



PwC actuarial agentic coding session

From idea to prototype in 45 minutes



Here with you today



Lars Janssen
Director



Tom Peters
Manager



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What my backyard has to do with building actuarial prototyping



Agenda



1. Intro & Basics: Understanding the building blocks of software development – 15 min



2. From Idea to Plan: Turn your concept into a structured prompt – 5 min

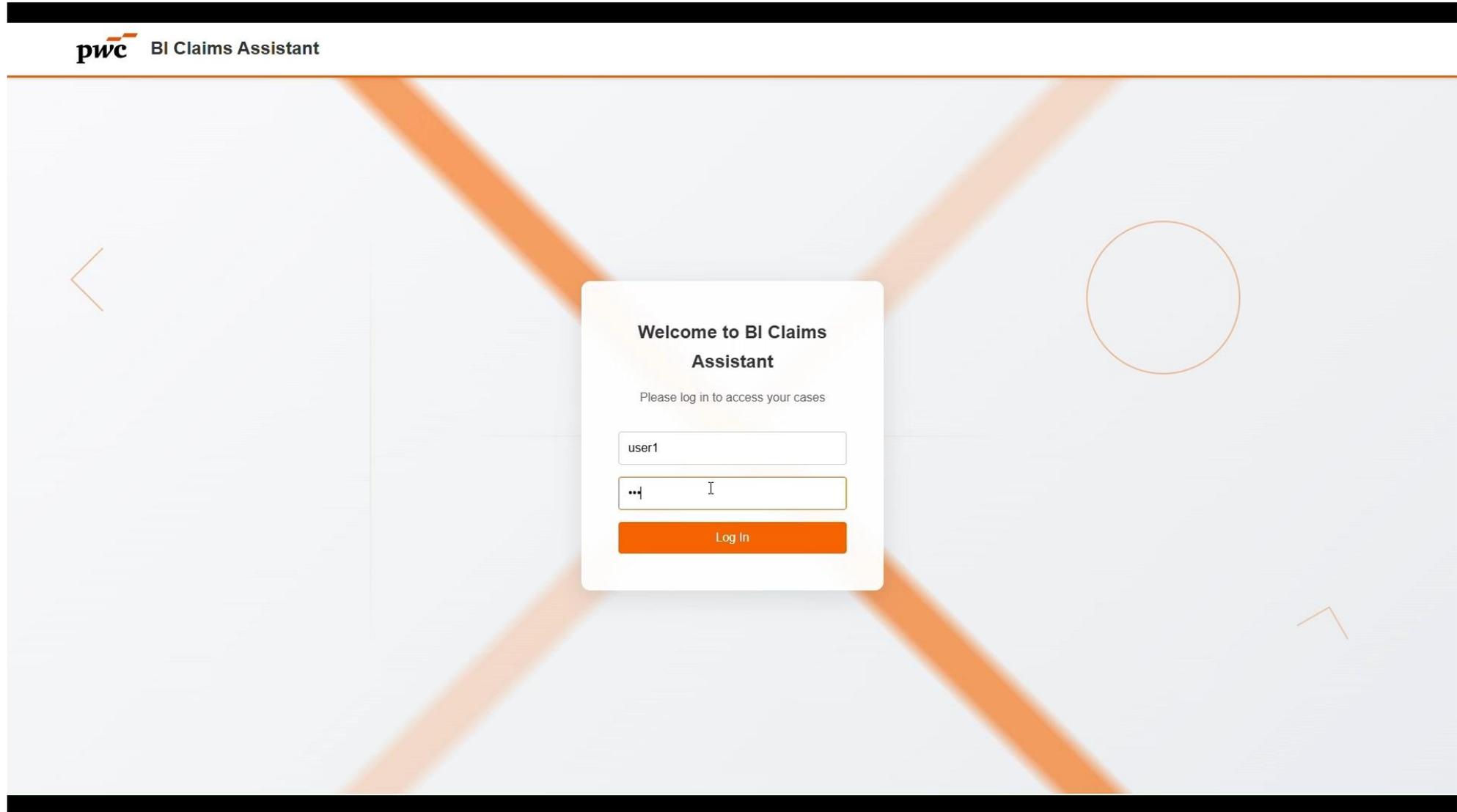


3. Build & Iterate: Coding, testing, and refining your mock-up live – 20 min



