

Software Engineering II
Semester 2025-II
Workshop No. 2 — Design Artifacts and System Modeling

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Welcome to Workshop 2! This session focuses on the *design phase* of your *Software Engineering II* course project. You will produce key design artifacts and models to clarify your system's structure and prepare for implementation.

Scope and Objectives

- **CRC Cards:** Define the main classes, their responsibilities, and collaborators using CRC cards.
- **Mockups:** Create mockups or wireframes for the main screens of your application.
- **Business Model Processes:** Document essential business processes using activity diagrams or BPMN.
- **Architecture Diagram:** Draw the overall software architecture, showing main components and their interactions.
- **Class Diagram:** Create UML class diagrams for your system, including attributes, methods, and relationships.
- **Relational Database Model:** Design the relational database schema, including tables, keys, and relationships.

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Any comment or concern regarding this workshop can be sent to Carlos A. Sierra at: *casier-rav@unal.edu.co*.

Methodology and Deliverables

1. CRC Cards

- Identify and describe the main classes in your system.
- For each class, specify its responsibilities and collaborators.
- Present CRC cards in a table or diagram format (one per each class).

2. Mockups

- Create mockups or wireframes for your screens.
- You may use digital tools (e.g., Figma, Balsamiq) or hand-drawn sketches.
- Briefly explain the purpose of each screen.

3. Business Model Processes

- Document at least one core business process using an activity diagram or BPMN.
- Describe the process and its role in your application.
- Reference: <https://www.visual-paradigm.com/guide/bpmn/what-is-bpmn/>

4. Architecture Diagram

- Draw a software architecture diagram showing system components and their interactions.
- Indicate technologies, layers, and communication flows.
- Reference: <https://www.lucidchart.com/blog/how-to-draw-architectural-diagrams>

5. Class Diagram

- Create UML class diagrams for the main classes.
- Include attributes, methods, and relationships.
- Reference: <https://www.uml-diagrams.org/class-diagrams-overview.html>

6. Relational Database Model

- Design the relational database schema for your application.
- Include tables, primary and foreign keys, and relationships.
- Present the model as an ER diagram or table definitions.

7. Delivery Format

- Compile all deliverables into a single PDF.
- Organize your files in a folder named **Workshop-2** in your course project repository, with a **README.md** referencing each section.

Project Requirements Checklist

- CRC cards for main classes.
- Mockups for key screens.
- Business process documentation.
- Architecture and class diagrams.
- Relational database model.
- Organized and referenced documentation.

Deadline

Thursday, November 6th, 2025, at 20:00. Late submissions may affect your grade according to course policies.

Notes

- All documents must be in **English**.
- Cite any references (articles, tutorials, tools) that influenced your design choices.
- Focus on clarity and completeness. This design phase will guide your implementation in future workshops.

Good luck! A clear and well-documented design will set the stage for a successful project implementation.