

Vibe Coding from Zero: Build AI Products Without Coding

Ship your first AI product in 7 days — no programming experience required

- ⭐ **Free comprehensive guide** to building with AI assistance
- 📚 **60+ pages** of step-by-step tutorials and frameworks
- 🚀 **Battle-tested** by builders who shipped real products
- 💡 **Created by Jenny Ouyang** | [Build to Launch Newsletter](#)

What You'll Learn

This guide teaches **domain experts with zero coding background** how to build and ship real web applications using AI tools like Claude and Cursor.

By the end, you'll be able to build:

- ✅ Web apps with user accounts and authentication
- ✅ Database-driven applications that store and retrieve data
- ✅ Payment-integrated products with Stripe
- ✅ Deployed applications with real URLs that anyone can access

No prior programming experience needed. If you can clearly describe what you want to build, AI can help you build it.

Who This Is For

Perfect for:

- 🚀 Domain experts with product ideas but no technical background
- 🎓 Teachers, marketers, consultants, designers, creators who see problems software could solve
- 💼 Professionals who tried learning to code and bounced off the syntax
- 🚀 Entrepreneurs who can't afford \$50k for an MVP but have valuable product ideas

Not required:

- ❌ Computer science degree
- ❌ Previous programming experience
- ❌ Understanding of how computers work
- ❌ Math skills beyond basic arithmetic

What Makes This Different

Traditional coding courses teach you syntax, algorithms, and computer science theory. This guide teaches you **how to build products** by describing what you want while AI handles the implementation.

Key insight: The bottleneck isn't writing code anymore — it's knowing what to build and how to describe it clearly. That's where your domain expertise becomes your superpower.

How to Use This Guide

 **Not sure where to start?** See [PATHWAYS.md](#) - Choose your learning path based on your experience level, goals, and learning style.

 **Need a quick answer?** Check the [micro-guides/](#) folder for focused, 1-2 page guides:

- [Deploy in 10 Minutes](#)
- [Fix 5 Common Errors](#)
- [Auth Quick Reference](#)
- [Debugging Checklist](#)
- [Idea to Live URL](#)

 **Prefer interactive docs?** Visit the [Docusaurus site](#) - Full searchable documentation with better navigation.

Guide Contents

[Chapter 1: The Vibe Coding Method](#)

Why AI changes everything, who this is for, and what you'll be able to build. Includes real success stories from non-technical builders.

[Chapter 2: Understanding the Shape of Apps](#)

Just enough mental models to direct AI effectively. Learn to think in shapes and flows, not code and syntax. Includes visual diagrams.

[Chapter 3: Choosing Your Stack](#)

Clear, opinionated recommendations for tools and technologies. No endless research — practical choices that work. Includes decision tree and pricing guide.

[Chapter 4: Your First AI-Built App in One Hour](#)

Learn the ONE PROMPT method. Build a real bookmark manager by describing what you want, not following 28 steps. Deploy it live in 60 minutes.

[Chapter 5: Common Building Blocks](#)

Reference guide for typical features: authentication, databases, file uploads, payments, email, deployment. Each with example prompts.

[Chapter 6: When Things Break](#)

Debugging through conversation, not through code. How to read error messages and work with AI to fix issues.

[Chapter 7: How to Know It Actually Works](#)

Simple testing strategies for non-technical builders. Catch obvious problems before users do, without writing unit tests.

[Chapter 8: What's Next](#)

Graduating to more complex builds, joining the community, and accessing advanced resources.

Real Results from Real People

Karen Spinner (Copywriter, no database experience):

- Built StackDigest's semantic search while working full-time
- 1,000+ sessions with users finding newsletters through AI-powered search
- *"Perhaps I just don't know how difficult some things are, so I'm willing to try them"*

Mia Kiraki (Marketing Strategist):

- Built Yahini, a strategic content platform, in 10 months
- 400+ users with 17% free-to-paid conversion rate
- *"90% of my domain expertise is baked directly into Yahini"*

Kenny (Filmmaker for 13 years, zero coding experience):

- Built Proudwork.io in a few months from a coffee shop in Thailand
- 20 active users, couple hundred dollars in tools vs thousands for traditional development
- *"Learning how to build and launch my ideas within just a few months is absolutely a game changer"*

How to Use This Guide

Option 1: Read Online (GitHub)

Browse the chapters directly in this repository. Each chapter is a separate markdown file you can read in order.

