

TASK 73D

Quality Review

SWE30010 - Managing IT Projects

Class: Fri 08:00 DT7.2 - **Tutor:** Pham Thi Kim Dung

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Introduction

In task 72D, we have introduced the planning for our quality assurance activities and checklist items. For this task, each item will be conducted with evidence and comparison to proposed metrics to re-evaluate our plan. This report will cover the criteria that worked well, those that needed adjustment, and our approach for future backlog items to adhere to the quality requirements. Our group utilised ClickUp, a recent project management software, to document the QA activities and checklist. Other alternatives that were considered were Jira and Trello.

Reflection

Overall quality

The sprint backlog item achieved high quality, with zero unauthorised login attempts and robust security measures implemented. 40 out of 41 checklist items were successfully tested and marked, with only one exception of the log taking longer to export from the server in the Timer tab.

Quality achieved

1. Registration

Metric 1: 100% successful registration with all required fields. Additional formatting and logic checks for email, phone number, and age.

Metric 2: 95% successful registration with strong passwords. (there are edge cases where the tested passwords meet all requirements but remain predictable using the online password strength evaluator).

Metric 3: 100% successful OTP verifications.

2. Login

Metric 1: 0 successful unauthorised login attempts (zero tolerance criteria achieved)

Metric 2: 100% login attempts with correct user role authorisation (achieved the desired threshold).

3. Logging

Metric 1: 100% successful registration activities were logged (achieved the desired threshold).

Metric 2: 100% successful login activities were logged (achieved the desired threshold).

Metric 3: Log data availability within 20 minutes (exceeding the 15-minute threshold). Only the Timer logs took longer due to configuration issues.

Quality satisfaction:

The sprint backlog items satisfy most quality definitions while only falling short in some areas:

1. **Registration password strength:** The high percentage of strong passwords showcases effective security measures. However, edge cases signal further checking and stricter regular expression patterns.
2. **Logging timeliness:** While most log tabs are readily available, the total exceeded the 15-minute threshold for Timer logs, which requires future optimisations.

Positive outcomes

1. **Zero unauthorised login attempts:** This outcome highlights the effectiveness of security measures in preventing breaches from external threats.
2. **Comprehensive testing:** All quality assurance activities were implemented, ensuring thorough evaluation of the backlog item and satisfying the definition of done in the project proposal.
3. **Detailed documentation:** Clickup checklist, assignees, time log, comments, and visual evidence from screenshots demonstrated completed task and facilitated collaboration.

Challenges encountered

1. **Edge cases in password strength:** While the validation rules are working, unpredictable passwords require additional checks.
2. **Timer log availability:** Configuration issues and personal environment resources caused delays in the Timer log accessibility, requiring optimisation for system analysis.
3. **Minor fluctuation from registration metrics:** Edge cases, user errors, and client-side exceptions affected the desired thresholds, which requires further research and planning.

Potential enhancement for future backlog items

1. **Enhance password validation:** Implement mechanisms to identify and flag predictable passwords despite meeting character requirements. This can include extra regular expressions for matching consecutive letters and patterns.
2. **Optimise timer log configuration:** Refine configurations to ensure timer logs are available within the 15-minute threshold. We planned to cut down the use of unnecessary timers, keep the delayed order checks and monthly reports to admin emails only, and cut down retention time for data from 2 months to 1 month.
3. **Address minor registration issues:** Further refine validation and user guidance to minimise edge cases and user errors. We planned to implement our Vietnamese address API for future references and accurate shipping information. This can quickly be developed and integrated with OutSystems' bootstrap Excel data function.
4. **Continuous monitoring and improvement:** Regularly review metrics, identify potential issues, and implement proactive solutions.

Conclusion

Given that the sprint backlog item met essential quality standards, there is room for improvement. We may further improve this implementation's overall quality and security by taking care of the password strength, availability of the timer log, and minor registration concerns. In the upcoming sprints, we will guarantee that we constantly meet the quality criteria through continuous monitoring and improvement procedures.

