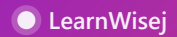


AI Coding Exercise

Build this module's TicketOps 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.



You are not going to type this sample. You are going to direct it.

Almost nobody writes Wisej.NET code from a blank file any more — an assistant writes the first draft and the developer decides whether it is right. That only works if you know the material, which is what the rest of this module gave you. Here you hand that knowledge to ChatGPT or Claude, get this module's sample back as a working Visual Studio solution, and review it the way you would review a colleague's pull request.

What you are asking for

Add authentication simulation, role-based authorization, server-side permission checks, safe HTML handling, and audit logging. Demonstrate that an unauthorized action cannot execute even if a UI control is enabled manually.

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

- ✓ Login gate
- ✓ Permission service
- ✓ Service-level authorization checks
- ✓ Safe text/HTML policy
- ✓ Security checklist

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
Authentication	establishing who a user is and binding that identity to the session (verified once at login).
Authorization	deciding whether this identity may perform this action (checked per action, on the server).
Trust boundary	the line between code you control (the server) and code you don't (the browser); enforce rules on the trusted side.
Least privilege	grant each user and each component only the permissions they actually need, no more.
Sanitization	neutralizing user-provided content before display, so markup or script shows as inert text instead of executing.
Audit trail	a server-side record of who did what to which record and when, kept free of secrets.

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 11 is about. You can open [module-11.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 TicketOps 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 11 – "Security, Authentication, Authorization & Safe Server Boundaries" – of the LearnWisej Production Architecture Deep Dive 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/intermediate/specs/module-11.md>

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

1. Project "TicketOps", 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: Add authentication simulation, role-based authorization, server-side permission checks, safe HTML handling, and audit logging. Demonstrate that an unauthorized action cannot execute even if a UI control is enabled manually.
3. Produce these deliverables, and tell me where each one lives in the solution:
 - Login gate
 - Permission service
 - Service-level authorization checks
 - Safe text/HTML policy
 - Security checklist
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.

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.

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



[Open the Module 11 sample on GitHub](#)

Or clone the whole set with `git clone https://github.com/iceteagroup/LearnWisej-Samples` and open `Production Architecture Deep Dive/Module 11`.



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.

- ✓ **Review it like a pull request.** *"Walk me through this TicketOps 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."*
- ✓ **Swap a piece without moving the seams.** *"Pick the part of this TicketOps project that is most obviously a stand-in for something real — a fake data source, an in-memory store, a simplified service — and replace it with a production-shaped implementation. The contract either side of it must not change: same types, same calls, same behaviour under failure. Tell me what the real implementation forced you to handle that the stand-in did not."*
- ✓ **Make it survive a bad day.** *"Review this TicketOps project for the failure modes it does not handle yet — bad or missing input, a dependency that is slow or unavailable, work arriving after the user navigated away, and two actions racing each other. For each one, tell me first whether it is a real risk in Wisej.NET 4 and why, and only then write the fix. Where you decide something needs no handling, say so and explain the reasoning rather than adding defensive code."*



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.