Option 2: Download PDF

Get the complete guide as a professionally formatted PDF from [GitHub Releases](#) (free download).

Option 3: Follow Along

The best way to learn is by doing. Open the guide alongside your code editor and build the projects as you read.

Quick Start

1. **Read Chapter 1** to understand the philosophy
2. **Read Chapter 2** to build mental models
3. **Read Chapter 3** to choose your stack
4. **Follow Chapter 4** to build your first app (set aside 1 hour)
5. **Reference Chapters 5-7** as you need them
6. **Read Chapter 8** when you're ready to go deeper

Time commitment: 7-10 hours total over a week

What You Need

Tools (all free to start):

- **AI Assistant:** Claude (Anthropic) or ChatGPT (OpenAI)
- **Code Editor:** Cursor (AI-powered code editor)
- **Hosting:** Vercel (free tier) or Netlify (free tier)
- **Database:** Supabase (free tier) or Railway (free tier)
- **Version Control:** GitHub (free)

Prerequisites:

- Ability to describe what you want clearly

- Willingness to iterate and refine
- Basic computer skills (if you can use Google Docs, you're good)

Community & Support

Join the Newsletter

Get weekly AI building tips, prompt templates, and real builder interviews:

 [Build to Launch Newsletter](#)

Share Your Builds

Built something with this guide? Share it!

- Share on [Bluesky](#)
- Open a discussion in this repo
- Submit your story to be featured

Get Help

- 💬 Open an issue if you find broken links or confusing sections
- 🤝 Start a discussion to ask questions
- 📖 Check the [Glossary](#) for unfamiliar terms

Advanced Resources

Ready to go deeper? Check out the **Vibe Coding Builder's Technical Playbook** for:

- Advanced architecture patterns
- Database design deep dives
- Performance optimization strategies
- Battle-tested prompt libraries
- Real code from shipped products

Available to [Build to Launch](#) premium subscribers.

About the Author

Jenny Ouyang is a computational biologist at Adimab and creator of the Build to Launch newsletter, where she teaches non-technical people to build AI products. She's shipped 7+ profitable AI products including quickviralnotes.xyz and substackexplorer.com using vibe coding principles.

Her mission: help domain experts turn their ideas into reality without spending years learning to code.

 [Newsletter](#) | [Bluesky](#) | [LinkedIn](#)

Contributing

Found a typo? Have a suggestion? Want to add an example?

1. Fork this repository
2. Make your changes
3. Submit a pull request

All contributions welcome!

License

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Changelog

- **v1.0** (December 2025) - Initial release
 - See [Releases](#) for version history
-

Keywords for Search

This section helps this guide be discovered by people searching for these topics:

build ai product without coding, claude ai tutorial, cursor ide guide, ai-assisted development, no-code ai development, ship products with ai, non-technical founder guide, domain expert software development, vibe coding, ai product development for beginners, chatgpt coding tutorial, build web apps with ai, ai-powered product development, how to build software without programming, ai for non-programmers

Found this helpful?  Star this repo and share it with someone who needs it

Want weekly tips? → [Subscribe to Build to Launch](#)

Choose Your Path: How to Use This Guide

"Not everyone learns the same way. Find your path below."

This guide works for different people with different goals. **Don't read it cover to cover** unless that's your style. Instead, find yourself below and follow the recommended path.