Evidence of quality assurance conducted

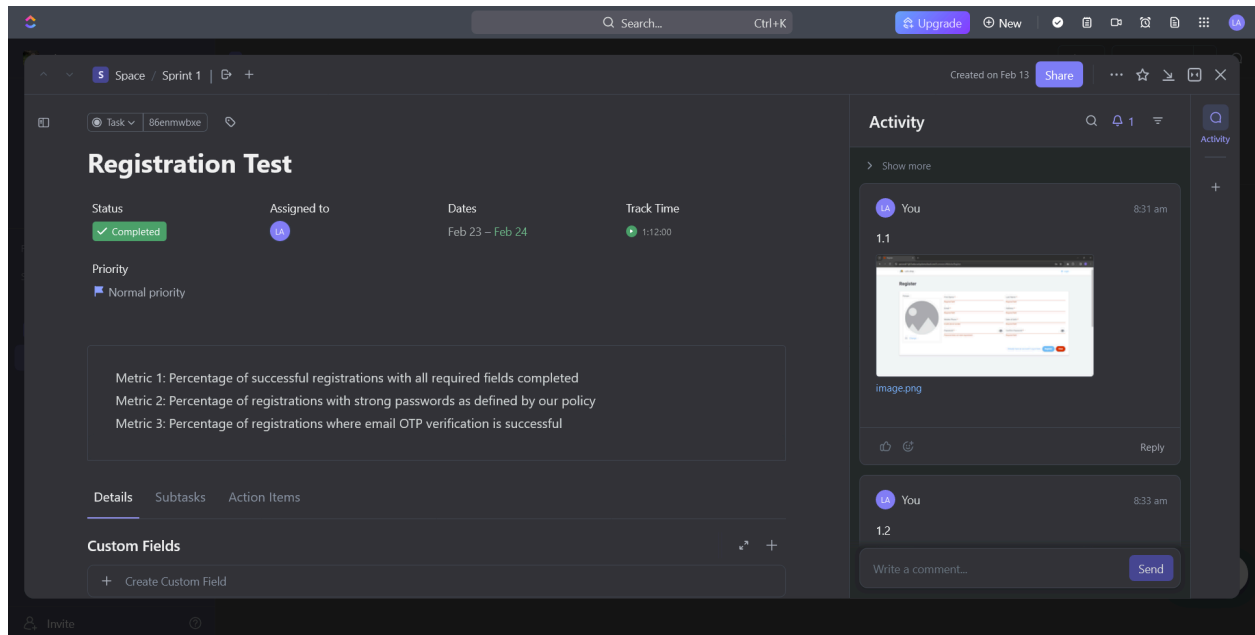


Figure 1: Registration test overview

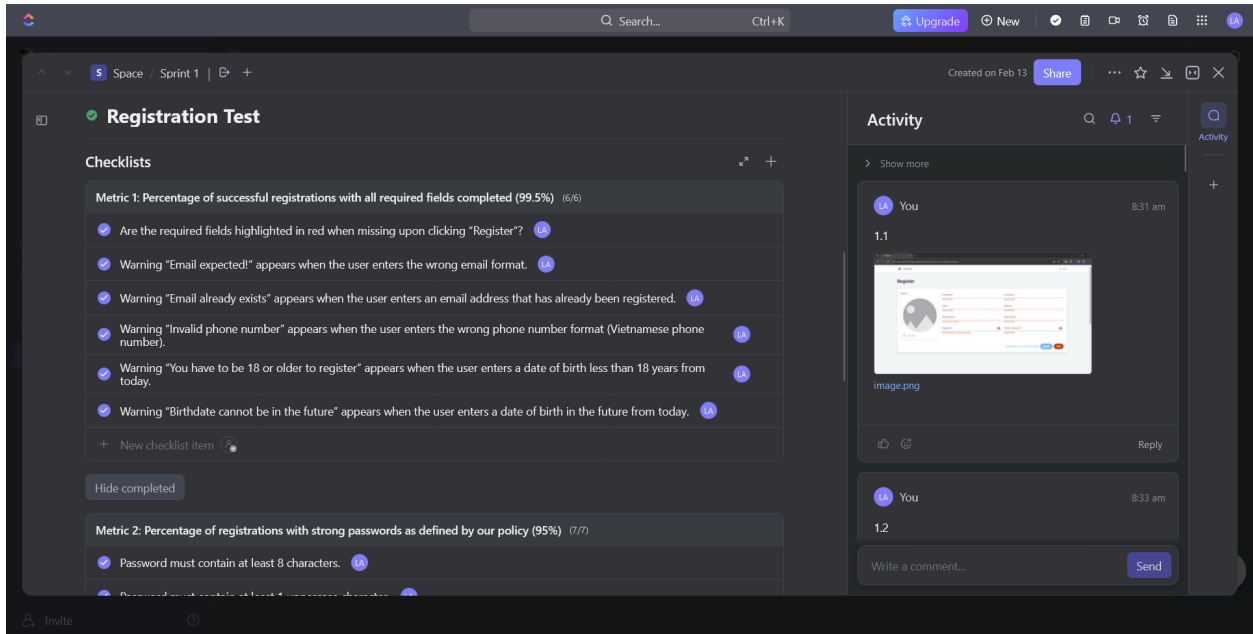


