Reflection Report on MTOBridge

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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. 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]

1.1 SRS and Hazard Analysis

1.1.1 SRS

1.1.2 Hazard Analysis

The changes made to the hazard analysis in response to feedback were relatively small. These changes mainly related to clarity and completeness, and had little impact on the final implementation. The largest change that was made was adding a new hazard relating to the case of lost saved data. Here is a complete list of changes:

1. Swapped the position of HA-11 and HA-12 for better readability

2. Clarified certain vague failure effects (e.g., "program cannot function")

3. Modified incorrect failure conditions in HC-2 and HD-2

4. Moved SR-3 and SR-4 to phase 2 of implementation

5. Changed some of the recommended actions in HA-1 to better resolve the identified failures

6. Clarified some of the recommended actions in HA-1, HA-6, and HD-3

7. Added background information in section 1

8. Added a new hazard for lost save data.

1.2   Design and Design Documentation

1.3   VnV Plan and Report

2   Design Iteration (LO11)

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

Pedram: Arriving at our final design was a process of rapid requirements gathering, feasibility analysis and software design built upon the initial findings and the proof of concept. In terms of requirements gathering, the client was regularly given multiple mockups of the proposed designs to choose from in addition to refining the requirements, constrains and assumptions. The team would often conduct brief feasibility analysis to better understand the priority and complexity of each ask. Very importantly, relational tools and diagrams where used in documenting and detailing the different components and their interactions. From the final design, a similar iterative approach was taken for the final implementation. The first steps, including the Rev0, was seen as a prototyping stage where the team made the basic infrastructure and user interface that could later be shaped in different ways. A similar iterative approach was taken with the client where the prototypes where refined and presented in a biweekly manner to clearly highlight what has been completed and what is left to implement. Toward the end, most members focused on rigorous testing to ensure the validity of the implementation.

Victor:

3   Design Decisions (LO12)

[Reflect and justify your design decisions. How did limitations, assumptions, and constraints influence your decisions? —TPLT]

Pedram: As a front-facing software project, the design decisions used in MTOBridge were mostly justified through the perspectives of the stakeholders, often being the client and final user. Nevertheless, there were many factors that also helped justify each decision. For starters, most of the decisions were

justified considering the implicit or explicit trade-offs that would be involved. For example, certain frameworks offered less robustness but a higher performance which was not ideal for our scenario. At the same time, there were many constraints that we had to adhere. The program had to be portable and installable on any Windows 10 and 11 machine without the requirement for any other software or applications. These constraint also often included the actual limitations of the framework being used which could vary by use case. Finally, the assumptions and the context for this project, specifically the user behavior and future requirements were other influencing factors.

Victor:

4   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]

5   Reflection on Project Management (LO24)

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

5.1   How Does Your Project Management Compare to Your Development Plan

Victor:

[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]

5.2   What Went Well?

Victor:

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

5.3   What Went Wrong?

Victor:

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

5.4 What Would you Do Differently Next Time?

Victor:

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