Quick Self-Assessment

Answer these 3 questions to find your path:

1. What's your coding experience?

A) Complete Beginner

- Never written code before
- Don't know what "front-end" or "API" means
- Intimidated by technical terms

B) Dabbled Before

- Tried tutorials but never finished a project
- Understand some concepts but can't build alone
- Know what HTML/CSS are but not much else

C) Technical Non-Coder

- Work adjacent to developers (PM, designer, analyst)
- Understand architecture concepts
- Can read code but don't write it

D) Already Building with AI

- Built something with Cursor/Claude/ChatGPT
 - Hit walls and need to understand what's happening
 - Want to ship faster and more reliably
-

2. What's your primary goal?

1) Build a Specific Project

- Have an idea and want to make it real
- Need to ship something this month
- Don't care about theory, just want it working

2) Learn the Workflow

- Want to understand how AI building works
- Planning to build multiple projects
- Want foundational knowledge first

3) Solve Current Problem

- Stuck on authentication, deployment, or debugging

- Have a working project but something's broken
- Need specific answers now

4) Become Consistent Builder

- Want to ship weekly/monthly
 - Looking to build a portfolio
 - Interested in building as a skill, not just one project
-

3. How do you learn best?

a) Hands-On First

- Learn by doing, understand later
- Get frustrated reading without building
- Prefer following step-by-step tutorials

b) Comprehensive Top-Down

- Want to understand "why" before "how"
- Read documentation before coding
- Prefer systematic learning

c) Just-In-Time Reference

- Look things up when you need them
 - Skip theory, go straight to examples
 - Bookmark reference guides
-



Your Learning Path

Path 1: Complete Beginner (A + any goal)

If you answered A above, start here regardless of your goal:

1. QUICK-START.md (5 min) ← Get context
2. Chapter 4: Tutorial (1 hour) ← Build something immediately
3. Chapter 1: Method (15 min) ← Now understand what you just did
4. Chapter 2: Apps (20 min) ← Understand the architecture
5. Chapter 5: Building Blocks ← Reference as needed
6. Chapter 6: Debugging ← When things break
7. Chapter 7: Testing ← Before showing anyone
8. Chapter 8: What's Next ← Where to go from here

Why this order? You need proof you can do this BEFORE learning theory. Building first gives you context for everything else.

Time to first working app: 1 hour (Chapter 4)

Alternative if you're a (Hands-On First):

- Do Chapter 4 first
- Skip everything else until you hit a problem

- Use other chapters as reference when stuck
 - Read Chapter 8 when ready for next project
-

Path 2: Dabbled Before (B + Goal 1 or 2)

You've seen tutorials but never shipped. This path focuses on finishing:

1. Chapter 1: Method (15 min) ← Understand the vibe coding approach
2. QUICK-START.md (5 min) ← Set up environment
3. Chapter 4: Tutorial (1 hour) ← Build end-to-end
4. Chapter 5: Building Blocks ← Reference when adding features
5. Chapter 7: Testing (20 min) ← Don't skip this
6. Chapter 6: Debugging ← Bookmark for when things break
7. Chapter 8: What's Next ← Plan your next build

Skip: Chapter 2 (you probably know this), Chapter 3 (use what tutorial uses)

Why this order? You have concepts but lack shipping experience. Focus on completing the tutorial, testing it, and deploying it. That's the skill you're missing.

Time to deployed app: 2 hours

Path 3: Technical Non-Coder (C + Goal 2 or 4)

You understand systems but haven't built. Fastest path to competence:

1. Chapter 1: Method (10 min) ← Skim – you get it
2. Chapter 3: Choosing Stack (15 min) ← Understand decisions
3. Chapter 4: Tutorial (45 min) ← You'll move faster than beginners
4. Chapter 5: Building Blocks ← Deep dive – this is your reference bible
5. Chapter 6: Debugging ← You'll need this often
6. Chapter 8: What's Next ← Build your roadmap

Skip: Chapter 2 (you know this), Chapter 7 (you'll figure it out)

Why this order? You have architecture knowledge. Focus on translation between "what you want" and "how to describe it to AI." Chapter 5 is your most valuable resource.

Time to competence: 3 hours reading + practice

Recommended: Read Chapter 5 twice. First time: overview. Second time: deep reference.

Path 4: Already Building with AI (D + any goal)

You've built something but hit limits. Fill in your gaps:

Start with your specific problem:

Stuck on authentication? → Chapter 5 (Authentication section)
Deployment failing? → Chapter 5 (Deployment section) + QUICK-START
Things breaking? → Chapter 6 (entire chapter)

Don't know if it's ready? → Chapter 7
Not sure what to build next? → Chapter 8
Want to understand architecture better? → Chapter 2
Choosing between frameworks? → Chapter 3

Don't read sequentially. Use this guide as a reference. Jump to what you need.