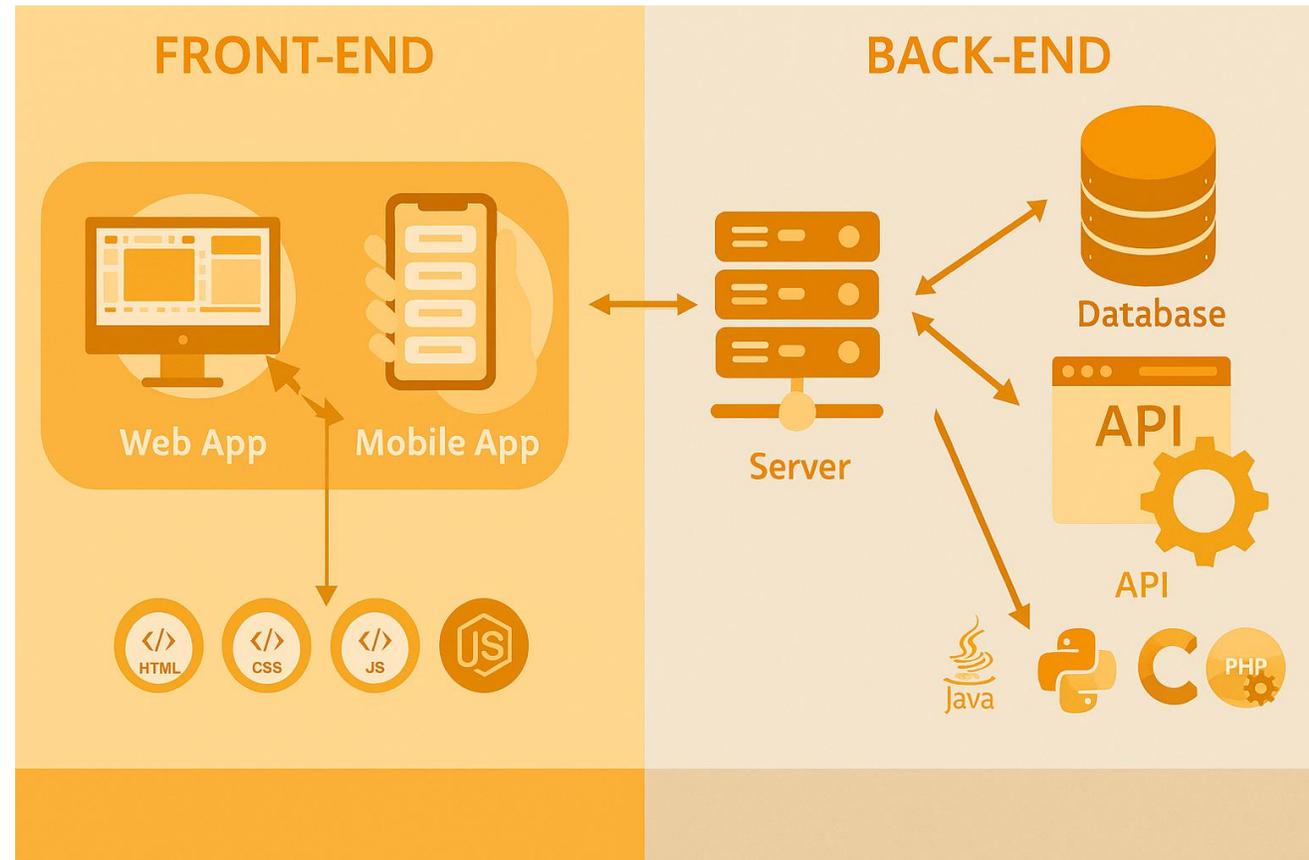
4. Wrap-up and closing – 5 min

By the end of this session, you will be able to build this



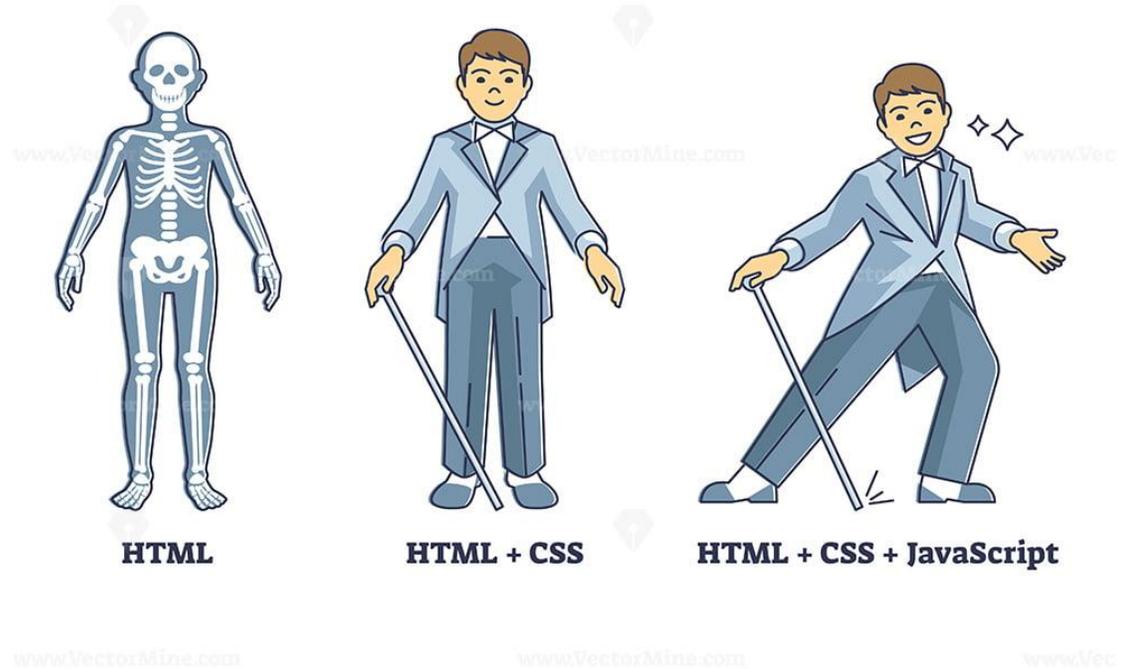
Before we start building, we need to have a good idea of the setup

