ 2**) User interface	
		(**REQ 4.1** - nofunc (a)) Training time of average user	
		(**REQ 4.3** - nofunc (c)) Execution time testing	
		(**REQ 4.2** - nofunc (b)) Time to use a feature (click count)	

5. Testing strategy

Only functions operating on files will be tested using Unit Testing. The rest of the functions will be tested using Integration Testing or System Testing. Manual Testing and Automated Testing will be used and the test cases will be created simultaneously with the code. The results will be stored in a testing report alongside with test cases.

5.1. Unit testing

The focus will be mainly put on testing the functions which are operating on files. To complete this, control files will be used, of which we know their structure. Automated tests will be run for all the unit tests.

Participants

- Mateusz Urbanek
- Artur Porębski

5.2. Integration testing

The main focus will be set on testing the User Interface. Manual Tests for testing Graphical User Interface will be carried out. Also whether the functions are compatible with each other will be tested - this will be done using Automated Testing.

Participants

- Anna Brzezina
- Artur Porębski

5.3. System testing

Expanded Integration Testing. These are tests preceding the deploy of the release version of the program. Every feature of the program will be tested. Manual tests will be used to test whether all the functions are working properly.

Participants

- Mateusz Urbanek
- Anna Brzezina
- Artur Porębski

6. Testing Schedule

Testing will be conducted while writing the code to minimize the necessary time. As soon as a new function is written, testing will be started. In the first phase of testing the focus will be set on testing functions and classes responsible for file and data manipulation. Finally GUI will be the main focus and in the final phase System Testing will be completed. The whole schedule of the tests can be presented using the following Flowchart:

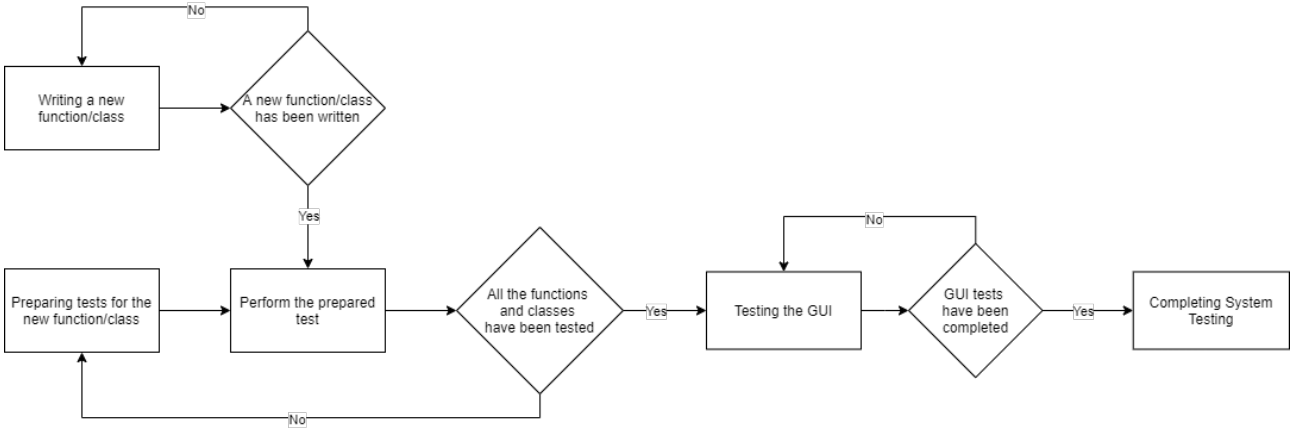

Figure 1: Flowchart showing the testing schedule

7. Testing tools

- Visual Studio Code
- Pytest library
- GitHub Actions