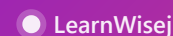


AI Coding Exercise

Build this module's SupportDesk 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

Create the Support Desk Data Console solution with Web, Data, Services and Tests projects, add the EF Core provider packages to the data project, create SupportDeskContext with a design-time factory, register AddDbContextFactory in ASP.NET Core startup and expose Microsoft's IServiceProviders to Wisej.NET, then resolve a query service from a Wisej.NET Page and run a first async count query behind a loading flag and an error message, without binding anything yet.

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

- ✓ Solution with Web, Data, Services and Tests projects and the EF Core provider packages
- ✓ SupportDeskContext registered through AddDbContextFactory with a design-time factory
- ✓ Microsoft IServiceProviders exposed to Wisej.NET and a query service resolved from a Page
- ✓ First async count query with a loading guard and an error message
- ✓ No static DbContext anywhere in the solution

Why it is shaped this way

A Wisej.NET application feels like WinForms because forms, pages, controls, BindingSource components and event handlers all live on the server, and that familiarity invites a dangerous shortcut: treating a DbContext as one more long-lived server object. EF Core is server-side too, but it is not a UI state container; it is a short unit of work whose change tracker is neither thread-safe nor meant to be shared. Many browser sessions will open the Support Desk Data Console at once, so the first skill of this course is keeping the UI lifetimes and the database lifetime apart before any grid is bound.

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
session state	The per-browser-session server state Wisej.NET keeps alive: open pages, the selected row, filters, validation messages and pending edits, reachable through Application.Session and the live control tree.
UI object lifetime	How long a Page, Form or BindingSource exists, from construction until the user closes it or the session ends; often hours, far longer than any database call.
request/thread lifetime	One browser event or one await continuation on the server; the thread that started a click handler is not necessarily the one that finishes it.
unit of work	The lifetime of one DbContext: create it, query or change entities, call SaveChangesAsync, dispose it; seconds, not sessions.
DbContextFactory	The IDbContextFactory<T> service registered by AddDbContextFactory that hands out a fresh, correctly configured context whenever an operation needs one.
Microsoft DI bridge	Registering ASP.NET Core's IServiceProvider with Application.Services so Wisej.NET pages can resolve the same services that startup configured.
cross-session leak	A static or shared mutable object (a context, a change tracker, a bound list, a selected entity) that one user's session can read after another user's session wrote it.

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 1 is about. You can open [module-01.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 SupportDesk 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 1 – "Architecture: EF Core inside a Wisej.NET Application" – of the LearnWisej Data Binding with EF Core 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/ef-core-binding/specs/module-01.md>

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

1. Project "SupportDesk", 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: Create the Support Desk Data Console solution with Web, Data, Services and Tests projects, add the EF Core provider packages to the data project, create `SupportDeskContext` with a design-time factory, register `AddDbContextFactory` in ASP.NET Core startup and expose Microsoft's `IServiceProvider` to Wisej.NET, then resolve a query service from a Wisej.NET Page and run a first async count query behind a loading flag and an error message, without binding anything yet.
3. Produce these deliverables, and tell me where each one lives in the solution:
 - Solution with Web, Data, Services and Tests projects and the EF Core provider packages
 - `SupportDeskContext` registered through `AddDbContextFactory` with a design-time factory
 - Microsoft `IServiceProvider` exposed to Wisej.NET and a query service resolved from a Page
 - First async count query with a loading guard and an error message
 - No static `DbContext` anywhere in the solution
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:

- Which lifetime did you choose for the `DbContext` behind `CountTicketsAsync`, and what would go wrong if the page kept that context alive between clicks?
- Two users open the Support Desk console at the same time and both click Count. Which objects are separate per session, which are shared, and why is that split safe?
- If the database is unreachable, what does the user see, what does the button do, and how does the loading flag end up false again?

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:

- ✓ Which lifetime did you choose for the DbContext behind CountTicketsAsync, and what would go wrong if the page kept that context alive between clicks?
- ✓ Two users open the Support Desk console at the same time and both click Count. Which objects are separate per session, which are shared, and why is that split safe?
- ✓ If the database is unreachable, what does the user see, what does the button do, and how does the loading flag end up false again?

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



[Open the Module 1 sample on GitHub](#)

Or clone the whole set with `git clone https://github.com/iceteagroup/LearnWisej-Samples` and open `Data Binding with EF Core Course/Module 1`.



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 SupportDesk 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/ef-core-binding/specs/module-01.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 SupportDesk 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.