- Frontend and backend



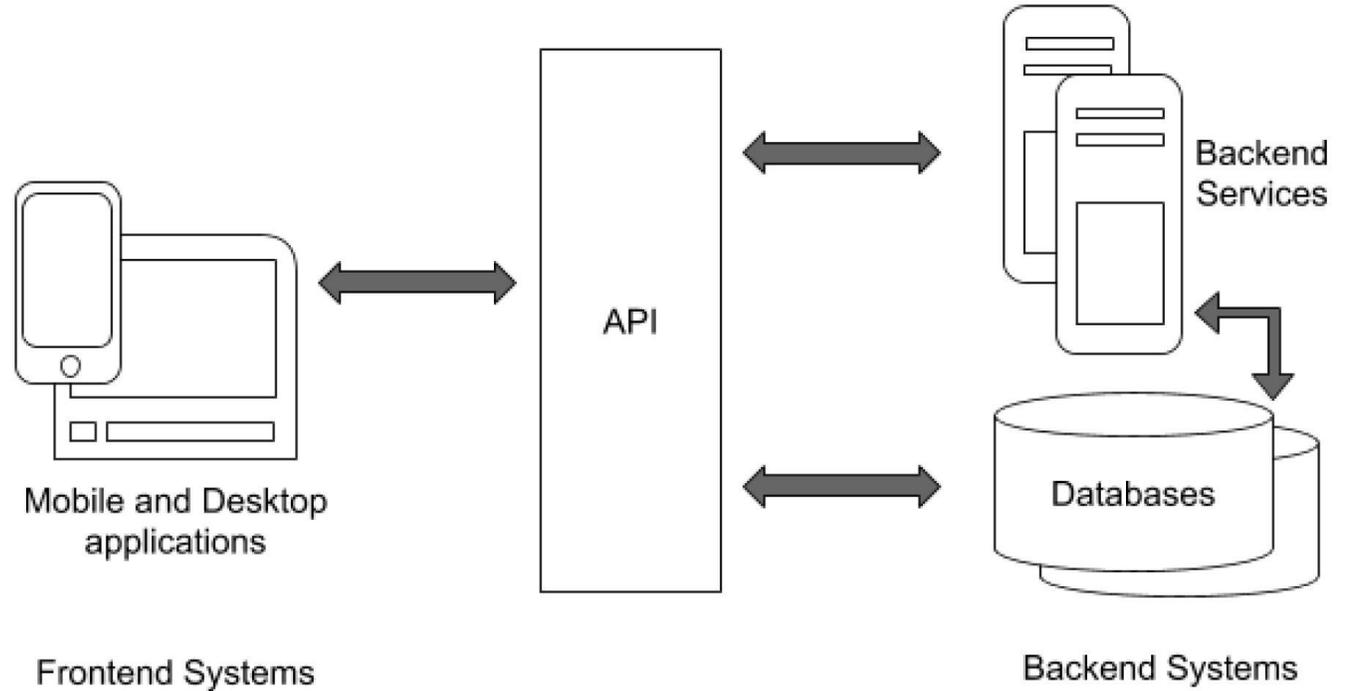
Before we start building, we need to have a good idea of the setup

- **Frontend and backend**
- **Frontend (separate server):**
 - HTML
 - CSS
 - JS

