

Build an API Backend with AI

Execution Path

A structured route from idea to working output - the steps, outcomes, workflows, resources, and tools, in order.

Category: Software Development Steps: 9 Phases: 4
Exported: 2026-07-21 (UTC)
Source: <https://newprompt.net/blueprints/build-api-backend-with-ai/execution-map>

PATH SUMMARY

9 steps across 4 phases.

Use this document as a portable execution guide. Each step lists the expected outcome and the workflow, resource, and tool used in NewPrompt.

PHASE 1 · Define & Scope

Clarify what you're building and for whom.

Step 1 · Define what the backend must do

Before any design, turn the need into written requirements - the operations the API exposes, the rules, the acceptance criteria - so the whole build aims at the same target.

OUTCOME
Requirements the backend build can start from.

USED IN THIS STEP
Workflow AI Product Requirements Workflow
Resource Product Requirements Assistant
Tool System Prompt Generator

PHASE 2 · Design

Design the right solution before building.

Step 2 · Design the architecture

Decide how the backend is structured - boundaries, data flow, the trade-offs that are expensive to reverse - and write the decisions down before the first line of code.

OUTCOME
An architecture decided on its trade-offs and documented.

USED IN THIS STEP
Workflow AI Project Architecture Workflow
Resource Software Architect Role Prompt
Tool Role Prompt Generator

Step 3 · Design the API contract

Pin the surface clients depend on - resources, endpoints, payloads, validation, and a versioning rule - as a contract before code makes it permanent.

OUTCOME

An API contract clients can build against.

USED IN THIS STEP

Workflow	AI API Design Workflow
Resource	Turn a JSON Schema into a Prompt
Tool	JSON Output Prompt Builder

Step 4 · Design the data model

Model the entities, relationships, and constraints behind the API, and plan the indexes the real queries need - the schema is the hardest thing to change later, so design it on its data.

OUTCOME

A schema designed on its entities, constraints, and queries.

USED IN THIS STEP

Workflow	AI Database Design Workflow
Resource	Schema Design & ERD Prompt - Entities, Relationships, and Keys
Tool	SQL Optimization Prompt

Step 5 · Design auth and access control

A backend's endpoints are reachable, so decide how callers prove who they are and what each may do - authentication, roles, and permissions - and review the design for gaps before the endpoints exist to exploit.

OUTCOME

An access-control model designed and reviewed before build.

USED IN THIS STEP

Workflow	AI Auth & Identity Workflow
Resource	Security Engineer Role Prompt
Tool	Role Prompt Generator

PHASE 3 · Build & Refine

Build, test, secure, and make it production-ready.

Step 6 · Review the code as you build

As endpoints land, review them against your conventions with severity-ranked findings - so the backend doesn't accumulate the debt that makes the next version miserable.

OUTCOME

Changes reviewed for correctness and design before they merge.

USED IN THIS STEP

Workflow	AI Code Review Workflow
Resource	Code Review Prompt - the Review Contract
Tool	Code Review Prompt Generator

Step 7 · Lock behavior down with tests

Build a test suite that fails for real reasons across unit, integration, and edge cases - so you can keep shipping endpoints without breaking the ones clients already use.

OUTCOME

Tests that catch real regressions in the API.

USED IN THIS STEP

Workflow	AI Test Generation Workflow
Resource	Unit Test Prompt - Isolation Done Right
Tool	Test Case Prompt Generator

Step 8 · Run a security review

A backend is the exposed surface and the data behind it. Review the auth and input paths the way an attacker would, and back the findings with tests, before it's reachable.

OUTCOME

Exposed paths reviewed for vulnerabilities and guarded by tests.

USED IN THIS STEP

Workflow	AI Security Review Workflow
Resource	Security Code Review Prompt
Tool	Code Review Prompt Generator

PHASE 4 · Ship & Validate

Ship with confidence and validate results.

Step 9 · Ship it to production

Cross the gap between tested and live - assess release readiness, plan the deploy and its rollback, and set up monitoring - so the backend goes into production deliberately, not hopefully.

OUTCOME

The backend shipped with a rollback path and monitoring.

USED IN THIS STEP

Workflow	AI Deployment & Release Workflow
Resource	Production Readiness Review Prompt
Tool	Markdown Output Builder

This PDF is a static export of the NewPrompt execution path. It does not include workspace progress, personal notes, saved outputs, or project state.