Test Plan

Project – Google Translate

Preparation date –2.4.2024

1. Introduction

1.1 General information

This document describes the methods and procedures that will be used in the testing process of the google translate. It is meant to be used as a manual during testing works. It describes the procedure of the testing process. The test plan is intended for project managers, product developers, and QA engineers. The objective of the testing activities is to check functions and features of the google translator.

1.2 Purpose

This Test Plan document for the google translate supports the following objectives:

● Identify existing information and components to be tested.

● Recommendation and description of the testing strategies to be employed.

● Identify required resources and provide a test effort estimate

● List the test project deliverable elements. The results of test execution will be sent to the customer as reports. All found bugs will be tracked.

2. Scope

Testing of google translate is in the scope of this test plan. The following components and functions would be tested:

1.Accuracy

2. fluency

3. completeness

4. language coverage

5. feature functionality

6. performance

7. scalability

3. Test Plan and Strategy

3.1 Objective:

To ensure the Google Translate delivers accurate, fluent, and reliable translations across its supported languages and features.

3.2 Target Audience:

This plan focuses on testing the google translate for casual users, but can be adapted for other audiences (e.g., professional translators).

3.3 Testing Approach:

A combination of manual and automated testing will be used.

3.4 Test Scope:

This plan covers core functionalities and excludes advanced features.

3.4.1 Functionality Testing

Test Cases:

Text Translation:

Accuracy: Translate various texts (sentences, paragraphs, documents) across different languages and domains (general, technical, etc.). Compare translations to human-generated ones and evaluate for correctness, naturalness, and cultural appropriateness.

Fluency: Assess readability and flow of translated text. Check for unnatural phrasing, awkward sentence structure, and grammatical errors.

Completeness: Ensure all parts of the input text are translated, including special characters, formatting, and context.

Voice Translation:

Accuracy: Test translation accuracy for spoken input in various languages and accents. Compare to text translation results.

Fluency: Evaluate naturalness and clarity of spoken translations.

Usability: Test ease of use of voice translation feature, including voice recognition accuracy and recording/playback controls.

Other Features:

Test image translation, website translation, language detection, and offline translation features for functionality and accuracy.

Test Data:

Use a diverse set of texts (short, long, simple, complex) from various domains and languages.

Utilize pre-recorded audio samples for voice translation testing.

Include test cases with special characters, formatting, and contextual nuances.

Pass/Fail Criteria:

Translations must be accurate, fluent, and complete with minor errors allowed depending on complexity.

Voice translations should be clear and understandable with minimal errors.

Features should function as intended without major crashes or bugs.

3.4.2 Non-Functional Testing

Test Cases:

Performance: Measure translation speed, load times, and responsiveness under different network conditions and device configurations.

Scalability: Simulate high volumes of concurrent users and assess system stability and performance.

Security: Test for potential vulnerabilities (unauthorized access, data breaches) and ensure secure data handling practices.

Accessibility: Evaluate interface accessibility for users with disabilities (screen readers, voice control).

Pass/Fail Criteria:

Translations should occur within reasonable timeframes and load quickly even under peak usage.

System should handle high loads without significant performance degradation.

No critical security vulnerabilities should be identified.

interface should be accessible to users with disabilities.

Interface and user experience should be culturally appropriate for different regions.

Additional Considerations:

Regression Testing: Regularly retest core functionalities after updates to ensure no regressions.

User Testing: Conduct usability testing with real users to gather feedback on the app's interface and overall experience.

Reporting: Document all test results, identify issues, and track their resolution.

Prioritization: Prioritize test cases based on impact and risk to ensure efficient testing.

4. Schedules for Testing

Test Procedure Test procedure assumes the next points:

- Reporting of found bugs.

Various aspects of the tested software should be checked; this requires executing of different testing types.

The main testing types that would be executed

- Functional Testing
- UI Testing

● Usability Testing

● Compatibility Testing

● Regression testing

● Retesting (during the second round if needed) It also will be checked how the software product is run on the browsers and devices that are supposed to support it, how it starts and stops, and how much time it needs to launch.

5. Resources

5.1 The list of the browsers

Name of the browser - Chrome

Version - Latest

5.2 The list of the devices

Name of the device - Android devices All supported OS

6. Test Environment

6.1 Functional Testing Environment:

Devices:

Smartphones (Android, various models and screen sizes)

Desktop web browsers (Chrome, Edge)

Operating systems:

Latest versions of Android

Windows

Network conditions:

Stable Wi-Fi

Cellular networks (4G)

Input methods:

Text input

Voice input

Camera input (for text recognition)

6.2 Performance Testing Environment:

Hardware:

High-performance servers

Software:

Performance monitoring tools

Network:

High-bandwidth network

Tasks:

Translation of common phrases, word and documents

Additional Considerations:

Test data:

Diverse range of text samples in multiple languages

Texts with varying complexity and length

Domain-specific texts (e.g., medical, legal)

Test cases:

Cover various functional and non-functional requirements

Include positive and negative test cases

Use equivalence partitioning and boundary value analysis

7. Risks and Assumptions

7.1 Risks

- availability of devices
- new features and modification which have not been planned in advance
- changes in requirements
- delays in schedule

7.2 Assumptions

each release is accompanied by a note with information about implemented features and their impact on the system

- all blocker bugs receive the high priority status
- all the bugs found are fixed before the next release
- all documents are up-to-date and delivered to the testing team in time
- all necessary equipment and tools are provided and ready for testing

- the test schedule is reviewed in case there are any obstacles for testing

8. Entry and Exit Criteria

8.1 Entry Criteria

- the development phase has been finished
- requirements have been defined and approved
- test design and tests plan have been created
- the test environment has been set up
- all necessary resources are available.

8.2 Exit Criteria

- tests cases are executed
- the rate of tests cases passed is satisfactory
- failed test cases are not related to crucial functionality
- tests results have been accepted
- critical defects have been fixed.

9. Roles and Responsibilities

Project roles and responsibilities should be clearly defined and divided among the project staff. Commonly, the roles are as follows:

9.1 Project Manager

The Project Manager is responsible for managing the whole testing process. They approve all test documentation, considers budget and time terms, and provide necessary resources.

9.2 Test Lead

The Test Lead is responsible for collecting requirements, planning process, test activity monitoring, and project reporting.

9.3 Test Engineer

The Test Engineer is responsible for test case preparation and execution, as well as issue reporting.

10. Deliverables

- test plan
- test cases
- Bug reports and reports regarding the testing progress.

- Test summary