When to read full chapters:

- Chapter 6 (Debugging) - Read once, prevents hours of frustration
- Chapter 8 (What's Next) - Read when you finish your current project

Time to solve specific problem: 15–30 minutes

Path 5: Want to Build Specific Project (Any experience + Goal 1)

You have an idea. Here's the fastest path to live URL:

1. QUICK-START.md (5 min) ← Environment setup
2. Chapter 4: Tutorial (1 hour) ← Learn the pattern
3. Modify tutorial to your idea:
 - Keep the structure (Next.js, Supabase, Vercel)
 - Change the feature (bookmarks → your idea)
 - Deploy when core feature works
4. Chapter 5: Building Blocks ← Add features as needed
5. Chapter 7: Testing (15 min) ← Before announcing

Use as reference:

- Chapter 6 when stuck
- Chapter 5 for adding payments, email, file uploads

Skip: Chapter 1–2 (learn later), Chapter 8 (read after launching)

Why this order? Your goal is shipping. Learn minimum viable knowledge, ship fast, learn the rest later.

Time to deployed MVP: 4–8 hours over a weekend

Pro tip: Don't add features until core workflow is deployed. Ship early, iterate publicly.

Path 6: Want to Become Consistent Builder (C or D + Goal 4)

You want to ship weekly/monthly. Build the foundation:

Phase 1 (First Weekend):

1. Chapter 1: Method (15 min)
2. Chapter 4: Tutorial (1 hour)
3. Chapter 5: Building Blocks (1 hour) ← Study this
4. Ship the tutorial project

Phase 2 (Second Weekend):

1. Chapter 3: Choosing Stack (20 min)
2. Build micro-project with different stack

3. Chapter 6: Debugging (30 min)

4. Ship second project

Phase 3 (Third Weekend):

1. Chapter 8: What's Next (20 min)

2. Plan your building cadence

3. Set up templates from your first two projects

4. Ship third project (should take < 6 hours now)

Phase 4 (Ongoing):

- Reference Chapter 5 for new features

- Reference Chapter 6 when stuck

- Use Chapter 7 before each launch

- Reread Chapter 8 monthly for ideas

Why this order? Building consistency requires repetition. Ship three projects in three weeks. You'll learn patterns that make shipping fast.

Time to consistent shipping: 3 weeks

Key skill: By project 3, you should recognize patterns and reuse code. If not, slow down and study Chapter 5 more deeply.

Learning Style Adaptations

If you're α (Hands-On First)

Your modified path (regardless of experience):

1. Chapter 4 → Build immediately
2. Get stuck? → Jump to relevant section in Chapter 5 or 6
3. Finish project? → Skim Chapter 7, deploy anyway
4. Deployed? → Read Chapter 8 for next project
5. Want to go deeper? → Read Chapter 1–3 after shipping

Your motto: "I'll understand it after I've built it."

Warning: You'll ship faster but may rebuild things. That's okay. Speed > perfect understanding.

If you're β (Comprehensive Top-Down)

Your modified path (regardless of experience):

1. README.md (10 min) ← Overview
2. Chapter 1: Method (15 min) ← Philosophy
3. Chapter 2: Apps (20 min) ← Architecture
4. Chapter 3: Stack (20 min) ← Decisions
5. GLOSSARY.md (10 min) ← Terminology
6. Chapter 4: Tutorial (1.5 hours) ← Now build with full context
7. Chapter 5–8 sequentially

Your motto: "I want to understand the system before I touch it."

Warning: You might over-learn before shipping. Force yourself to complete Chapter 4 even if you don't feel "ready."

If you're y (Just-In-Time Reference)

Your modified path (regardless of experience):

1. Bookmark this guide
2. Start with Chapter 4 only
3. When you need something:
 - Authentication? → Chapter 5, Authentication section
 - Broken? → Chapter 6, search for your error type
 - New feature? → Chapter 5, relevant building block
 - Ready to ship? → Chapter 7 checklist

Your motto: "I'll read it when I need it."