Figure 2: Checklist for metric 1 in registration test

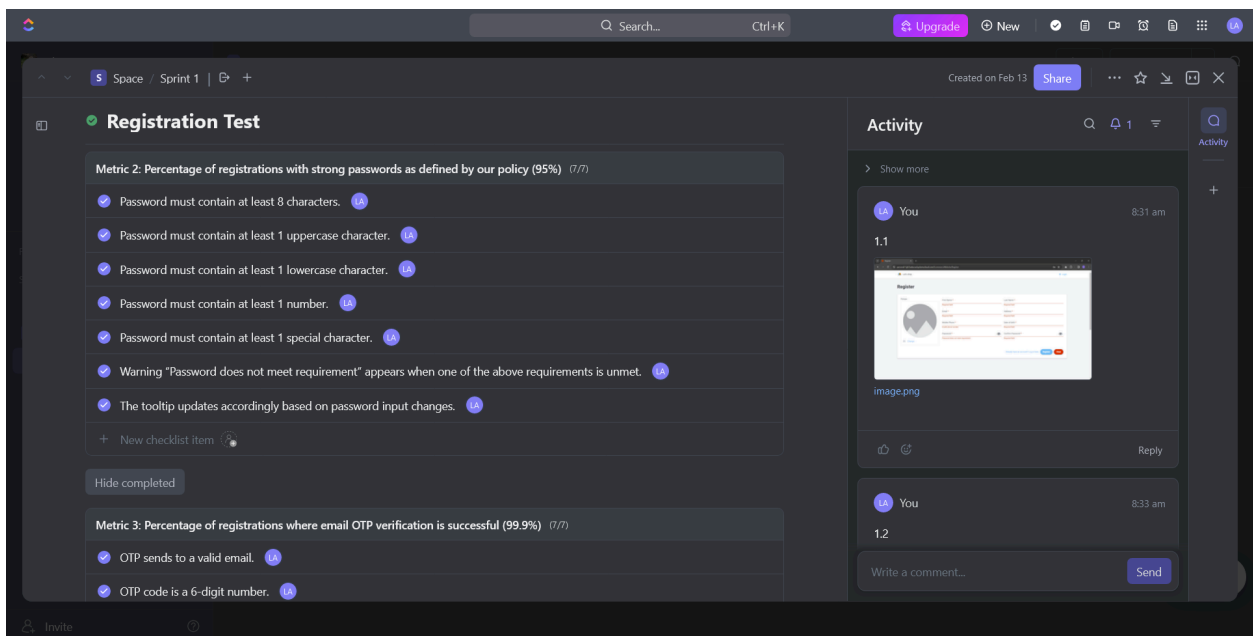


Figure 3: Checklist for metric 2 in registration test

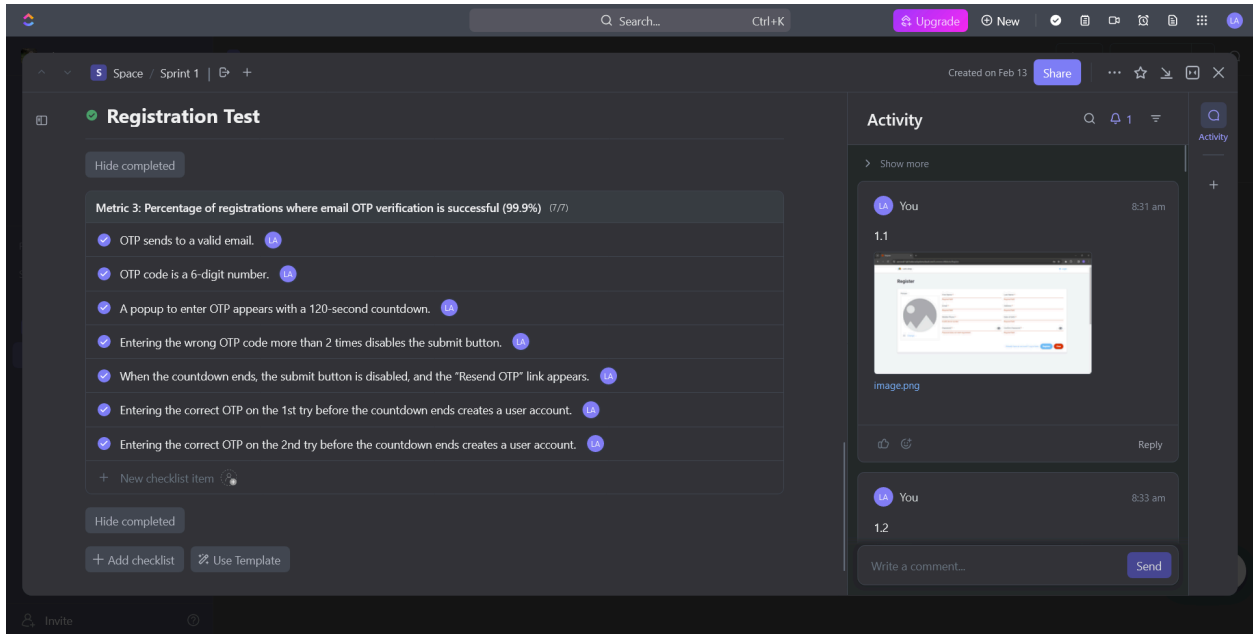


