Niagara College Canada

TORONTO SCHOOL OF MANAGEMENT

Assessment Title: Prototype – 3

Final Software Development, Testing, and Delivery - 30% (100 Points)

Program: Computer Programming	**Due Date:** Week 11
Course: Community Sponsored Project	**Outcomes Evaluated:** 03, 04, 05
Percentage: 30% of Total Grade (100 Points)	**AI Use Level for this Assessment:** Level 3 (AI-Assisted Editing)

Objective:

This assessment evaluates students' ability to refine, complete, and test their software projects before final delivery. Students must ensure that their prototypes from Prototype 2 are fully functional, optimized, tested for real-world use, and meet stakeholder requirements. The final deliverable should be deployable and ready for handover to the client.

Instructions for Students:

Follow these instructions to complete and present your final software solution based on feedback from Prototype 2.

1. Final Software Development & Testing

a. Task:
Your team must finalize and deliver a fully functional software solution that meets the project requirements. The final prototype must:

- Fully implement all core and additional features outlined in previous prototypes.
- Be optimized for performance, security, and usability.
- Be thoroughly tested to ensure a bug-free experience.
- Include comprehensive documentation for future maintenance and handover.
- Be deployed in a staging or production environment for real-world demonstration.
- Integrate final stakeholder feedback received from Prototype 2.

b. Guidelines:
Your final submission must include the following:

1. Fully Functional Software Solution
   - The software must be fully operational and meet project requirements.
   - Include all necessary refinements based on previous feedback.
2. Code Repository & Documentation:
   - Maintain an organized GitHub repository (or equivalent).
   - Provide a detailed user manual and developer documentation covering installation, features, known issues, and maintenance guidelines.
3. Performance Optimization:
   - Ensure the application runs smoothly without lags or crashes.
   - Optimize database queries, API calls, and resource management.
4. Security Testing & Bug Fixes:
   - Implement basic security measures (e.g., input validation, authentication, encryption where necessary).
   - Conduct a final round of testing to identify and fix critical bugs.
   - Submit a bug report document listing test cases and resolutions.
5. Deployment & Handover Plan:
   - Deploy the project in a live or simulated environment.
   - Provide installation/setup instructions for stakeholders.
   - Prepare a handover document detailing how the client can use and maintain the software.

c. Submission:

Upload the GitHub repository link (or equivalent), documentation, and deployment guide to Canvas by the end of Week 10**.**

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2. Final Demonstration & Presentation

a. Task:
Your team will present a final live demonstration of the software to stakeholders in Week 11.

b. Guidelines:
Your final presentation must:

- Showcase the complete working software with all features implemented.

- Explain the improvements made since Prototype 2.
- Demonstrate usability and performance with real test cases.
- Discuss security measures and optimizations applied.
- Present a detailed handover plan for project maintenance.
- Address any remaining stakeholder concerns.

c. Submission:

- Submit your presentation slides, final project documentation, and demo video (if applicable) before your scheduled presentation on Canvas.

3. AI Use Guidelines (Aligned with AI Assessment Scale - AIAS)

This assessment allows AI use at: Level 3 - AI-Assisted Editing: AI tools may be used to make improvements to the clarity or quality of student-created work to improve the final output, but no new content can be created using AI. All AI use must be documented, and the original work without AI content must be provided in an appendix.

What is Accepted:

✓ AI can be used to suggest improvements in code readability and structure.
✓ AI may assist in identifying errors and debugging, but students must manually validate and implement these fixes.
✓ AI may be used for structuring documentation, but all content must be originally written and reviewed.
✓ AI use in presentation slides formatting is permitted, but the content must be created by students.

What is Not Accepted:

✗ AI-generated entire code blocks or solutions without human review and refinement.
✗ Direct AI-generated documentation text without student edits or understanding.
✗ Using AI to generate presentation content instead of student input.
✗ Failure to acknowledge AI use in the documentation.

AI Use Declaration:

Students must explicitly state in their documentation:

- Where AI was used (e.g., debugging, documentation structure).
- How AI was used (e.g., suggested fixes, code refactoring).
- Why AI was used (e.g., to improve clarity, to enhance efficiency).
- Citations of the AI tool used (e.g., ChatGPT, GitHub Copilot).
- All AI usage must be properly documented and cited. Failure to declare AI use will be considered a breach of academic integrity.

3. Grading Rubric

Each criterion is evaluated on a 5-level scale: **Exceptional (10), Excellent (8), Satisfactory (6), Needs Improvement (4), and Unsatisfactory (0).**

Criteria	Details	Exceptional (10)	Excellent (8)	Satisfactory (6)	Needs Improvement (4)	Unsatisfactory (0)
Functionality & Features	Implements all required functionalities with refinements	Fully functional and exceeds expectations	Fully functional with minor issues	Basic functions work, some minor features missing	Some features work but incomplete	Non-functional solution
Performance & Optimization	Speed, responsiveness, and efficiency	Highly optimized, smooth performance	Good performance with minor lags	Basic performance, some inefficiencies	Noticeable performance issues	Very slow or non-functional
Backend Development & Integration	Robust database and API integration	Efficient backend with smooth integration	Good backend with minor performance issues	Basic backend with limited integration	Incomplete or faulty backend	No backend implementation
Security & Bug Fixes	Effectiveness of security and final bug resolutions	No critical bugs, strong security	Minor bugs, good security	Some security issues, few unresolved bugs	Multiple bugs, weak security	No security measures, major unresolved bugs
Technical Documentation	Clarity and completeness of handover docs	Fully detailed and easy to follow	Well-documented with minor gaps	Basic documentation, missing details	Poorly written or incomplete	No documentation provided
Deployment & Handover Plan	Successful deployment and clear instructions	Fully deployed, easy setup	Deployed with minor setup issues	Partially deployed, difficult setup	Deployment incomplete or faulty	No deployment attempted
Stakeholder Feedback Integration	Implementation of final feedback	All feedback incorporated	Most feedback integrated	Some feedback applied	Minimal feedback incorporated	No feedback addressed
Presentation Quality	Clarity, professionalism, and engagement	Engaging, well-structured, interactive	Clear and professional, minor gaps	Basic presentation, missing key points	Poorly structured or unclear	No meaningful presentation
Demo Effectiveness	Ability to demonstrate the final product	Flawless demo, clear explanations	Good demo with minor issues	Basic demo, missing key features	Unclear or incomplete demo	No meaningful demo
Citations and AI use declaration	Properly documents AI usage, citations, and ethical considerations	Clearly states where, how, and why AI was used, with accurate citations and a critical evaluation of its impact	Documents AI use with minor gaps in explanation or citation details	AI use is acknowledged but lacks clarity on its purpose, method, or proper citations	AI use is poorly documented or lacks citations, making verification difficult	No AI use declaration or citations, or evidence of undisclosed AI-generated content

Scoring Guidelines:

- **Total Marks:** 100 Points
- Each criterion is worth **10 points**, with a total of **10 criteria**.
- The **minimum score for a category is 0 (Unsatisfactory).**

Key Notes:

- Final Software & Documentation: The project must be fully functional and include a handover guide.
- Presentation Delivery: Each team member should contribute to the demo.
- Stakeholder Interaction: Be prepared to answer questions and address concerns.
  Professionalism Matters: Treat this as a real-world client handover.

End of Assessment Brief