Software Test Plan

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Test Plan Identifier

Master plan for LinkedIn website: TP_IN1.0

Introduction

This is the test plan for the LinkedIn website. LinkedIn is a social media platform mainly concerned with businesses recruitment that operates via a website and a mobile app. The platform serves professional networking and career development, with jobseekers creating profiles in the form of a CV and employers posting open vacancies. LinkedIn enables users (both employees and employers) to connect with each other in an online social network that represents real-world professional relationships. LinkedIn can also be used to plan offline/online events, join groups, write articles, post job opportunities, share photos and videos, and much more. LinkedIn's functionalities allow users to create profiles, which for employees typically consist of a resume depicting work experience, education, preparation, skills, and a personal photo. Employers can post job openings and search for potential applicants. Users can discover people and job opportunities recommended by someone in their network, constructed by people “connected to” or followed. They can also save jobs they want to apply for and follow many companies as well. Users can interact with each other in several ways: connections can interact by liking or commenting on others' posts as well as via direct messages. Additionally, LinkedIn Video now allows users to share videos with text and filters. As explained, the site includes many special features as well as basic features of social network such as login, search bar, filters, etc., which users frequently use for browsing. Therefore, testing must be performed to ensure that these features work properly to provide the best user experience and quality. The document supports some key objectives, which are as follows: define project information, define approach, identify testable/non-testable features, recommend and define test strategies, establish test schedule, define test risks, and list test deliverables.

The scope of this document is to test this system using a variety of methods, beginning with unit testing (software testing in which discrete software units/components are tested), followed by integration testing (software testing in which different software units/components are brought together as one large entity and the internal interface between them is validated), and finally system testing (software testing is where the entire system is tested as a whole).

Validating major system functionalities: Because the system contains a large number of features, selected features were prioritised for testing.

Software Risk Issues & Contingencies

1. **Schedule Risk:** Time constraints. This project should be finished within two months. There may not be enough time to fully test all system features. We will prioritise testing efforts in high-priority areas, ensuring that core features are thoroughly tested. Also, maximise test coverage within the project timeline. Although we will have a weekly meeting with team members to check in on this, we will continue with it.
2. **Functional Risks:** Errors or flaws in LinkedIn functionality can significantly impact user experience and satisfaction. We will develop comprehensive test cases covering key features of LinkedIn, including job posting, user feeds, etc.
3. **Lack of testing tools:** The system must be tested on a variety of levels, including performance, security, white box testing, integration testing, and so on. We do not have enough tools for this testing, but we will try to test the aspects that can be effectively evaluated with the tools we have on hand.
4. **Technical Risk:** LinkedIn server failures that impact production delivery can disrupt testing activities and project timelines. We will measure probability and impact. We will develop contingency plans and collaborate with LinkedIn technical teams to address these issues.
5. **Operational Risk:** Unclear or frequent changes in requirements can disrupt testing activities and lead to rework and delays in project delivery. We will ensure clear documentation of requirements and collaboration between team members for any change to minimize the impact of changes to test schedules and deliverables.
6. **Documentation Risks**: Incomplete or outdated documentation of test procedures, test cases, and requirements can lead to confusion, errors, and inefficiency in testing activities. We will regularly review and update testing documentation to ensure accuracy and comprehensiveness.
7. **Risks of scaling the project:** Expanding the scope of testing beyond initial requirements or goals may increase workload and delay project timelines. We will set clear boundaries and goals for testing activities. Regularly review and validate test scope against project objectives and priorities and implement change control processes to effectively manage scope changes.

8. **Accessibility Restrictions Risks:** A lack of independent testing environment and accessibility may occur. The timeline will be affected and will delay the rollout of testing and the team will be ramping up work to keep up.
9. **Natural Disaster Risk:** The probability of natural disasters, such as floods or severe weather events, is very low and will have a low impact on the continuity and success of projects. If any members are affected, we will redistribute the workload to the remaining team members to ensure project activities continue smoothly.