Figure 4: Checklist for metric 3 in registration test

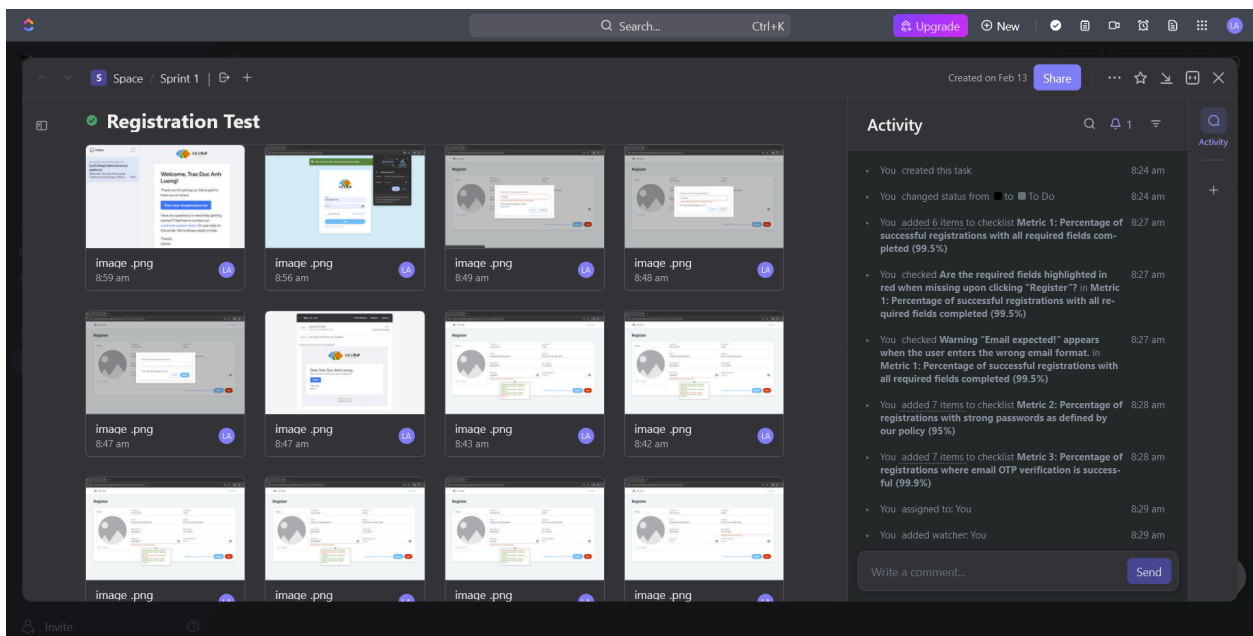


Figure 5: Registration test screenshot evidence according to checklist items