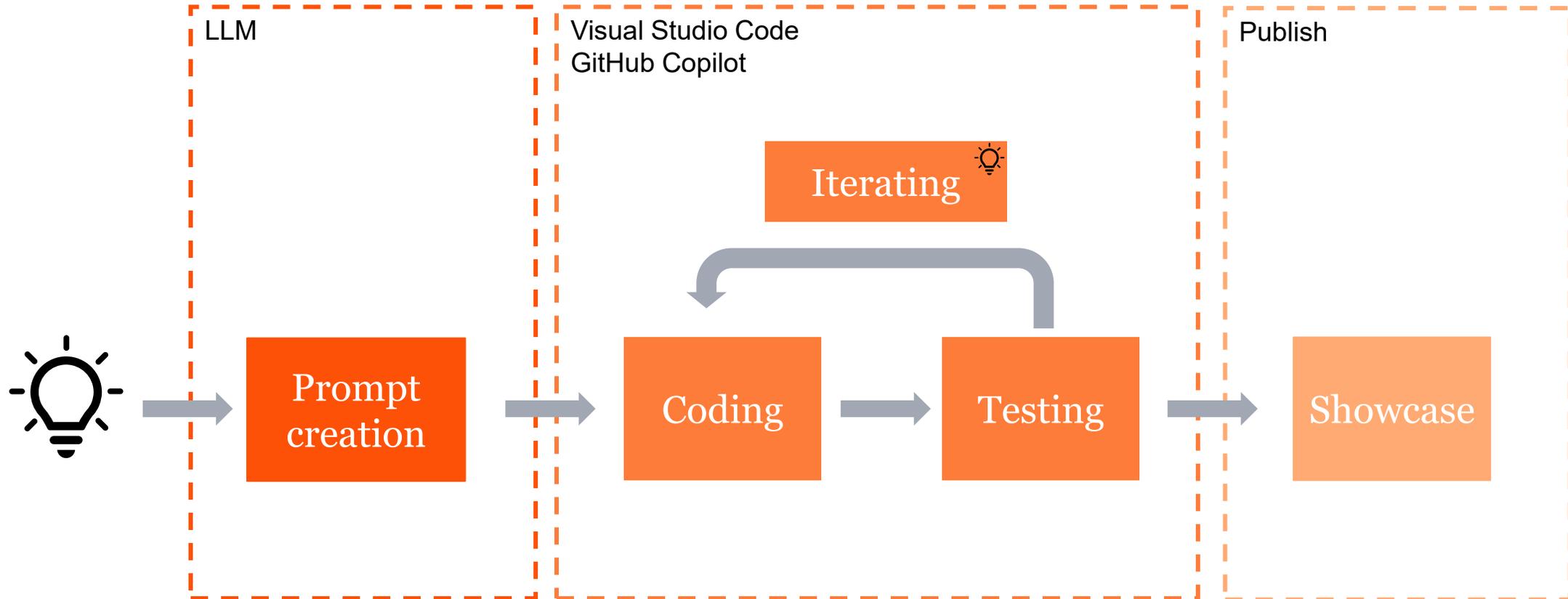


Before we start building, we need to have a good idea of the setup

- **Frontend and backend**
- **Frontend (separate server):**
 - HTML
 - CSS
 - JS
- **Backend (separate server):**
 - Python + (Fast)API

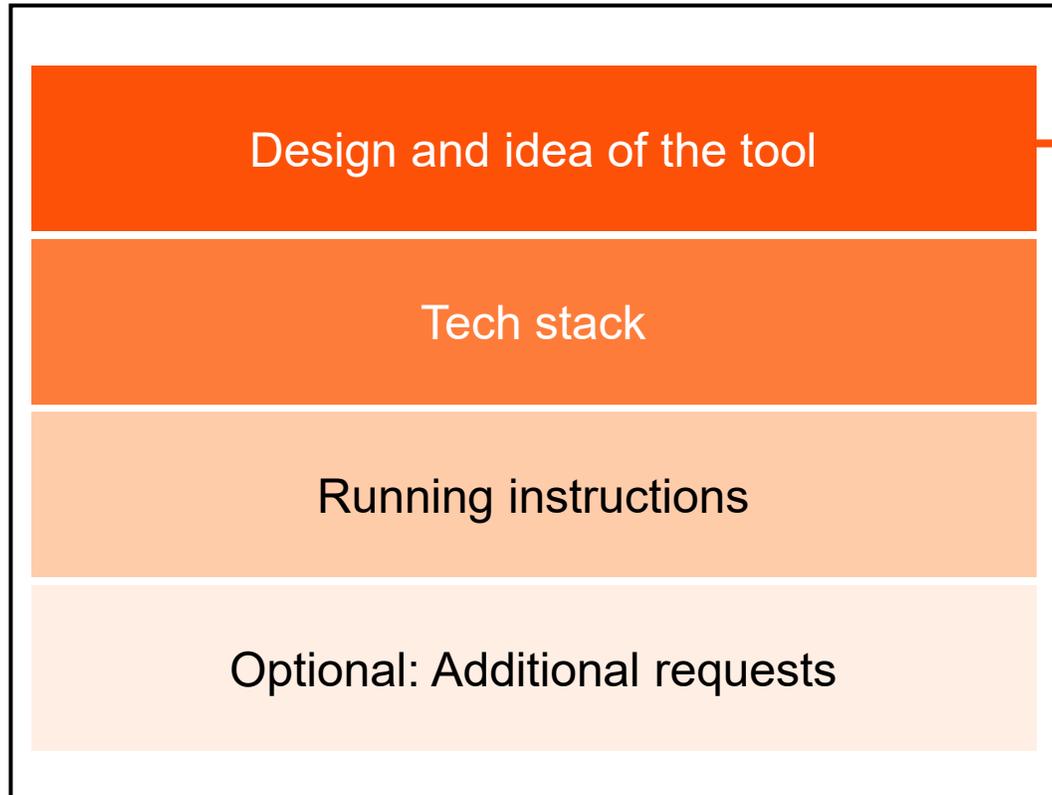


Engineering process: From idea to mock-up



Generate a well-structured initial prompt for your coding agent

Prompt:



I want to build an insurance claims simulator app called "ClaimSim" with 3 pages: Setup, Simulation, and Dashboard.

