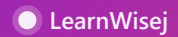


AI Coding Exercise

Build this module's EnterpriseOps sample with ChatGPT or Claude from a ready-made prompt that points the model at this module's specification, then review, run and extend what it gives you — including against our own reference build on GitHub.



Writing the code is the easy half now.

Getting working code for "Real Data Architecture: EF Core, Transactions, Repositories, and Commands" out of a modern assistant takes one good prompt. Judging it, correcting it and extending it takes everything this module covered. That is the split this exercise is built around — you supply the specification and the review, the assistant supplies the typing.

What you are asking for

Replace fake WorkOrderService persistence with an EF Core-backed implementation or a production-shaped repository abstraction. Implement Create, Update, Approve, Search, and Audit operations with transaction boundaries and mapped errors.

The module asks for these deliverables, and the prompt below asks the assistant for exactly them:

- ✓ Data access boundary diagram
- ✓ DbContext lifetime decision
- ✓ Command and result classes
- ✓ Transaction example
- ✓ Error mapping table

Why it is shaped this way

Intermediate labs can use fake services. Advanced applications must connect to real data stores without turning screens into SQL clients or leaking persistence concerns into the UI.

These are the terms the assistant has to get right. If what comes back uses them loosely, it has not understood the module:

Term	What it means here
EF Core boundary	The line between UI code and Entity Framework Core. Screens call services and commands; they never hold a DbContext or write LINQ against entities.
DbContext lifetime	How long a DbContext instance lives. Short, per-operation contexts avoid stale tracking, memory growth, and cross-session leaks in a long-lived app.
repository vs query service	Repositories load and save aggregates for commands, while query services return read-only projections shaped for screens. Keeping them separate keeps both simple.
transaction boundary	The unit of database work that must succeed or fail together. It belongs in a service or command, not spread across UI event handlers.
command object	A small class that carries the input for one business operation and is executed by a handler, so the operation can be validated, logged, and tested independently.
unit of work	Coordinates all changes in one operation and commits them together, giving a single place to manage transactions and change tracking.
error mapping	Translating database exceptions such as constraint violations and concurrency failures into meaningful application errors the UI can present safely.

Build it — pick your assistant

Both buttons open a new tab with the **same ready-made prompt** already filled in. The prompt points the model at this module's specification — a single Markdown file holding the lesson, the lab brief and the deliverables — so it works from the real material instead of guessing what Module 4 is about. You can open [module-04.md](#) yourself to see exactly what it will read.



Use ChatGPT

Opens [chatgpt.com](#) with this module's prompt loaded. Works with GPT-5 or Codex; any plan that can browse the web will fetch the spec.



Use Claude

Opens [claude.ai](#) with the same prompt loaded. Claude Code users can paste it into a terminal in an empty folder instead.



Send it as-is and you get a project, not a snippet

The prompt ends by asking for the whole solution as a single [.zip](#) with build-and-run steps. Download it, open the solution in Visual Studio, press F5 and EnterpriseOps comes up on [localhost](#). You need the .NET SDK and the [Wisej-4](#) NuGet package; everything else the prompt asks the assistant to write itself.

The prompt, in full — read it, then edit it if you want a different sample

I am working through Module 4 – "Real Data Architecture: EF Core, Transactions, Repositories, and Commands" – of the LearnWisej Enterprise Wisej.NET: Architecture to Cloud course, and I want to build the module sample with you.

Start by reading the module specification. It is a single Markdown file holding the full lesson, the lab brief and the deliverables:

<https://learnwisej.com/assets/courses/azure-docker/specs/module-04.md>

Then build a complete Wisej.NET 4 project I can open in Visual Studio:

1. Project "EnterpriseOps", C#, net8.0 or later, NuGet package Wisej-4 4.1.x, Kestrel host calling `app.UseWisej()`.
2. Build what the specification's lab asks for: Replace fake `WorkOrderService` persistence with an EF Core-backed implementation or a production-shaped repository abstraction. Implement Create, Update, Approve, Search, and Audit operations with transaction boundaries and mapped errors.
3. Produce these deliverables, and tell me where each one lives in the solution:
 - Data access boundary diagram
 - `DbContext` lifetime decision
 - Command and result classes
 - Transaction example
 - Error mapping table
4. Follow the specification wherever it names a Wisej.NET class, property or event – use exactly that one. Where it leaves a choice open, tell me which API you picked and why.
5. Keep the server authoritative: state and validation live in .NET, and the browser renders and reports. Never move a decision into JavaScript because it is easier there.
6. Make the result demonstrable: I should be able to run it and see the behaviour this module is about, including what happens when something goes wrong.

Before you write any code, restate in your own words what you are going to build and where each piece will live, so I can correct the design while it is still cheap.

When the code is done, package the whole solution as a single .zip I can download, and give me the exact steps to build and run it.

Finally, answer these questions from the specification, using your own implementation as the evidence:

- Can a save be tested without creating a Form?
- What is inside the transaction?
- How are concurrency and unique key errors surfaced?

Ask me about anything that is ambiguous before you start.

Then review what came back

Code that compiles is not yet code that is right. The interesting questions are design questions: is this the Wisej.NET control the job actually calls for, does it follow the lifecycle the framework gives you, is the authoritative state on the server rather than parked in the browser because that was convenient? Read the result as a reviewer, not as a customer.

This module gives you the checklist. Answer each one against the code you just received:

- ✓ Can a save be tested without creating a Form?
- ✓ What is inside the transaction?
- ✓ How are concurrency and unique key errors surfaced?

Anything you had to correct is worth writing down. A short note of the conventions and decisions you settled on, pasted into the first message of your next session, is worth more than any single clever prompt.



We already built this one — compare yours with ours

The Module 4 reference implementation lives in the public samples repository. Build yours first, then open ours: the differences are the interesting part.



[Open the Module 4 sample on GitHub](#)

Or clone the whole set with `git clone https://github.com/iceteagroup/LearnWisej-Samples` and open `Enterprise Wisej.NET Course/Module 4`.



Our sample is a starting point, not a finished product

It was built the same way you are building yours — by prompt, then corrected — and it deliberately stops where the module stops. Expect stand-ins where production code would go, thin error handling and no tests. Treat that as an invitation: use what you learned in this module, plus the assistant, to push it further. Improving code you did not write is the skill this course is actually teaching.

Three prompts to take it further

Point your assistant at the project you just built — or at ours and try these. Each one is a review-and-extend exercise, not a rewrite.

- ✓ **Add the second case.** *"Extend this EnterpriseOps project with a second case that follows the same pattern as the first — another entity, screen or control of the same shape, wired the same way. Factor out what is genuinely shared into a base class or service, but only where it earns its place; two similar things do not always want an abstraction. Show me the diff and justify each thing you extracted."*
- ✓ **Prove it actually works.** *"Go through this project deliverable by deliverable against the module specification at <https://learnwisej.com/assets/courses/azure-docker/specs/module-04.md> and show me the evidence that each one is genuinely done — the code path, what to click, and what I should see. Where a deliverable is only partly met, say so plainly instead of arguing it through. Then add whatever is missing."*
- ✓ **Review it like a pull request.** *"Walk me through this EnterpriseOps code as if you were reviewing a colleague's pull request and did not write it. Where does state live, what happens end to end on one user action, what would you send back for changes, and which parts would you not be comfortable putting in front of a customer? Be specific and quote the lines you mean — do not summarise the design back to me."*



Carry it into the lab

The hands-on lab that closes this module asks for the same deliverables you just had the assistant produce. Use what you have here as the shape of your answer and the evidence behind it — not as the answer itself. The lab is graded on your reasoning, and that part has to be yours.