Features to be Tested

1. **Adding a Post:**
    - Description: Test the functionality for users to create and publish posts on their profile.
    - Risk Level: M (Medium) - Important for user engagement but may not directly affect core functionality.
2. **Interacting with a Post (Like, Comment, Share):**
    - Description: Test the ability for users to like, comment on, and share posts created by themselves or others.
    - Risk Level: H (High) - Critical for user engagement and platform interaction.
3. **Attaching an Event to the Post:**
    - Description: Test the feature allowing users to attach events, such as webinars or networking sessions, to their post.
    - Risk Level: M (Medium) - Enhances post content but may not be utilized by all users.
4. **Writing an Article:**
    - Description: Test the functionality for users to create, edit and publish long-form articles on their profile.
    - Risk Level: M (Medium) - Important for users sharing in-depth content but may not be a primary use case for all users.
5. **Posting a Job Offer:**
    - Description: Test the process of creating and publishing job offers on the platform.

- Risk Level: H (High) - Crucial for companies and recruiters utilizing LinkedIn for hiring purposes.

6. **Applying for a Job Offer:**

   - Description: Test the functionality for users to search for and apply to job offers posted on the platform.
   - Risk Level: H (High) - Critical for users seeking job opportunities and career advancement.

7. **Managing Posted Job Offers:**

   - Description: Test the features for companies and recruiters to manage and update job offers they have posted on the platform.
   - Risk Level: M (Medium) - Important for companies but may not directly impact individual user experience.

8. **Adding Data to Personal Profile:**

   - Description: Test the functionality for users to add personal information, work experience, education, skills, etc., on their profile.
   - Risk Level: H (High) - Core functionality that directly impacts user engagement and networking.

9. **Profile Editing:**

   - Description: Test the ability for users to edit their profile information, including personal details, work experience, education, and skills.
   - Risk Level: H (High) - Core functionality that directly impacts user engagement and networking.

10. **Creating a Resume:**

    - Description: Test the functionality for users to create and customize resumes within the platform.
    - Risk Level: M (Medium) - Important feature for users seeking job opportunities but may not be used by all users.

11. Connection Requests:

- Description: Test the functionality of sending and accepting connection requests between users.
- Risk Level: M (Medium) - Important for networking but may have lower impact compared to core profile features.

12. Following and Subscribing to Public Pages or Profiles:

- Description: Test the functionality for users to follow and subscribe to public pages, profiles, and influencers.
- Risk Level: M (Medium) - Important for content discovery and user engagement but may not be utilized by all users.

13. Connection Requests:

- Description: Test the functionality of sending and accepting connection requests between users.
- Risk Level: M (Medium) - Important for networking but may have lower impact compared to core profile features.

14. Privacy Settings:

- Description: Test the various privacy settings and controls available to users for managing their profile visibility and data sharing.
- Risk Level: M (Medium) - Important for user privacy and security but may not directly impact core functionality.

15. Notifications:

- Description: Test the delivery and functionality of notifications for updates, messages, connection requests, etc.
- Risk Level: M (Medium) - Important for keeping users informed but may have lower impact on overall system stability.

16. Premium Membership Features:

- Description: Test the additional features and benefits available to users with premium membership subscriptions, such as InMail credits, advanced search filters, and profile insights.

- Risk Level: M (Medium) - Important for users with premium subscriptions but may not impact all users.

17. **Chatting:**

- Description: Test the messaging functionality for users to chat with connections and other LinkedIn members.
- Risk Level: H (High) - Critical for communication and networking purposes.

Features not to be Tested

1. **Backend Infrastructure Changes:**

- Reason: Not to be tested as they do not directly impact user functionality and are handled by backend development teams

2. **Internal API Testing/Third-party Integrations:**

- Reason: Not included in our testing scope

3. **Performance Optimization Changes:**

- Reason: Not to be tested as they are internal optimizations and do not directly impact user functionality.

4. **Database Changes:**

- Reason: Not to be tested as they are backend changes and do not directly affect user interactions with the system.

5. **Platform Compatibility with Older Browsers:**

- Reason: Not to be tested as LinkedIn focuses on supporting modern browsers and may not prioritize compatibility with older versions.

Item Pass/Fail Criteria

Defining pass/fail criteria is an important part of the test plan. These criteria help determine whether a test case, scenario, or overall testing phase is successful (meets expected results without errors) or unsuccessful (does not meet expected results and produces errors).