Setup page:

The user enters a company name, selects a line of business from a dropdown (Auto, Home, Health), sets the number of policies (slider from 100 to 10,000), and sets an annual premium per policy (input field, default 500). There should be a large "Launch Simulation" button that navigates to the Simulation page.

Simulation page:

When the page loads, it animates a one-year simulation. Claims arrive following a Poisson process. Show an animated counter for: total claims count, total claims cost, and total premium collected. Display a live bar chart comparing cumulative premiums vs cumulative claims over 12 months. Each claim amount should be drawn from a lognormal distribution. When the year finishes, a "View Dashboard" button appears.

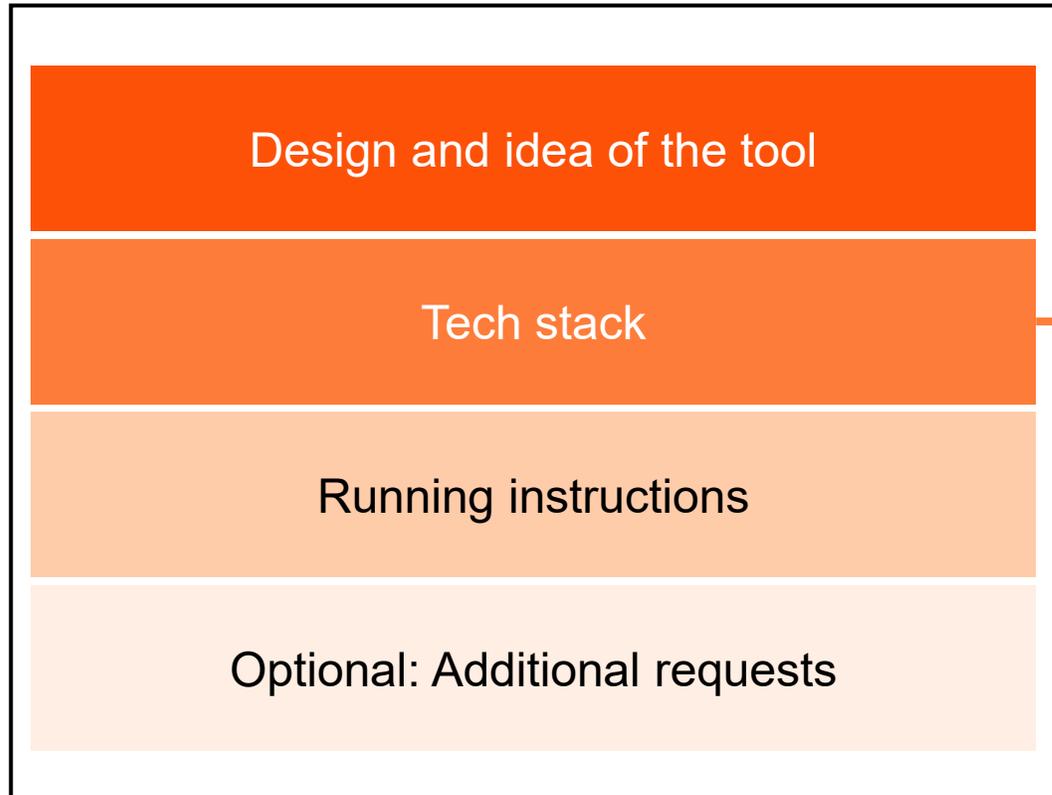
Dashboard page:

Show summary cards with: total premium, total claims, profit/loss, and loss ratio. Use green styling if profitable, red if loss. Show a bar chart of monthly claim counts and a histogram of claim severities. Include a "Run Another Year" button that reruns the simulation and adds results to a table tracking Year, Premiums, Claims, Profit/Loss, and Loss Ratio.