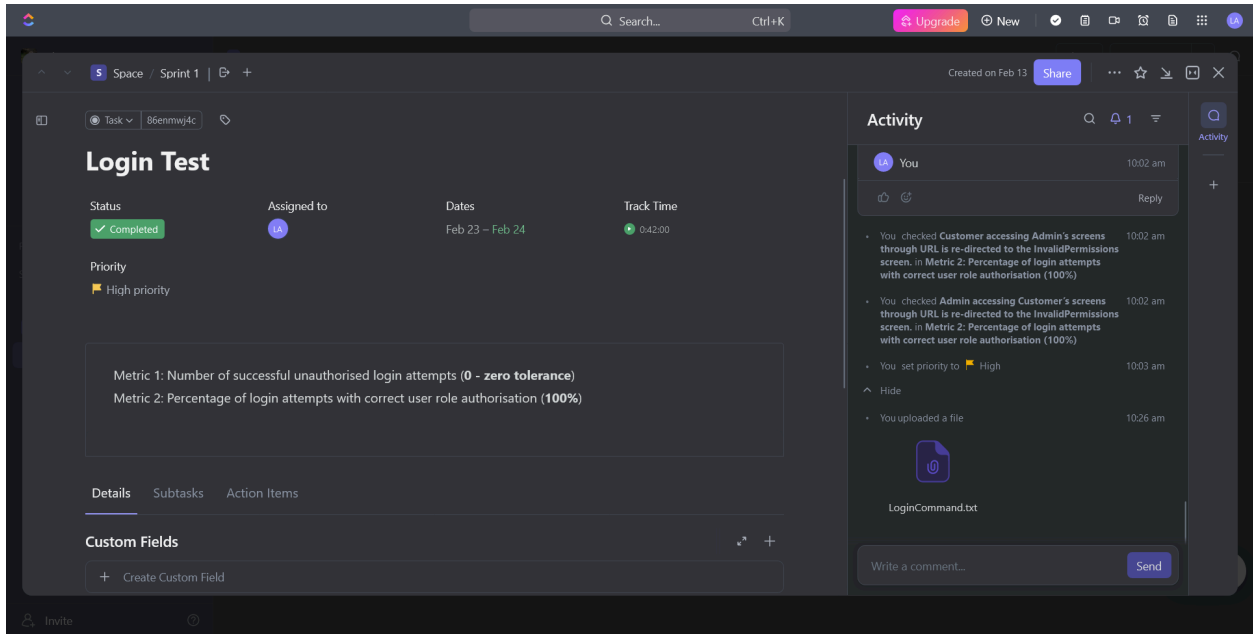


Figure 6: Login test overview

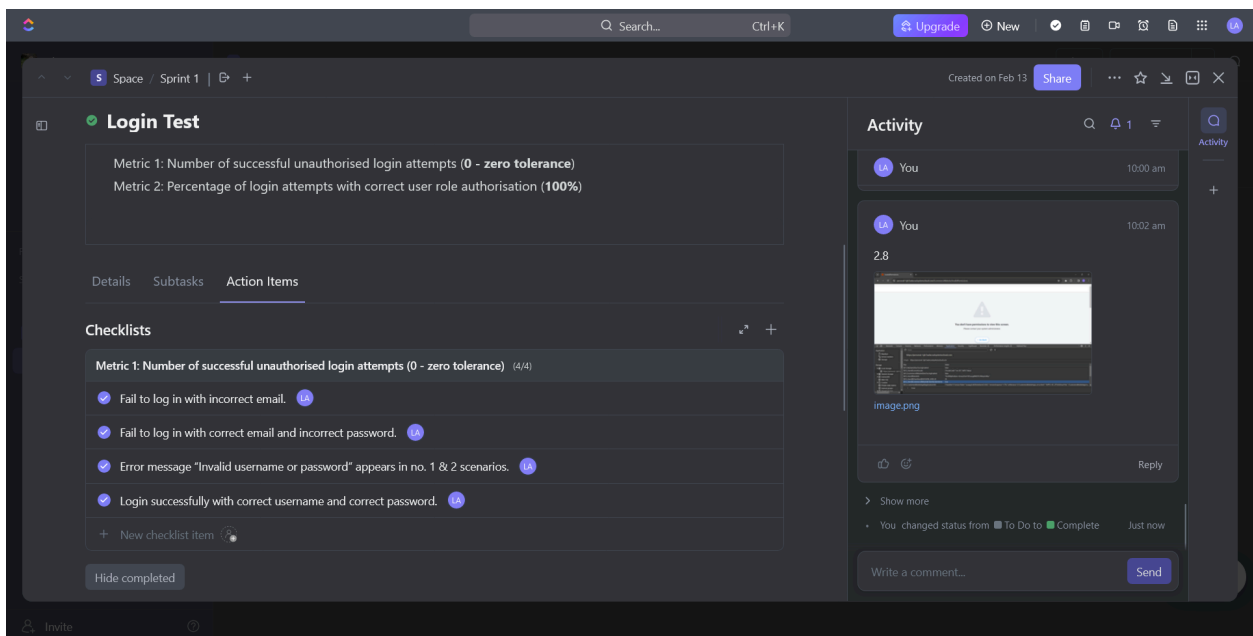


Figure 7: Checklist for metric 1 in login test

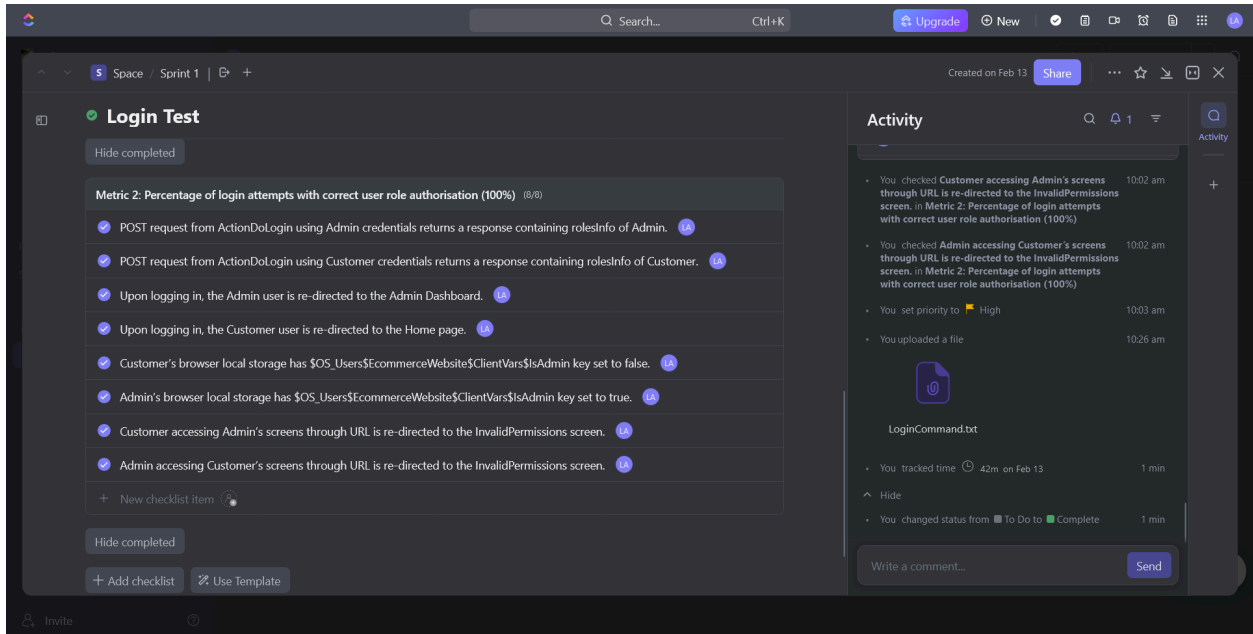