Recommended bookmarks:

- Chapter 5 (Building Blocks) - Most referenced
- Chapter 6 (Debugging Checklist) - For when stuck
- Chapter 7 (Testing Checklist) - Before launch

Warning: You might miss foundational concepts. If you're rebuilding the same mistakes, spend 30 min reading Chapter 1.

🎓 Micro-Guides (Quick Reference)

Don't want to read full chapters? Use these micro-guides:

For Immediate Problems:

- `micro-guides/deploy-in-10-minutes.md` - Get your app live fast
- `micro-guides/fix-5-common-errors.md` - Debug the usual suspects
- `micro-guides/debugging-checklist.md` - Systematic troubleshooting

For Adding Features:

- `micro-guides/auth-quick-reference.md` - Add user accounts
- **Chapter 5: Building Blocks** - Payments, email, file uploads

For Shipping:

- `micro-guides/idea-to-live-url.md` - Complete shipping checklist
- **Chapter 7: Testing Checklist** - Pre-launch verification

When to use micro-guides: You have a specific question and need an answer in 5 minutes.

When to read full chapters: You keep hitting the same problems or want deep understanding.

🚀 Recommended First Steps by Path

If you haven't started yet:

1. Read this PATHWAYS.md (you're doing it!)
2. Find your path above
3. Do the first item in your path TODAY (even if just 15 minutes)
4. Schedule 1-2 hour block this week for Chapter 4

If you're midway through:

1. Find which path matches your experience + goal
2. See what you've already covered
3. Jump to the next recommended chapter
4. Skip what you've already mastered

If you finished the tutorial:

1. Read Chapter 7 (Testing)
2. Deploy your project (Chapter 5 → Deployment)
3. Read Chapter 8 (What's Next)
4. Plan your next build

If you're stuck:

1. Go directly to Chapter 6 (Debugging)
 2. Use the debugging checklist
 3. Find your specific error type
 4. Come back to sequential learning after you're unstuck
-

Success Metrics by Path

How to know you're on the right path:

Path 1 (Complete Beginner):

- After 1 hour: You have something live on the internet
- After 1 week: You understand basic architecture
- After 2 weeks: You can explain how your app works
- After 1 month: You're building a second project

Path 2 (Dabbled Before):

- After 2 hours: You have a deployed project
- After 1 week: You're adding features to it
- After 2 weeks: You shipped a second project faster
- After 1 month: You understand patterns and can estimate build time

Path 3 (Technical Non-Coder):

- After 3 hours reading: You understand how to describe features to AI
- After first build: You see how architecture maps to prompts
- After 1 week: You're comfortable iterating with AI
- After 1 month: You're building without much reference to guide

Path 4 (Already Building):

- After 15 min: You found answer to your specific problem
- After 1 week: You're unstuck and shipping again
- After 2 weeks: You reference Chapter 5 regularly
- After 1 month: You're helping others debug their issues

Path 5 (Specific Project):

- After 1 hour: Tutorial completed
- After 1 weekend: Core feature of your idea working
- After 1 week: Deployed and getting feedback
- After 2 weeks: Iterating based on user feedback

Path 6 (Consistent Builder):

- After Week 1: First project shipped
- After Week 2: Second project shipped
- After Week 3: Third project shipped (in < 6 hours)
- After Month 2: You have templates and ship in < 4 hours
- After Month 3: You're teaching others

Not hitting these metrics? You might be on the wrong path. Reassess your answers above and try a different route.

When to Switch Paths

Switch from Comprehensive (β) to Hands-On (α) if:

- You've read 3+ chapters but haven't built anything
- You're overthinking instead of shipping
- You're waiting to "fully understand" before starting

Action: Force yourself to do Chapter 4 today.

Switch from Hands-On (α) to Comprehensive (β) if:

- You've built 2+ projects but keep hitting the same issues
- You're rebuilding features because you don't understand patterns
- Debugging takes longer than building

Action: Read Chapter 1-2, then skim Chapter 5 cover-to-cover.

