TEST REPORT

FOR FACTORIAL

CALCULATOR

EXPLORATORY

TESTING

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1. Introduction

Purpose of the document

The document is intended to describe the activities performed as part of the exploratory tests of the Factorial Calculator located at https://qainterview.pythonanywhere.com/. The purpose of testing was to identify potential functionality issues, discover unexpected results with various use cases and user inputs, and provide information about the quality of the software.

General description of the subject of the tests

Factorial Calculator is a simple application for calculating factorials from integers. It consists of one site with:

- one text field,
- one button calculation,
- three hyperlinks,
- copyright messages.

Document scope

Description and evaluation of the performed testing activities along with the scope of the tests performer and recommendations for further testing activities.

2. Scope of tests

The scope of the tests includes testing GUI, testing usability and the functionality of the Factorial Calculator application website: https://qainterview.pythonanywhere.com/

Functional tests were planned and performed.

There was no requirement specification.

3. Test environment

Tools used in the project:

Name of process	Tool
Defect management	JIRA
Test reporting	Microsoft Word
Screenshots / Video capture	ShareX

Desktop web browsers used in the tests:

Name of the browsers	Version	Operation system
Google Chrome	112.0.5615.121 (64 bit)	Windows 10
Mozilla Firefox	112.0 (64 bit)	Windows 10
Microsoft Edge	112.0.1722.48 (64 bit)	Windows 10

4. Test approach. Used methods and techniques.

The main approach to testing was exploratory testing, without test cases.
Experience-based testing and error guessing were used.
Tester's skills and intuition as well as experience with similar applications or technologies were used.
The tester acted independently, trying different combinations of inputs and observing the results.

5. Non-conformance reports

Number of non-compliances/suggestions reported

As part of the exploratory testing session, 16 bugs were found, a detailed description of which is available in section 6.

Classification of reported non-compliances by priority

As part of the exploratory testing session, the inconsistencies found were classified by priority. The table below presents the classification and description of non-compliance reports by priority.

Priority Level	**Priority Description**	**Number of reported defects**
Highest	This bug must be fixed immediately; the product cannot ship with this bug.	-
High	These are important problems that should be fixed as soon as possible.	5
Medium	The problem should be fixed within the time available. If the bug does not delay the shipping date, then fix it.	5

Low	It is not essential (at this time) that these bugs be addressed. Fix these bugs after all other bugs have been fixed.	4
Lowest	Minor fixes/improvements	2

Classification of reported non-compliances by severity

As part of the exploratory testing session, the inconsistencies found were classified by severity. The table below presents the classification and description of non-compliance reports by severity.

Severity Level	Severity Description	Number of reported defects
Critical	The module/product crashes or the bug causes non-recoverable conditions. System crashes, GP Faults, database or file corruption, potential data loss, program hangs requiring reboot are all examples of a severity 1.	-
High	Major system components are unusable due to failure or incorrect functionality. Severity 2 bugs cause serious problems such as a lack of functionality, or insufficient or unclear error messages that can significantly impact the user, prevent other areas of the app from being tested, etc. Severity 2 bugs can have a workaround, but the workaround is inconvenient or difficult.	2
Medium	Incorrect functionality of component or process. There is a simple workaround for the bug if it is severity 3.	9
Minor	Typos and misspellings are severity level 4.	5

7. Defects found report

FC-1 Possibility of entering any number of "0" digits into the calculator
FC-2 The application does not work when entering negative numbers
FC-3 Possibility of entering a number with leading zeros
FC-4 No data limit in calculator's field
FC-5 Terms and Conditions link incorrectly redirected
FC-6 Privacy link incorrectly redirected
FC-7 The calculator does not work from value 992 onwards
FC-8 Grammatical errors in the messages in the 'Terms and Conditions' and 'Privacy' pages
FC-9 Numbers above 170 have 'Infinity' as result
FC-10 The calculator does not support floating-point integers
FC-11 The 'Enter' button does not work in the form
FC-12 Typo in the website title
FC-13 The copyright format is incorrect
FC-14 Refreshing using the browser's button is invalid
FC-15 Uncleared data after returning to the calculator from another page using the 'back' button
FC-16 No display of information about 'cookies'

*Detailed descriptions of reported bugs with attachments are in a separate file

8. Recommendation and evaluation of the tested application

Based on the tests carried out, unfortunately, we do not recommend the "Factorial Calculator" application due to its serious errors and shortcomings. Planned and performed tests showed errors in its basic functionality. Some of them have been classified as critical errors, which may negatively affect users.

The "Factorial Calculator" application offers a basic but limited factorial calculation function. Other useful features are missing, such as calculation histories, handling negative numbers, handling floating point integers, and saving results.

Inconsistencies were observed in the tested main functionality of the application, but also errors related to usability and errors in the GUI layer were detected. These are errors related to refreshing the page, cleaning the form, operating links, information about cookies, working in different browsers and typos.

Post-correction confirmation tests for reported non-conformances, retests of requests, and regression tests should be planned. The estimated time for the above tests is 1 man-hour.