

Systems Analysis & Design
Semester 2025-III
Workshop No. 3 — Robust System Design and Project
Management

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Welcome to the third workshop of the *Systems Analysis & Design* course!

This session focuses on strengthening your system design by applying robust engineering principles and introducing project management strategies to ensure your solution is viable and sustainable. The goal is to refine your architecture, address quality and risk, and define how you will manage the project as it moves toward implementation.

Workshop Scope and Objectives

- **Robust System Design:** Refine your system architecture to address reliability, scalability, maintainability, and usability, referencing quality guidelines and standards (e.g., ISO 9000, CMMI, Six Sigma).
- **Risk and Quality Management:** Identify potential risks and failure points in your system, and propose mitigation strategies using established frameworks.
- **Project Management Foundations:** Define a basic project management plan, including roles, milestones, and tools (e.g., Kanban, Gantt charts) to guide your team through development.
- **Incremental Improvement:** Review feedback from previous workshops and show how your design and management approach have evolved.

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Any comment or concern about this document can be sent to Carlos A. Sierra at: *cavir-guezs@udistrital.edu.co*.

Steps to Follow

1. Review and Refine System Architecture:

- Update your architecture diagram to incorporate robust design principles (modularity, fault-tolerance, scalability).
- Clearly label components and describe how each supports system quality and reliability.
- Reference relevant standards or guidelines (ISO 9000, CMMI, Six Sigma) that inform your design choices.

2. Quality and Risk Analysis:

- Identify at least three potential risks or failure points in your system (e.g., data loss, downtime, security breaches).
- Propose mitigation strategies for each risk, referencing best practices from your slides.
- Briefly discuss how you will monitor and respond to issues during development and operation.

3. Project Management Plan:

- Define team roles and responsibilities (e.g., analyst, developer, tester, manager).
- Set key milestones and deliverables for the remainder of the project.
- Choose and describe project management tools or methodologies (e.g., Kanban board, Gantt chart, Scrum).
- Include a simple project timeline or workflow diagram.

4. Incremental Improvements:

- Summarize feedback or lessons learned from Workshops 1 and 2.
- Explain how your system design and management plan have evolved in response.

5. Documentation and Submission:

- Compile your updated architecture diagram, risk analysis, project management plan, and incremental improvement summary into a single PDF.
- Place all files in a folder named `Workshop-3` in your GitHub repository, with a `README.md` referencing each section.

Deadline

Saturday, November 8th, 2025, at 8:00

Late submissions may be subject to grading penalties as outlined in course policy.

Notes

- All documents must be in **English** and submitted in **PDF format**.
- Cite any references (articles, standards, tutorials) that influenced your design and management choices.
- Focus on clarity, completeness, and how your robust design and project management approach support the business and user needs.
- Treat this delivery as an incremental step. You will continue to expand and refine your design and management plan for the final project.
- Consider including a brief reflection (1-2 paragraphs) describing challenges faced and decisions made during this phase.

Good luck! This workshop will help you build a more robust, manageable, and successful system as you prepare for your final project delivery.