Switch from Just-In-Time (γ) to Comprehensive (β) if:

- You've looked up the same thing 3+ times
- You feel lost about how pieces fit together
- Every new feature feels like starting from scratch

Action: Spend 1 hour reading Chapter 2 + Chapter 5 sequentially.

Full Chapter Descriptions

If you want to know what's in each chapter before diving in:

Chapter 1: The Vibe Coding Method

- **What:** Philosophy and mindset of building with AI
- **Why read:** Understand the paradigm shift from traditional coding
- **Skip if:** You just want to build and don't care about theory
- **Read if:** You want to understand how this approach differs
- **Time:** 15 minutes

Chapter 2: Understanding the Shape of Apps

- **What:** How web apps are structured (front-end, back-end, database)
- **Why read:** Mental model for how pieces fit together
- **Skip if:** You're technical and know architecture
- **Read if:** You're confused about what AI is actually building
- **Time:** 20 minutes

Chapter 3: Choosing Your Stack

- **What:** Framework and tool decisions (Next.js vs Flask, Supabase vs Firebase)
- **Why read:** Understand trade-offs before committing
- **Skip if:** You're following the tutorial (uses Next.js + Supabase)
- **Read if:** Building second project or need different stack
- **Time:** 20 minutes

Chapter 4: Your First AI-Built App in One Hour

- **What:** Complete step-by-step tutorial (bookmark app with auth)
- **Why read:** Get hands-on experience building end-to-end
- **Skip if:** Never (everyone should do this)
- **Read if:** Always - this is the core of the guide
- **Time:** 1-1.5 hours

Chapter 5: Common Building Blocks

- **What:** Reference guide for adding features (auth, database, payments, email, file uploads, deployment)
- **Why read:** Most valuable reference chapter for adding features
- **Skip if:** Only building what's in tutorial
- **Read if:** Adding any new feature to any project
- **Time:** 1 hour to read, lifetime reference

Chapter 6: When Things Break

- **What:** Debugging process, common errors, how to get unstuck
- **Why read:** Save hours of frustration
- **Skip if:** Everything always works (it won't)
- **Read if:** Stuck on bug OR preventatively before you are
- **Time:** 30 minutes to read, save hours when needed

Chapter 7: How to Know It Actually Works

- **What:** Testing checklist, device testing, pre-launch verification
- **Why read:** Ship with confidence, avoid embarrassing bugs
- **Skip if:** Building only for yourself
- **Read if:** Showing to users or launching publicly
- **Time:** 20 minutes

Chapter 8: What's Next

- **What:** Next project ideas, building consistently, community
 - **Why read:** Don't stop at one project
 - **Skip if:** Haven't finished first project yet
 - **Read if:** Shipped something and ready for more
 - **Time:** 15 minutes
-

Still Not Sure? Start Here:

Default path for maximum people:

Day 1 (1 hour):

- QUICK-START.md (5 min)
- Chapter 4 up to "Deploy Your App" (55 min)

Day 2 (1 hour):

- Finish Chapter 4 deployment
- Add one custom feature of your choice

Day 3 (30 min):

- Chapter 7 testing checklist
- Show to 2 friends, get feedback

Day 4 onwards:

- Read Chapter 8
- Plan next project
- Reference other chapters as needed

By end of week 1, you'll have:

- Deployed working app
- Understanding of the build process
- Confidence to build next project

That's the goal. Start there, adjust as you learn your style.

Need Help Choosing?

If you're still unsure which path to take, ask yourself:

"Do I have a deployed working app?"

-  No → Do Chapter 4 today
-  Yes → Go to Chapter 8, plan next build

"Am I stuck on a specific problem right now?"

-  Yes → Chapter 6 (Debugging) immediately
-  No → Follow one of the paths above

"Do I learn better by reading or doing?"

- Doing → Hands-On (α) adaptation
 - Reading → Comprehensive (β) adaptation
 - Both → Follow standard path for your experience level
-

Remember: The best path is the one you'll actually follow. Don't overthink it. Pick one, start today, adjust as you go.