Use a dark blue and white color theme. The company name from Setup should appear as header on all pages.

Generate a well-structured initial prompt for your coding agent

Prompt:

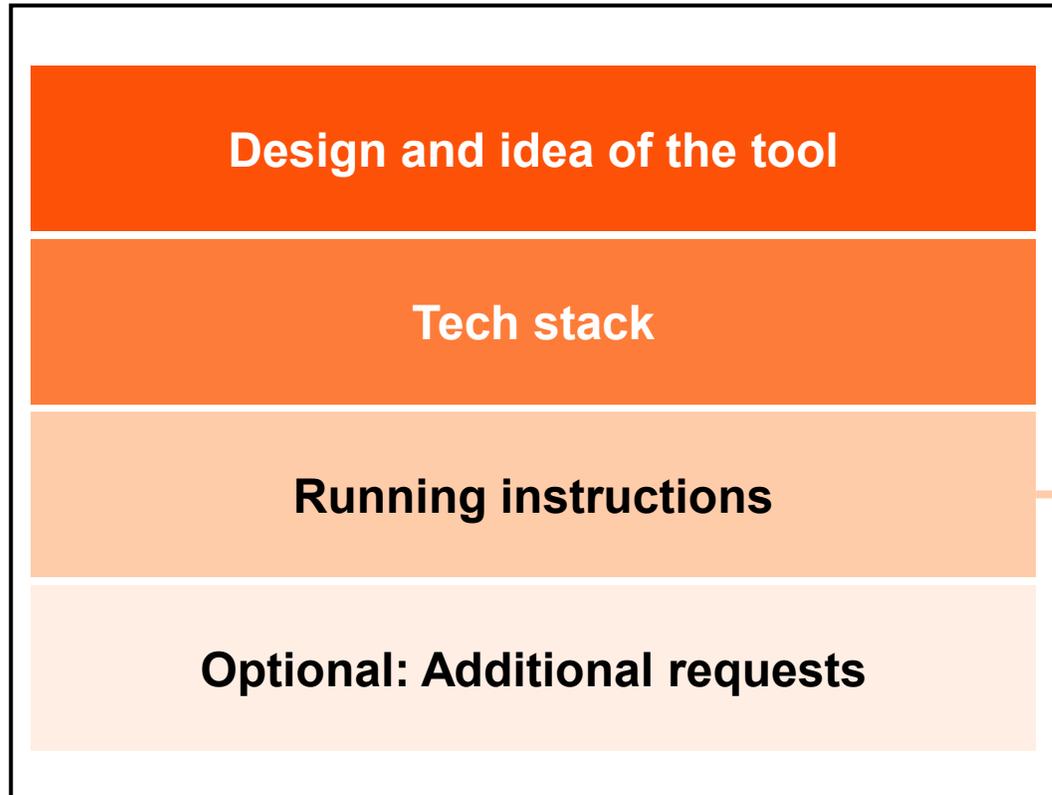


Make sure to use the following stack:

- HTML,
- CSS,
- JS for the frontend
- and Python with FastAPI for the backend. Please add a separate frontend and backend folder. The simulation logic should run in the backend via API endpoints.

