# Café POS & Delivery Project — Final Part (Weeks 8–11) Descriptive Guide with Rubric

The Final Assessment (till Week 11) represents the culmination of the Café POS & Delivery Project. It evaluates your progress from **Week 8 through Week 11**, where you advanced beyond the mid-term to integrate higher-level design patterns, architectural principles, and full system composition.

By this stage, your project should demonstrate a complete, domain-centric Café POS & Delivery system that integrates multiple layers, clear architectural boundaries, event connectors, and full lifecycle management. The goal is to show that you can scale a small project into a structured architecture while maintaining correctness, testability, and clean design.

**Weekly Roadmap and Scope**

- **Week 8 — Command & Adapter**
  You introduced the Command pattern to decouple button presses from domain logic and support undo/macro commands. You also introduced an Adapter to integrate a legacy printer without modifying core code.
  Deliverables: Week8Demo_Commands and Week8Demo_Adapter.

- **Week 9 — Composite, Iterator & State**
  You extended the system with Composite and Iterator to implement hierarchical menus and filtering (e.g., vegetarian options). You also introduced the State pattern to model the order lifecycle cleanly, replacing conditional chains.
  Deliverables: Week9Demo_Menu and Week9Demo_State.

- **Week 10 — Layered Architecture & MVC**
  You restructured the code into four clean layers (Presentation, Application, Domain, Infrastructure) and built a simple MVC console interaction. You also introduced components and connectors via an EventBus to decouple UI from application events.
  Deliverables: Week10Demo_MVC and EventWiringDemo.

- **Final Integration & Delivery**
  You integrated all patterns and architecture into a single cohesive system. UI controllers, application services, domain model, and infrastructure adapters must work together. Documentation, tests, and trade-off reflections must be finalized.
  Deliverables: complete Maven project, final README, ADRs, tests, and final demo script.

**Video Presentation (max 8 minutes) – What You Must Cover**

Your final submission includes a short video recording (no longer than **8 minutes**) that clearly demonstrates how your Café POS & Delivery system satisfies the assessment rubric. In your video, you should provide a concise guided tour that shows evidence for each rubric category:

- **Pattern Correctness & Integration (8 marks)**
  Briefly demo where and how you use Command, Adapter, Composite, Iterator, State, MVC, and EventBus in the running system. Point to the relevant classes or packages and show at least one concrete example of each pattern working (e.g., a command triggering an action, state change in an order, composite menu traversal, event flowing through the EventBus).

- **Architectural Integrity (7 marks)**
  Show a high-level view of your four-layer architecture (Presentation, Application, Domain, Infrastructure). Use either a simple diagram or a quick project-structure tour. Explain how UI, services, domain model, and infrastructure adapters are separated, and highlight one or two connectors (e.g., EventBus, repositories) to show how components communicate without breaking boundaries.
- **Code Quality & Testing (6 marks)**
  Give a quick walkthrough of your code organisation (packages, naming, key classes) and point out any refactoring you carried out since mid-term. Then, show your JUnit *tests* (test classes, how you run them) and mention what behaviours they cover (e.g., order lifecycle, menu filtering, command execution).
- **Trade-off Documentation (4 marks)**
  Show at least one Architecture Decision Record (ADR) in your project. In the video, briefly summarise:

    - the context/problem,

    - the alternatives you considered,

    - the decision you made, and

    - the main consequences (pros/cons).
      Connect this to what we see in the code or architecture (e.g., "We chose EventBus over direct calls for decoupling; you can see that here…").

By the end of the video, the marker should be able to clearly see how your **running system, architecture, tests, and ADRs** together fulfil the rubric for the Final Assessment.