

KASPER – ID4 PROCESS DOCUMENTATION

SOFTWARE DEVELOPMENT TEAM:

Project Manager: Tushita Patel

Dev Lead: Kristof Mercier, Dylan Prefontaine

Test Lead: Jeremy Liao

Build Manager: Christopher Mykota-Reid (ChrisMR)

Developers: Gaurav Arora, Haotian (Justin) Ma,
Melody (Tian) Zhao

Test Team: Christopher May (Chris May), Ryan
Tetland

Documentation: Arianne Butler

Contents

0.0 Important Links..... 3

1.0 Task Assignments 3

2.0 Activity Log 4

3.0 Inspections ID4 4

4.0 Client Communication 5

5.0 Risk Assessment 6

 5.1 Technical Risks..... 6

 5.2 Non-Technical Risks..... 8

 5.3 Materialized Risks..... 9

6.0 Meeting Notes..... 10

0.0 Important Links

Slack: <https://cmpt371group1.slack.com/messages/C3N24Q5EC/>

Trello:

- Front-end: <https://trello.com/b/S2XiqLAm/dev-id4-front-end>
- Back-end: <https://trello.com/b/m9OtfvS1/dev-id4-back-end>

Activity Log: <https://docs.google.com/spreadsheets/d/1g3Cfvll1erdg2zaHZlVyh6uQ-rYQ6L5Cay0YIn2UETk/edit#gid=0>

- Click on the bottom right tab labelled **Individual Activity Log** or the bottom right tab **Activity Log Totals**, for a break down of the activities

GitHub Project: <https://github.com/CMPT371Team1/Project>

GitHub ID4 Documentation: <https://github.com/CMPT371Team1/Documentation>

1.0 Task Assignments

Dev Team

- Below are the links to our front and back-end Trello boards, respectively. These outline the ID4 task assignments for the dev team. You will be prompted to sign in to view these boards. Each card is accompanied by a time estimate. These estimates were approximated by the dev leads:

Front-end: <https://trello.com/b/S2XiqLAm/dev-id4-front-end>

Back-end: <https://trello.com/b/m9OtfvS1/dev-id4-back-end>

Test Team

- Do Peer Review board tasks (as many as possible): Ryan, Chris May
- Manual testing (Browser, Android): Chris May, Ryan, Jeremy
- Remove unused and out-of-date test files: Jeremy
- Automate regression tests: Jeremy
- Create separate configuration files for Firefox and Chrome testing: Chris MR
- Get backend developers to create a test database for testing: Jeremy, Gaurav, Chris MR
- Fix high priority bugs before Bug Party: Ryan, Chris May, Jeremy, developers
- Create new Use Cases for ID4, update old ones: Ryan, Chris May
- Refactor and update E2E tests: Ryan, Chris May
- Testing results and defect report: Ryan, Chris May, Jeremy
- Fix smoke tests: Chris May, Ryan, Jeremy, Chris MR
- Test matrix update: Jeremy
- Path diagram update: Jeremy
- Testing plan document update: Jeremy

Documentation

- Organization, compilation, and editing of documentation: Arianne

2.0 Activity Log

The following link leads to our term schedule. Click on the **Individual Activity Log** tab at the bottom left for our group activity log, as well as the group member contribution pie chart. This section also indicates which tasks were completed via pair programming. Click on the **Activity Log Totals** tab to see the summary of hours for each group member. In the **Activity Log Totals** tab, you can see the percentage of hours worked that have been peer reviewed by at least one other group member. Currently about 45% of hours worked has been peer reviewed.

Note: we are currently experiencing difficulty with this link and you may need to copy and paste it into your web browser.

<https://docs.google.com/spreadsheets/d/1g3Cfvll1erdg2zaHZlVyh6uQ-rYQ6L5Cay0YIn2UETk/edit#gid=0>

3.0 Inspections ID4

As the Inspections begin to focus more heavily on actual code, the team has decided to adopt an Inspection Format. This format is essentially a set of rules and guidelines to be followed by all group members attending the inspection. The purpose of the format is to encourage participation and effective team communication. The Inspection Format document can be found on GitHub at the following link:

<https://github.com/CMPT371Team1/Documentation/blob/master/Meetings/InspectionsFormat.pdf>

Inspection 9: Back-end Listing API, Melody (Tian) Zhao

Date: March 6th /17 at 3:30pm

Summary: This code review was held in S371. The artifact was the Back-end Listing API, as written by Melody (Tian) from the back-end development team. The team looked at the implementation of creating a new Listing, the Like/Dislike Listing feature, the get filtered Listings feature, and the corresponding unit tests. Everyone was asked to come prepared with flaws and/or questions. Kristof and Chris MR were the notetaker and moderator for this session respectively. Each portion of the artifact was reviewed line by line and a total of 47 faults/errors/areas of improvement were discovered. Melody (Tian) was then asked to modify the artifact as per the code review.

