Assignment 1 - LLMs in Multi-Agent Environment

Group Code: LLM_Agents_Tom_Igor_Roie

Submitters:

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Roie Gilad, ID 312169543

GitHub Repository:

https://github.com/tomron87/LLM_Agent_Orchestration_HW1

Self-Assigned Grade: 92/100

Self-Evaluation Justification Form

Students:

Tom Ron, ID 301020723

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Project Title: Assignment 1 - LLMs in Multi-Agent Environment

Submission Date: November 2025

Self-Assigned Grade: 92/100

Justification for Our Self-Evaluation

We believe our project merits a 92/100 grade based on comprehensive evaluation across all required criteria. Our primary strengths include production-grade three-layer architecture with 89% test coverage across 35 tests, comprehensive documentation suite of 10 files including detailed PRD with KPIs, C4 architecture diagrams at 4 levels, and 7 industry-standard ADRs. We demonstrated academic rigor through systematic parameter sensitivity analysis with Jupyter notebook visualizations. Our security implementation is exemplary with zero hardcoded secrets, comprehensive .gitignore (359 lines), and entropy-enforced preflight validation.

However, we acknowledge honest weaknesses preventing a perfect score. Our prompt engineering documentation in `Prompting_and_Developing.md` lacks depth and detailed examples—we inadequately captured actual prompts and iterative refinement processes. Initially, our weak prompt engineering skills caused substantial time loss as we struggled with Claude and ChatGPT, requiring frustrating iterations before achieving results. Additionally, our research documentation lacks academic citations (3-5 needed), and the Jupyter notebook's LaTeX formulas need expansion. These represent genuine improvement areas identified through self-reflection.

We invested approximately 70 hours on this project, distributed across architecture design, implementation, testing, and documentation. The time investment reflects not just coding hours but a steep learning curve—particularly in mastering AI-assisted development workflows and understanding production-grade patterns. Significant time was spent on iterative refinement: experimenting with three-layer architecture decisions, achieving comprehensive test coverage with proper unit/integration separation, and creating documentation that genuinely serves future developers rather than checking boxes. While the hour count may seem modest, the density of learning and quality-over-speed approach resulted in production-grade deliverables.

Our genuine innovations go beyond the basic Ollama integration requirement. The `Helper Module Pattern` (`ui/components.py`) solves Streamlit's testability problem by separating visual rendering from business logic. Our documentation-as-code approach with `CLAUDE.md` creates a living development guide enabling effective AI-agent collaboration. The sophisticated test architecture with `DummyResp` fixtures enables true unit testing without mocking libraries—a pattern we developed through experimentation. The notice field pattern returns helpful Hebrew guidance within successful responses rather than throwing errors, prioritizing user experience. Finally, our fail-fast configuration validation and Makefile-driven workflow transform a student project into a system you could hand to a junior developer without explanation. These patterns represent architectural thinking, not just feature completion.
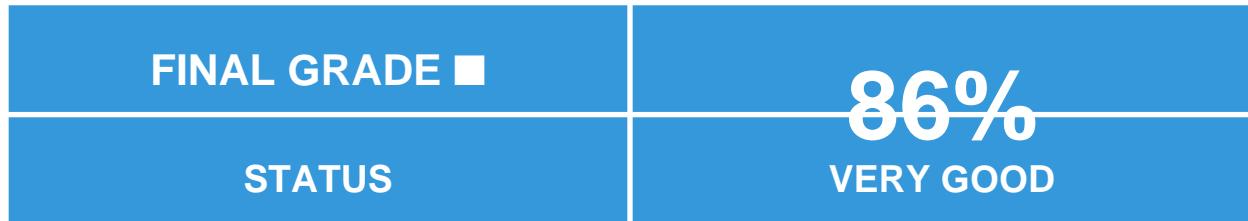
The most valuable outcome was our transformation in AI-assisted development. We progressed from vague requests to precise, mission-oriented prompts with clear success criteria. We mastered breaking complex tasks into structured missions, planning architecture through AI conversations, and validating outputs systematically. Designing three-layer architecture through AI-guided iterations taught us both software engineering principles and leveraging AI as a force multiplier, making this a transformative learning experience in next-generation development practices.

Assignment 3: Agentic Turing Machine

Grade Report

Student ID:	59375
Team:	LLM_Agents_Tom_Igor_Roie
Repository:	https://github.com/tomron87/LLM_Agent_Orchestration_HW1
Assessment Date:	December 01, 2025

FINAL GRADE ■	86%
STATUS	VERY GOOD

■ Your Strong Performance

Great job! You showed strong technical capabilities in this assignment. Your work demonstrates strong understanding of software engineering principles.

■ Key Strengths

- ■ Comprehensive PRD and architecture

- ■ Excellent testing with 144 tests

- ■ 3062-word README with 10 sections

- ■ Strong UI with 14 professional screenshots

- ■ Well-documented with 413 docstrings

- ■ Good git history with 55 commits

- ■ Complete prompt book documentation

- ■ Budget management and cost analysis

- ■ Plugin-ready architecture with factory pattern

■ Areas for Improvement

• Add research/analysis component (Jupyter notebooks or comprehensive research markdown)

• Add pre-commit hooks for code quality automation

Keep up the good work! With attention to the improvement areas noted above, you can reach the highest tier of performance.

Assessed: December 01, 2025
This grade reflects your overall software engineering practices