

Reflection and Traceability Report on Plutos

Team #10, Plutos

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[Reflection is an important component of getting the full benefits from a learning experience. Besides the intrinsic benefits of reflection, this document will be used to help the TAs grade how well your team responded to feedback. Therefore, traceability between Revision 0 and Revision 1 is an important part of the reflection exercise. In addition, several CEAB (Canadian Engineering Accreditation Board) Learning Outcomes (LOs) will be assessed based on your reflections. —TPLT]

1 Changes in Response to Feedback

[Summarize the changes made over the course of the project in response to feedback from TAs, the instructor, teammates, other teams, the project supervisor (if present), and from user testers. —TPLT]

[For those teams with an external supervisor, please highlight how the feedback from the supervisor shaped your project. In particular, you should highlight the supervisor's response to your Rev 0 demonstration to them. —TPLT]

[Version control can make the summary relatively easy, if you used issues and meaningful commits. If your feedback is in an issue, and you responded in the issue tracker, you can point to the issue as part of explaining your changes. If addressing the issue required changes to code or documentation, you can point to the specific commit that made the changes. Although the links are helpful for the details, you should include a label for each item of feedback so that the reader has an idea of what each item is about without the need to click on everything to find out. —TPLT]

[If you were not organized with your commits, traceability between feedback and commits will not be feasible to capture after the fact. You will instead need to spend time writing down a summary of the changes made in response to each item of feedback. —TPLT]

[You should address EVERY item of feedback. A table or itemized list is recommended. You should record every item of feedback, along with the source

of that feedback and the change you made in response to that feedback. The response can be a change to your documentation, code, or development process. The response can also be the reason why no changes were made in response to the feedback. To make this information manageable, you will record the feedback and response separately for each deliverable in the sections that follow. —TPLT]

[If the feedback is general or incomplete, the TA (or instructor) will not be able to grade your response to feedback. In that case your grade on this document, and likely the Revision 1 versions of the other documents will be low. —TPLT]

1.1 SRS and Hazard Analysis

Table 1: SRS Issues

Issue Number	Source	Issue Title	Addressed?	PR	Comments
106	TA	docs(SRS): Add section for "normal operation"		x	
107	TA	docs(SRS): Add section for undesired event handling		x	
108	TA	docs(SRS): Add fit criteria to requirements	✓	310	Changes made
109	TA	docs(SRS): Link requirements to rationale section	✓	303	Linked requirements to rationale section
110	TA	docs(SRS): Link likely and unlikely changes to requirements	✓	303	Linked requirements to un/likely changes
38	Peer Review	peer-review[team 23]: OCR system accuracy	✓	—	This was a question, which was answered as a comment in the issue.
39	Peer Review	peer-review[team 23]: OCR pipeline privacy	✓	—	This was a question, which was answered as a comment in the issue.
40	Peer Review	peer-review[team 23]: release platform	✓	310	Changes made
41	Peer Review	peer-review[team23]: Non-Functional Requirements Verifiability	✓	179	Changes made
42	Peer Review	peer-review[team 23]: Ambiguous Response Time Specifications	✓	179	Changes made
43	Peer Review	peer-review[team 23]: Item Recognition and Categorization Requirements	✓	299	Slightly reworded requirements to make them more clear, but the issue was more of a clarification question than feedback
44	Peer Review	peer-review[team 23]: Data retention and Deletion Policies	✓	179	Changes made
105	TA Feedback	docs(SRS): Include formal/math specs	✓	300	Added formal math specifications in SRS for OCR model, data constraints, budget calculation and receipt/receipt item data definitions

Table 2: Hazard Analysis Issues

Issue Number	Source	Issue Title	Addressed?	PR	Comments
111	TA	docs(hazards): Add list of tables	✓	288	Added table
112	TA	docs(hazards): Put constants in constants section	✓	288	Referred to symbolic constants
113	TA	docs(hazards): Fix hazard recommended action	✓	299	Changed recommended action
51	Peer Review	Peer Review (hazards) - Expand Analysis on External System Interactions	✓	311	Added assumption for external systems
52	Peer Review	Peer Review (hazards) - Enhance Network Failure Handling and Data Integrity Measures	✓	185	Added more details
53	Peer Review	Peer Review (hazards) - Improve Hazard Mitigation User Feedback	✓	—	Was already addressed, left comment on issue
54	Peer Review	Peer Review (hazards) - some assumptions needed for user end equipment	✓	187	Added suggested assumptions
55	Peer Review	Peer Review (hazards) - concern about problem resolution	✓	187	Added suggested changes