Inspection 10: Risk Report, Ryan Tetland

Date: March 7th /17 at 5:00pm

Summary: This code review was held in S371. The artifact was the Risk Report from ID3, which was made available for review one week prior. Gaurav and Tushita volunteered to be moderator and notetaker, respectively. Each risk was

viewed individually. Various flaws were pointed out and probabilities and losses were re-analyzed. After the session Ryan used the notes from the discussion to write the risk report for ID4.

Inspection 11: Filter End-to-end Tests, Chris May

Date: March 13th /17 at 3:30pm

Summary: The code review session was held in S371. The author was Christopher May from the testing team. The artifact involved the implementation of the Filter screen end-to-end testing and the related Use Case from the Testing Document. All attendees were asked to prepare potential flaw/questions. Gaurav, who was unable to attend, sent feedback in the Peer Review Google Doc. Kristof and Arianne were the Moderator and notetaker respectively. All questions/concerns found prior to the code review were raised and discussed. Afterwards, each piece of the artifact was reviewed line by line by the committee and a total of 12 faults/errors/areas of improvement were discovered and discussed. After the session, Chris May was asked to modify the artifact.

Inspection 12: Front-end pages and Trello Peer-Review Board, Justin Ma

Date: March 14th /17 at 4:00pm

Summary: This code review was held in S371. The artifact, by Justin, involved the implementation of the MyListings and AddListing screens, as well as the Trello Peer Review boards. All attendees were expected to come prepared with potential flaws/questions. Chris May and Melody (Tian) were the moderator and notetaker respectively. The MyListings page was reviewed first and a total of 11 errors/areas of improvement were discovered and discussed. The team then reviewed the AddListing page and a total of 14 errors/areas of improvement were found. Lastly, the team looked at the Trello Board set-up and a short tutorial was given so that each member start Code Policing on their own time. After the session, Justin was asked to modify the artifact as per the discussion.

There will be no further formal inspections this term, however, all members have been asked to continue with informal reviews of each others work to ensure quality as much as possible.

4.0 Client Communication

Email Communication: Early on in ID4, an email was sent to Conrad requesting that he join us for the ID3 presentation. The team thought it would be a good way for him to see our app demo and learn about the background development. Conrad also requested an APK version of the app so that he could demo it to potential investors.

ID3 Presentation: Conrad came to see the presentation on March 7th /17 at 4:00pm. After the presentation, Conrad was very happy with development thus far. We gave him the APK version of the app and it was decided that we would cancel the upcoming client meeting because everything appeared to be on track. It was decided that we would meet next week at the regular time to finalize which features will be delivered.

Meeting #: 6

Date: March 16th /17

Time: 11:30 a.m.

Location: Geology Tim Hortons

People present: Tushita (Project Lead), Kristof Mercier (Dev Lead)

Purpose: Summarize final deliverables to Conrad

Summary: The purpose of this meeting was to give Conrad a better picture of our final deliverables. The following points were highlighted:

- 1) Navigation:
 - The navigation feature, which was added to requirements near the end of ID2 is unfinished in both the front and back-end, although it is setup in the database for each listing's location using latitude and longitude.
- 2) Facebook messaging:
 - The Facebook messaging will be delivered, even though it was added mid-way through the development process.
- 3) Code freeze:
 - The client was notified about the upcoming code freeze at the end of ID4.
- 4) Easy to expand:
 - We let Conrad know about the unfinished requirements and that we will work to make our code base easy to expand upon, so that the unfinished features can be added later without having to make changes to our code base.

5.0 Risk Assessment

Introduction

Risks are divided into two categories – technical and non-technical. Technical risks are related to the construction and design of our code, and non-technical risks relate to team management, such as group structure and client communication. For each risk identified, this risk assessment will provide estimates for probability of occurrence and severity, possible scenarios that could cause the risk to materialize, and mitigation and contingency plans. This report also contains a section dedicated to materialized risks and their effect on our project.

5.1 Technical Risks

5.1.1 Team is Unable to Finish ID4 Tasks

Probability: 0.7

Loss: 0.6

Scenario: Due to our code freeze at the end of ID4, the development team aims to finish all implementation by this ID. There are a large number of tasks in this ID, and there may not be time to complete everything.

Mitigation: The dev team and project manager will decide on the highest priority features. These features will be completed before moving on to others. The dev team will communicate with the project manager throughout the ID to monitor and handle this risk, should it materialize.

Contingency Plan: All features that are not implemented by the end of ID4 will be cut out of the project. These features will be recorded for future programmers in the ID5 Programmer Documentation.

5.1.2 Unable to Test Dependant Functionality

Probability: 0.7

Loss: 0.3

Scenario: Testing filter functionality requires the availability of certain data and this data is not yet available.

Mitigation: A mock/test database will be implemented for testing purposes only.

Contingency Plan: This testing will be done in ID5 following the code freeze when everything else is implemented.

5.1.3 App is Not Fully Tested by Code/Feature Freeze

Probability: 0.7

Loss: 0.5

Scenario: For ID4, development will continue up until the deadline. This will result in untested functionality at the ID4 deadline.

Mitigation: The test team will be given all finished code by March 14th /17 and this code will be properly tested by the ID4 deadline. Any code written after March 14th will be fully tested in ID5. This will allow us to develop as much as possible before the code freeze.