Figure 8: Checklist for metric 2 in login test

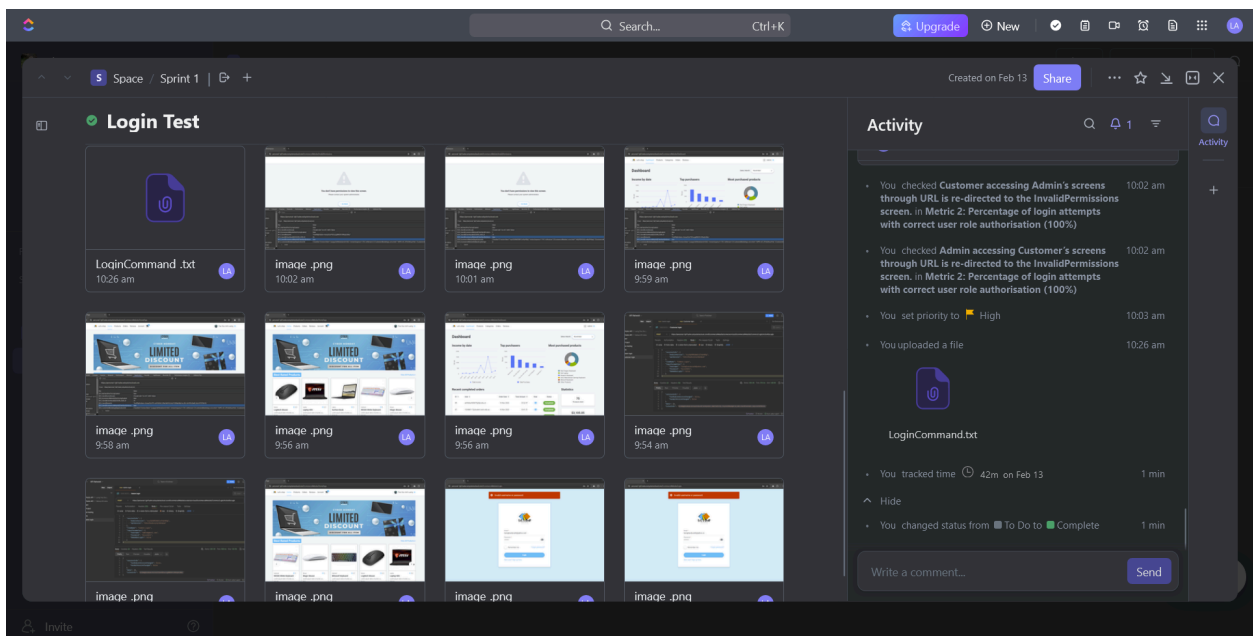


Figure 9: Login test screenshot and bash script evidence according to checklist items