Some reasons that can be considered pass/fail criteria:

- All important features must function according to specifications in order to be considered successful, otherwise the criteria will fail.
- If a feature has been tested 6 times, 5 times it works as expected and 1 time it doesn't work correctly, this condition is considered a failure condition.
- When the website is displayed on different browsers and works as expected on the selected browsers, this is considered a pass condition.
- The execution time for a given test case takes an acceptable time limit.
- To be considered a fulfilled unit testing, testers must have at least 60% code coverage and complete all test cases with passing results.
- The system crashes and becomes unresponsive under expected user load which is considered a failure condition.

Suspension Criteria

There are several conditions that, if met, will cause the testing process to be suspended. So, here are some criteria agreed upon by all team members for which we will halt the testing process.

- **Environmental Issue:** A specific LinkedIn service is unavailable, and testing may be paused until it is restored or stabilised.
- **Project Deadline:** If the deadline is missed, the instructor will not accept the submission, even if all tests are completed.
- **Defect Ineffectiveness:** If the number or type of defects reaches a level where the next test is useless, it is pointless to continue testing.
- Defects are found and recorded, preventing further testing from being carried out. As a result, the testing process can be paused until this defect is resolved.
- **Team Member Illness:** If a key team member becomes ill and is unable to contribute to the testing process in a productive manner, testing will be suspended.

Test Deliverables

The following document will outline what will be delivered as part of this plan:

- **Master test plan:** a complete document containing all the details of the system testing process.
- **Test cases:** they are used to check whether a particular software is working properly or not.
- **Test scenarios:** they provide a small description of what needs to be implemented based on the use case.
- **Test strategy:** a document that defines the overall approach to testing.
- **Testing outputs:** a document that contains details about the results of each tested feature in the system.
- **Test reports:** summaries of testing activities and results.
- **Exit parameters:** description and steps of when testing activities should stop.
- **Error logs:** a document used to track errors that are observed when testing the website.

Schedule

A test plan schedule outlines the timeline and sequence of testing activities to be conducted throughout the duration of a project. It serves as a roadmap for the testing team, providing guidance on when different testing tasks will be performed and how they will be coordinated to achieve project objectives.

Task	Start Date	End Date
Test Strategy	07/03/2024	09/03/2024
Master Test Plan	09/03/2024	13/03/2024
Test Scenarios	13/03/2024	15/03/2024
Test Cases	15/03/2024	20/03/2024
Testing Outputs	20/03/2024	25/03/2024
Error Logs	25/03/2024	28/03/2024
Test Reports	28/03/2024	05/04/2024
Exit Parameters	05/04/2024	09/04/2024

Planning Risks & Contingencies

Risk	Contingencies
Time constraints required the project to be completed within two months, limiting the possibility of testing all features of the system.	• Prioritize testing efforts in high priority areas. • Test core features thoroughly. • Maximize test coverage within the project timeline. • Hold weekly meetings with team members to monitor progress and adjust testing priorities.
Inadequate performance of different testing levels (performance, security, integration).	• Utilize available tools for effective evaluation. • Explore alternative tools or methods for testing when necessary. • Focus on aspects of the test that can be assessed using existing tools.
A LinkedIn server failure may disrupt testing activities and project timelines.	• Collaborate with LinkedIn technical teams to resolve server issues. • Monitor probability and impact and adjust testing schedules accordingly.
Uncertain or frequent changes in requirements can disrupt testing activities.	• Ensure that the requirements are clearly documented. • Create change control processes to manage requirement changes. • Collaborate closely with stakeholders to minimise the impact on testing schedules.
Incomplete or outdated testing documentation can result in errors and inefficiencies.	• Regularly review and update testing procedures, test cases, and requirements documentation.

	• Ensure the accuracy and completeness of documentation throughout the project.
The lack of an independent testing environment, as well as accessibility, may cause testing to be delayed.	• Increase work to create necessary testing environments. • Collaborate with IT teams to resolve accessibility issues. • Adjust project timelines as needed to accommodate environment setup.
Natural disasters have a low probability of disrupting project continuity.	• If affected, divide the workload among team members. • Ensure remote work capabilities to reduce the effects of physical office disruptions.