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Bauhaus- Universität Weimar

HANDOVER - 3
ERP

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Introduction

This document serves as a handover for the software engineering project assigned to our group. It outlines the testing procedures and provides a detailed account of the test cases executed during the black-and-white-box testing phases. The document aims to facilitate a smooth project transition to the next team, ensuring they have a clear understanding of the project's current state and the areas that require further development and testing.

Black-Box Testing

Approach

Black-box testing was conducted without prior knowledge of the internal workings of the code. Test cases were derived solely from the provided documentation and the observable behaviour of the program.

Testing Details:

This section of the handover document highlights the failed test cases identified during the black-box and white-box testing phases. The aim is to provide the next team with a clear understanding of the issues that need attention and to guide the refactoring process.

Test Case 1: Registered Companies List Display

- Issue: The system failed to display the registered companies list correctly for logged-in members. Instead, it allowed users to search for specific companies before logging in.
- Impact: This issue affects the privacy and security of the company data and undermines the user authentication process.
- Recommendation: Implement proper access controls to ensure that sensitive information is only available to authenticated users.

Test Case 4: Unique Login Credentials via Email

- Issue: The system did not send unique login credentials via email after registration.
- Impact: Users cannot receive their login information, preventing them from accessing the system.
- Recommendation: Verify the email integration functionality and ensure that the system generates and sends credentials reliably.

Test Case 9: Feedback on Resolved Queries

- Issue: Members were able to write feedback even if they didn't have a resolved query, but the feedback was saved regardless.
- Impact: This could lead to irrelevant feedback being stored and complicate the feedback analysis process.
- Recommendation: Add checks to verify the resolution status of a query before allowing feedback submission.

Test Case 18: Member Profile Update

- Issue: Users were unable to update their profile information.
- Impact: This restricts users from maintaining up-to-date personal information, which is critical for service personalization and communication.
- Recommendation: Review the profile management module and ensure that update operations are handled correctly.

White-Box Testing

Approach

White-box testing involved a thorough inspection of the codebase. This allowed us to define test cases that cover undocumented functionalities, edge cases, and potential crash scenarios.

Testing Details:

Test Case 2: Empty Comment Handling in CSV

- Issue: The system saved empty comments to the CSV file when it should have rejected them.
- Impact: This could lead to data quality issues and affect the integrity of the feedback system.
- Recommendation: Modify the *writeToCSV* method to include validation checks for empty inputs.

Test Case 8: Setting Empty Answers for Questions

- Issue: The system allowed the saving of empty answers into the CSV file.
- Impact: This could result in incomplete data records and affect the query resolution process.
- Recommendation: Implement input validation in the *setAnswerForQuestion* method to prevent empty answers from being saved.

Test Case 20: Company Registration with Missing Information

- Issue: The system permitted the registration of companies even when critical information, such as the username, was missing.
- Impact: This could lead to incomplete company profiles and potential issues with service delivery.
- Recommendation: Enhance the *registerCompany* method to check for the presence of all required fields before proceeding with registration.

Test Case 22: Validation of Empty Strings in Queries Object

- Issue: The system did not throw an *IllegalArgumentException* when attempting to set empty strings for questions and answers.
- Impact: This could allow the creation of invalid query objects, leading to potential errors in query management.

- Recommendation: Update the setters in the Queries class to throw exceptions when provided with invalid input.

Conclusion

The failed test cases point to areas where the system's data validation and error handling need improvement. Addressing these issues will be crucial for enhancing the system's reliability and user experience. The next team should prioritize these areas during the refactoring phase to ensure the robustness of the software.