Generate a well-structured initial prompt for your coding agent

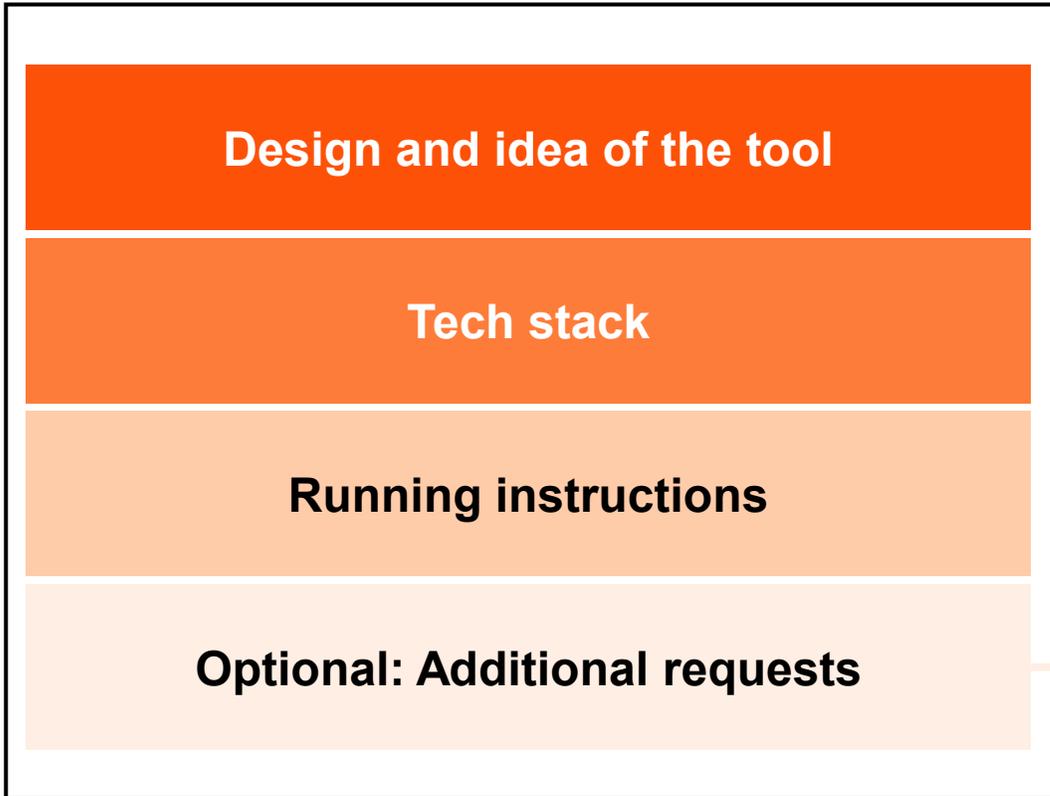
Prompt:



I want to be able to run the entire application with a single command from a python main.py file. In this file the frontend server as well as the backend server needs to be setup.

Generate a well-structured initial prompt for your coding agent

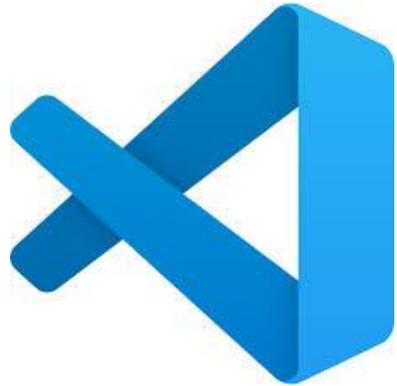
Prompt:



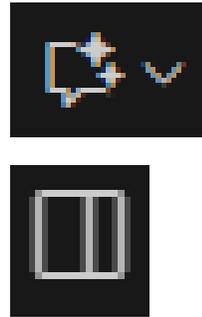
Please generate the right folder structure for me. Generate a ReadMe. Use port 8000 for the backend and port 3000 for the frontend.

Now that we have all the basics and the prompt constructed, lets get started

Open VSCode with new folder



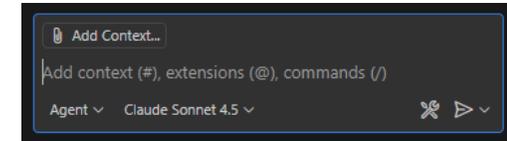
Open Github Copilot



Scan QR code for the prompt



Select agent mode, insert the prompt and start the agent





Wrap-up and closing





Thank you

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