1.2 Design and Design Documentation

Table 3: Design Doc Issues

Issue Number	Source	Issue Title	Addressed?	PR	Comments
233	Peer Review	docs(design): add tests to CI	✓	262 , 264 , 258	Added tests to CI
234	Peer Review	docs(design): DetDesDoc syntax - change naming and data types	✓	247	Added suggested changes
235	Peer Review	docs(design): DetDesDoc syntax - add transaction class		x	
236	Peer Review	docs(design): DetDesDoc semantics - add more details to ML/categorization module	✓	247	Adedd details
237	Peer Review	docs(design): DetDesDoc semantics - add details about calculations	✓	247	Added math specification
238	TA	DetDesDoc semantics - add state diagram	✓	302	Added state diagram to Figma
239	TA	DetDesDoc semantics - add 'main' UI module	✓	302	Adjusted DAG diagram and added Main UI module to module hierarchy and DAG
240	TA	DetDesDoc semantics - exception handling specs	✓	302	Added exception handling section for item misclassification
158	Peer Review	Module hierarchy diagram Link Issue	✓	302	Adjusted DAG diagram
159	Peer Review	OCR Processing Module Issue	✓	302	Added exception handling section for OCR module
160	Peer Review	Peer Review - Limited Discussion on Module-Level Secrets		x	
161	Peer Review	Peer Review - Limited Error Handling Descriptions		x	
162	Peer Review	Peer Review - Ambiguity in Access Routine Semantics		x	
163	Peer Review	Peer Review - Hyperlink in section 5	✓	186	Fixed

1.3 VnV Plan and Report

Table 4: VnV Plan Issues

Issue Number	Source	Issue Title	Addressed?	PR	Comments
120	TA	docs(vnv): system tests for FRs	✓	290	Adjust control of system tests.
119	TA	docs(vnv): add to testing plan	✓	290	Adjust functional testing criteria.
74	Peer Review	Automated Testing and Verification Tools	×		Daily sanity checks aren't necessary as we are running the tests and linter pipelines on every PR. This will ensure that the app/features work seamlessly after every change.
75	Peer Review	Load Testing for Concurrent Users	×	298	Already addressed in initial version of VnVPlan 'Performance tests can be conducted to measure the app's speed and reliability, especially when processing large receipts or handling multiple users'.

Table 5: VnV Report Issues

Issue Number	Source	Issue Title	Addressed?	PR	Comments
266	Peer Review	Missing Functionality	×		A couple of the FRs weren't implemented yet during the initial draft of VnVReport - they have now been implemented. As for account update and notifications, we felt that for the scope of the project, these functionalities would be able to be implemented later.
267	Peer Review	Reduced accuracy	✓	306	Added more reasoning as to why we decreased accuracy threshold.
268	Peer Review	Reduced accuracy	×		Multiple NFRs are tested (NFR-ACC-1, NFR-ACC-3, NFR-MTB-1)

2 Challenge Level and Extras

2.1 Challenge Level

[State the challenge level (advanced, general, basic) for your project. Your challenge level should exactly match what is included in your problem statement. This should be the challenge level agreed on between you and the course instructor. —TPLT]

2.2 Extras

[Summarize the extras (if any) that were tackled by this project. Extras can include usability testing, code walkthroughs, user documentation, formal proof, GenderMag personas, Design Thinking, etc. Extras should have already been approved by the course instructor as included in your problem statement. —TPLT]

3 Design Iteration (LO11 (PrototypeIterate))

[Explain how you arrived at your final design and implementation. How did the design evolve from the first version to the final version? —TPLT]

[Don't just say what you changed, say why you changed it. The needs of the client should be part of the explanation. For example, if you made changes in response to usability testing, explain what the testing found and what changes it led to. —TPLT]

4 Design Decisions (LO12)

[Reflect and justify your design decisions. How did limitations, assumptions, and constraints influence your decisions? Discuss each of these separately. —TPLT]

5 Economic Considerations (LO23)

[Is there a market for your product? What would be involved in marketing your product? What is your estimate of the cost to produce a version that you could sell? What would you charge for your product? How many units would you have to sell to make money? If your product isn't something that would be sold, like an open source project, how would you go about attracting users? How many potential users currently exist? —TPLT]

6 Reflection on Project Management (LO24)

[This question focuses on processes and tools used for project management. —TPLT]

6.1 How Does Your Project Management Compare to Your Development Plan

[Did you follow your Development plan, with respect to the team meeting plan, team communication plan, team member roles and workflow plan. Did you use the technology you planned on using? —TPLT]

6.2 What Went Well?

[What went well for your project management in terms of processes and technology? —TPLT]

6.3 What Went Wrong?

[What went wrong in terms of processes and technology? —TPLT]

6.4 What Would you Do Differently Next Time?

[What will you do differently for your next project? —TPLT]

7 Reflection on Capstone

[This question focuses on what you learned during the course of the capstone project. —TPLT]

7.1 Which Courses Were Relevant

[Which of the courses you have taken were relevant for the capstone project? —TPLT]

7.2 Knowledge/Skills Outside of Courses

[What skills/knowledge did you need to acquire for your capstone project that was outside of the courses you took? —TPLT]