You're not locked in. These are guides, not rules. Mix and match as needed.

The only wrong choice is not starting.

Now pick your path and go build something.

Connect & Share

 **Newsletter:** [Build to Launch](#) - Weekly AI building tips, templates, and real builder stories

 **Medium:** [AI Builders](#) - Read more articles and guides

 **Reddit:** [r/VibeCodingBuilders](#) - Join the community

 **Bluesky:** [@jenny-ouyang](#) - Connect

 **LinkedIn:** [Jenny Ouyang](#) - Connect

Chapter 1: The Vibe Coding Method

"You don't need to know how a car engine works to drive to the grocery store. You don't need to know how plumbing works to take a shower. And you don't need to know how to code to build software."

Why This Actually Works Now

For decades, building software required you to learn programming languages, understand algorithms, memorize syntax, and think like a computer. That was the deal. If you wanted to build, you had to become technical first.

That deal just changed.

AI can write code now. Really good code. Production-ready, scalable, secure code. The bottleneck isn't writing the code anymore — it's knowing what to build and how to describe it clearly.

This is where domain experts have a massive advantage. You already know your industry's problems. You already understand what would make people's lives better. You already have the vision. You just couldn't execute it before because you'd hit a wall called "learning to code."

That wall just disappeared.

Vibe coding means: You describe what you want, AI handles how to build it, and you iterate until it works. You stay in your zone of genius (understanding problems and solutions) while AI stays in its zone of genius (implementing technical solutions).

Who This Guide Is For

This guide is for you if:

- **You have domain expertise** but zero coding background. You're a teacher, designer, marketer, consultant, researcher, or creator who sees problems that software could solve.
- **You tried to learn coding** and bounced off. You started a tutorial, got confused by semicolons and syntax errors, and thought "this isn't for me." You were right — memorizing syntax isn't for you. Building things is.
- **You have product ideas** but can't afford to hire developers. You know what would be valuable but \$50k for an MVP isn't happening. You need a way to build it yourself.
- **You want to solve problems** in your industry. You see inefficiencies every day. You know what tool would save people hours. You just needed a way to build it.

You don't need:

- A computer science degree (or any degree)
- Previous programming experience
- To understand how computers work
- Math beyond basic arithmetic
- To be "technical" or "logical"

What you do need:

- Ability to describe what you want clearly
- Willingness to iterate and refine

- Patience to learn through building
- 7-10 hours spread over a week

What You'll Be Able to Build

By the end of this guide, you'll have the skills to build:

Simple Web Applications like:

- A booking system for your service business
- A tool that helps your audience do something better
- An internal tool that automates work for your team
- A lead magnet that collects emails and delivers value

Apps with Real Features including:

- User accounts (signup, login, profiles)
- Databases (saving and retrieving information)
- File uploads (images, documents, PDFs)
- Payments (Stripe integration for products or subscriptions)
- Automated emails (confirmations, notifications, newsletters)

Deployable Products meaning:

- Live on the internet with a real URL
- Accessible from any device
- Actually usable by other people
- Professional-looking and functional

Real Examples from Real People:

Karen Spinner (copywriter with no database experience):

- Built StackDigest's semantic search while working full-time
- Went from knowing relational databases to implementing vector databases and sentence transformers
- "Perhaps I just don't know how difficult some things are, so I'm willing to try them"
- 1,000+ sessions with users finding newsletters through AI-powered semantic search
- Built using Claude Code: "I'm 10 times faster with it"

Mia Kiraki (marketing strategist with three degrees):

- Built Yahini, a strategic content platform, in 10 intense months
- Her husband taught himself to code from scratch right before building
- 400+ users with 17% free-to-paid conversion rate
- "90% of my domain expertise is baked directly into Yahini"
- \$5,000 investment, now generating sustainable revenue

Kenny (filmmaker for 13 years, zero coding experience):

- Built Proudwork.io in a few months after getting frustrated with existing tools
- Started from a coffee shop in Thailand, now has 20 active users
- Used Canva for mockups, ChatGPT to generate Replit prompts
- "Learning how to build and launch my ideas within just a few months is absolutely a game changer"
- Spent a couple hundred dollars on tools vs thousands for traditional development

Karo Ziemiński (AI Product Manager):

- Built Stackshelf in 13 long evenings, now a paid platform
- Became a Substack Bestseller partly because of her own product
- "I don't want to build **for** them, I want to build **with** them"
- Premium users from day one, sustainable business model
- Started in Notion to validate, then turned into full product

Notice the pattern: Domain experts who saw problems in their daily work, described solutions clearly, and shipped products in weeks or months. No computer science degrees. No bootcamps. No years of syntax memorization.