Contingency Plan: ID5 will be dedicated to testing, debugging, and code refactoring. This will make up for any lack of testing in ID4.

5.1.4 Inaccurate Time Estimations

Probability: 0.4

Loss: 0.7

Scenario: If the implementation of certain features takes longer than expected, the app may not be finished before the code freeze.

Mitigation: Group members will communicate with team leads to ensure that all tasks are being properly monitored and that the highest priority features are being implemented first.

Contingency Plan: If the time to complete tasks is underestimated, these features will be cut from the app and documented in the ID5 Programmer Documentation.

5.1.5 Compatibility Issues

Probability: 0.6

Loss: 0.2

Scenario: Due to our app's multi-platform functionality, implementing extensive testing on all platforms will be challenging. There may not be time to fully test compatibility of all platforms.

Mitigation: Testing will be as thorough as possible on each platform. This might involve testing on multiple operating systems, or using multiple browsers. By doing this we aim to identify platforms that are incompatible with our app.

Contingency Plan: If a platform is not compatible, research/testing will be performed to identify the origin of the problem. If the issue is unresolvable, the group manager will inform the client and document the app's inability to work on the platform(s).

5.1.6 Not Enough Code is Peer Reviewed

Probability: 0.6

Loss: 0.2

Scenario: Group members do not have enough pair programming sessions, resulting in less peer reviewed code. This could lead to a decrease in quality and/or an increase in bugs.

Mitigation: Group members are required to complete at least one pair programming session per ID, and will be encouraged to do more. All group members are also required to hold one code review during the term. An excel spreadsheet has been set up to record and monitor the percentage of completed work that has been peer reviewed.

Contingency Plan: If the percentage of peer reviewed work is too low, more people will be assigned to the Code Police. We are also expecting more peer reviews in ID5.

5.2 Non-Technical Risks

5.2.1 Documentation Comes in Late

Probability: 0.7

Loss: 0.3

Scenario: A group member does not hand in their assigned documentation to Arianne by the set deadline.

Mitigation: A master checklist is posted to Git, so that team members can view assigned tasks, and so that nothing gets forgotten.

Contingency Plan: Arianne will seek help from Tushita and others if write-ups are provided too close to the deadline.

5.2.2 Busy Schedules

Probability: 0.8

Loss: 0.8

Scenario: Group members may be busy doing work for other classes and are not able to devote time to the project.

Mitigation: Group members should communicate with leads and project manager if they are going to be busy. Daily stand-ups via Slack will also let people know how much work is being done and how much time is being allotted to the project.

Contingency Plan: If group members become too busy to finish the project, some of the features will be cut and documented in Programmer Documentation. This scenario will be a loss to our project, but the code freeze is a hard deadline. After the code freeze, the team will focus on improving the project's quality, instead of implementing more features.

5.2.3 Team Member Unexpected Absence

Probability: 0.8

Loss: 0.4

Scenario: A team member unexpected absence may include illness and/or other unforeseen emergencies.

Mitigation: Knowledge of the entire project must be shared amongst team members. This will allow the team to continue production even if someone is unavailable. To gain a thorough understanding of the project, each member will perform pair programming sessions at least once per ID. Regular code reviews with as many members as possible will also be a strong preventative measure.

Contingency Plan: Communication between team members when someone is unavailable and fair distribution of the missing member's assigned work.

5.2.4 Client Becomes Unavailable

Probability: 0.8

Loss: 0.6

Scenario: The client is unable to meet to discuss project requirements and/or to resolve issues that have arisen in development.

Mitigation: Open and frequent communication with the client will help the team gain awareness of when the client might become unavailable. The client-questions channel on Slack should be used by any team member wishing to record a question for the client. Items in this channel will be brought up during the next client meeting, or by email.

Contingency Plan: The team will move forward with the project based on the agreed upon highest priority. It is unlikely that the client would be unable to answer emails, so email communication will be used in place of proper meetings where necessary.

5.3 Materialized Risks

The following section describes the ID4 materialized risks. Each materialized risk will be accompanied by a description, a plan for resolution, and its effects on the project.

Busy Schedules

Description: Some group members were busy studying for midterms and/or doing work for other classes.

Resolution: In some cases, busy group members postponed their work to a later date. In other cases, group members with extra time took on a heavier work load.

Effects: The effects were minimal because the group exercised proper communication.

Team Member Unexpected Absence

Description: During this ID, a couple of group members became ill and were unable to attend meetings.

Resolution: A team member who is ill should be in communication with the team via Slack and should do whatever they can to help remotely, if possible.

Effects: Less people were present at code reviews which could lead to a lower code quality and less knowledge of the code base.

6.0 Meeting Notes

There were no group meetings for ID4, but the team held frequent stand-ups both before class time and via Slack. The following link contains our documented meeting notes and pre-class stand-ups:

<https://github.com/CMPT371Team1/Documentation/blob/master/Meetings/371-MeetingNotes.docx>

For online stand-ups on Mondays, Wednesdays, and Fridays, see our “stand-ups” channel on Slack:

<https://cmpt371group1.slack.com/messages/C43K3962J/>