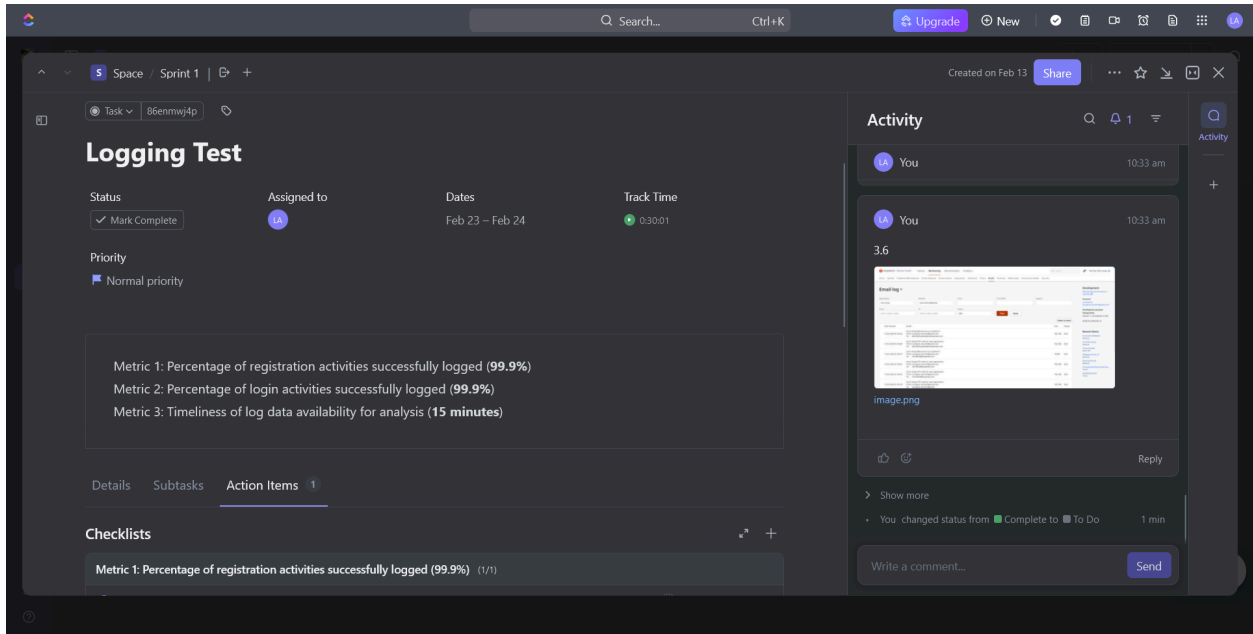


Figure 10: Logging test overview

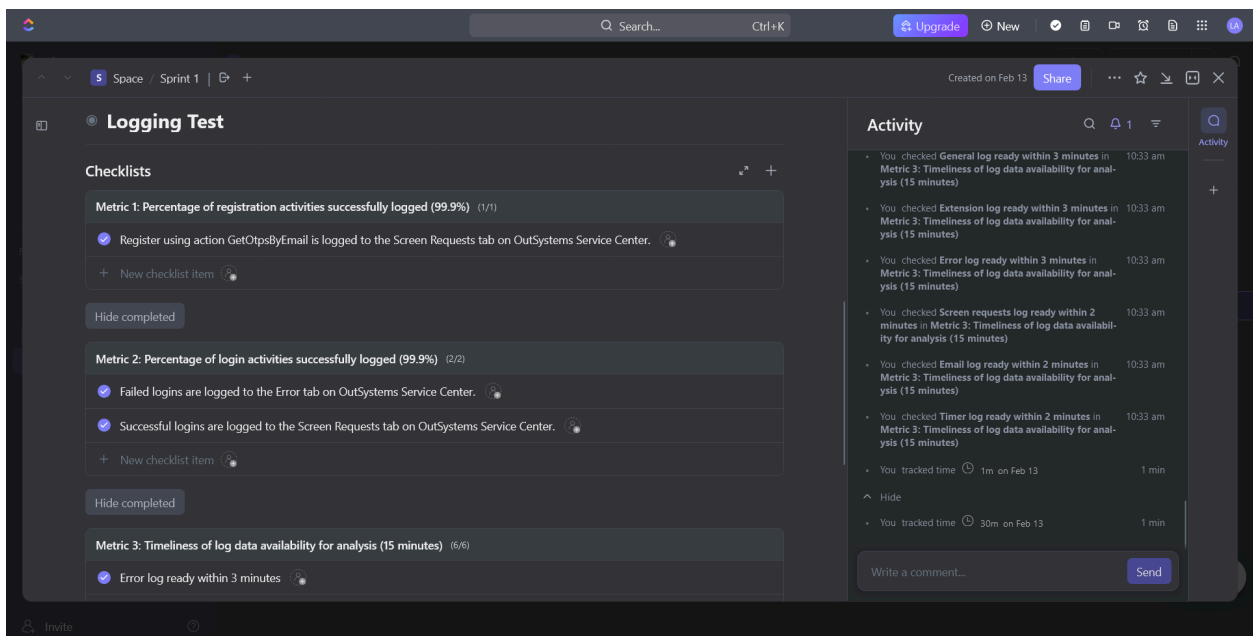


Figure 11: Checklist for metrics 1 and 2 in logging test

