

Modernize a Legacy Codebase 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: 8 Phases: 4
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PATH SUMMARY

8 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 · Understand the codebase

Before changing anything, build a mental model of the system you inherited - what it does, how it's organized, where the important logic lives. You can't safely modernize what you don't understand.

OUTCOME

A working mental model of the existing system.

USED IN THIS STEP

- Workflow** AI Codebase Onboarding Workflow
- Resource** Onboarding Codebase - Explain Code to a New Team Member
- Tool** Project Context Builder

PHASE 2 · Design

Design the right solution before building.

Step 2 · Make the architecture explicit

Reverse-engineer and document the current architecture - the boundaries, the data flow, the decisions baked in - so the modernization works from a clear picture instead of a guess about how it all fits.

OUTCOME

The existing architecture reviewed and documented.

USED IN THIS STEP

- Workflow** AI Architecture Recovery Workflow
- Resource** Architecture Explanation Prompt - Layers, Boundaries, Data Flow
- Tool** Code Explanation Prompt

PHASE 3 · Build & Refine

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

Step 3 · Pin the behavior with tests

Before you touch the code, build a test safety net that captures what it does now - so when you start changing things, a break shows up as a failing test instead of a production incident.

OUTCOME

Tests that pin current behavior before any change.

USED IN THIS STEP

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

Step 4 · Refactor safely

With the safety net in place, improve the structure without changing behavior - untangle the parts that fight you, one safe step at a time, leaning on the tests to prove nothing broke.

OUTCOME

Cleaner structure with behavior held constant.

USED IN THIS STEP

Workflow AI Code Refactoring Workflow
Resource Safe Refactoring Prompt - Zero Regression Tolerance
Tool Refactor Prompt Builder

Step 5 · Modernize the code

Bring the outdated patterns current - old idioms, deprecated APIs, the conventions that have moved on - so the codebase is something the team wants to work in, not around.

OUTCOME

Outdated patterns brought up to current practice.

USED IN THIS STEP

Workflow AI Legacy Code Modernization Workflow
Resource Legacy Code Refactor - Changing Code You Can't Fully See
Tool Refactor Prompt Builder

Step 6 · Review the changes

Run the modernized code past a review lens - correctness, design, and the regressions a big change invites - so the improvement is real and not a fresh layer of debt.

OUTCOME

The changes reviewed for correctness and design.

USED IN THIS STEP

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

Step 7 · Address performance

Now that the code is clean, find and fix the real hotspots - measured, not guessed - so modernization also leaves the system faster where it counts, not just tidier.

OUTCOME

Measured hotspots fixed, not guessed-at ones.

USED IN THIS STEP

Workflow	AI Performance Optimization Workflow
Resource	Debug Performance Problems
Tool	Debugging Prompt Generator

PHASE 4 · Ship & Validate

Ship with confidence and validate results.

Step 8 · Ship the modernized code

Release the modernized system the careful way - readiness checked, rollback planned, monitoring in place - because shipping changes to code people already depend on is exactly when a rollback path earns its keep.

OUTCOME

The modernized code shipped with a rollback path.

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.