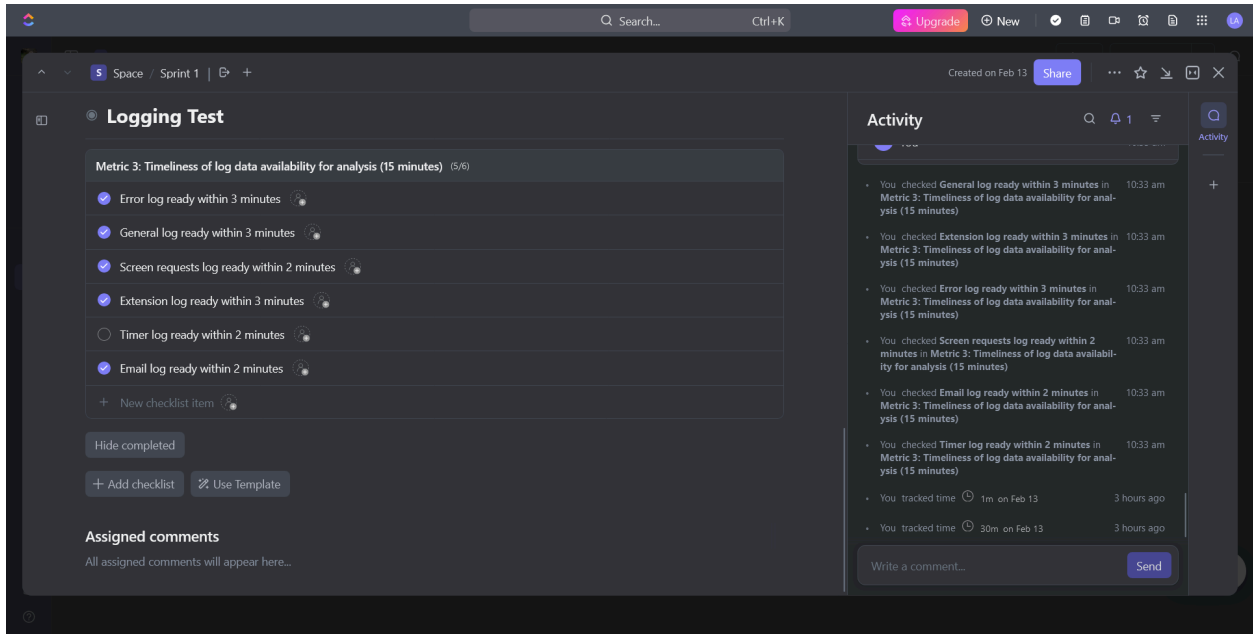


Figure 12: Checklist for metric 3 in logging test

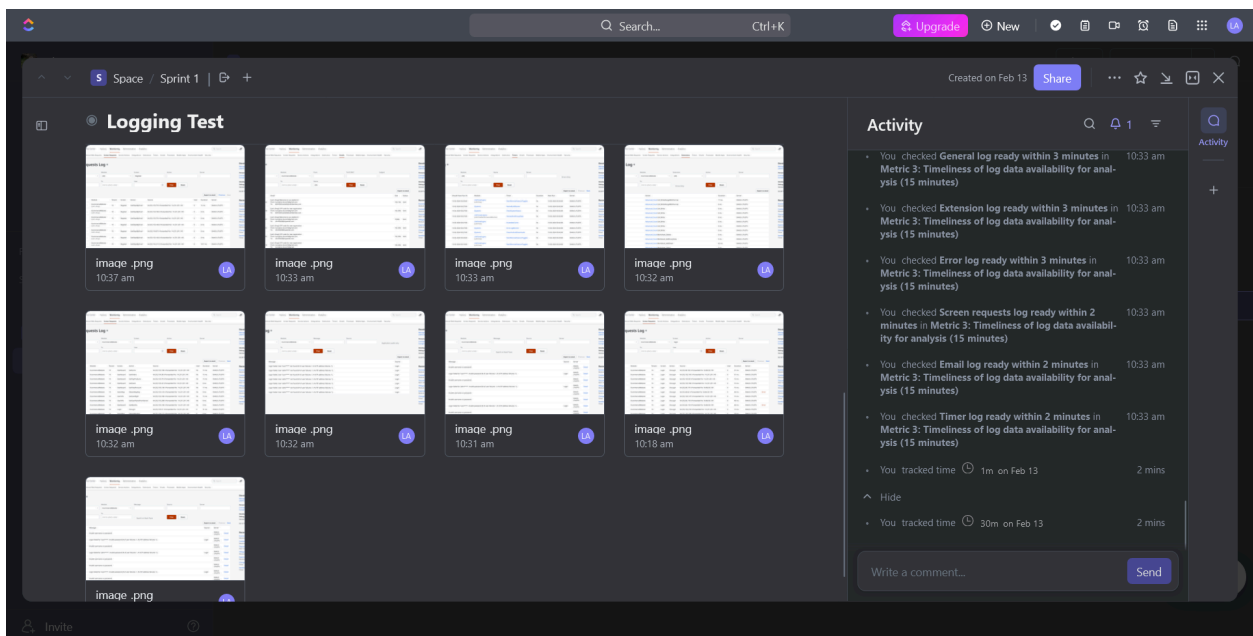


Figure 13: Logging test screenshot evidence according to checklist items