That's what this guide teaches.

The Vibe Coding Philosophy

Traditional coding teaches you to think like a computer: loops, variables, functions, classes, inheritance. You learn the language computers understand.

Vibe coding teaches you to think like a product builder: users, features, flows, data. You learn to describe what you want in human terms, and AI translates it into code.

Think in Shapes, Not Syntax

When you want to add user accounts to your app, you don't think: "I need to hash passwords with bcrypt, store user sessions in Redis, implement JWT tokens, and handle OAuth callbacks."

You think: "Users should be able to sign up with email and password, log in, and stay logged in even if they close the browser."

That's the shape of the feature. AI handles the syntax.

Articulate Vision, Not Implementation

When you want to save data, you don't need to know:

- SQL query syntax
- Database normalization rules
- Index optimization strategies
- Connection pooling configuration

You need to know:

- What data you're saving (user profiles, blog posts, bookmarks)
- How it connects (each post belongs to a user)
- When it changes (when someone edits their profile)
- Who can access it (users only see their own data)

That's articulating the vision. AI handles implementation.

Trust AI to Handle the Details

You don't verify every line of code. You don't debug syntax errors. You don't memorize best practices.

Instead, you:

1. Describe what you want clearly
2. Let AI generate the code
3. Test if it works as expected
4. If not, describe what's wrong
5. Let AI fix it

You're the director. AI is the camera operator. You say "I want a wide shot of the sunset." You don't need to know focal lengths, aperture settings, and ISO values.

Focus on What Actually Matters

What matters:

- Does it solve the user's problem?
- Is it easy to use?
- Does it work reliably?
- Can you maintain it?

What doesn't matter:

- Is the code "elegant"?
- Does it follow every best practice?
- Would a senior engineer approve?
- Is it using the latest framework version?

Perfect code that ships late is worse than good-enough code that ships now.

The Permission You Need

You might be thinking:

"But I don't know enough. What if I build something wrong? What if it breaks? What if real developers would laugh at my code?"

Here's the truth: every developer started by building terrible code. Every single one. The difference is, they had years to get comfortable with being bad at it.

You get to skip that.

With AI, your "terrible beginner code" is actually production-ready from day one. You're not writing it — AI is. AI knows best practices. AI handles security. AI follows conventions.

Your job isn't to write good code. Your job is to build useful products.

You have permission to:

- Not understand how everything works under the hood
- Ask "dumb" questions (there are no dumb questions)
- Build something simple rather than something perfect
- Iterate and improve over time
- Ship before you feel "ready"

You don't need permission to:

- Build things that matter to you

- Solve problems you see
- Create value for others
- Call yourself a builder

You're not "pretending to code" or "cheating." You're using available tools to solve real problems. That's what builders do.

What Happens Next

In Chapter 2, you'll learn just enough about how apps work to describe what you want effectively. Not computer science theory — practical mental models.

In Chapter 3, you'll make clear decisions about which tools to use. No endless research — opinionated recommendations based on what actually works.

In Chapter 4, you'll build your first real app, step by step, with exact prompts to use. Not theoretical — you'll deploy something live.

In Chapters 5-6, you'll learn the building blocks for common features and how to debug when things break.

In Chapter 7, you'll understand what's next and how to keep building.

Total time commitment: 7-10 hours over a week. By day 7, you'll have something live on the internet that you built.

Ready? Let's understand how apps actually work — in plain English, no jargon.

Connect & Share

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 **Medium:** [AI Builders](#) - Read more articles and guides

 **Reddit:** [r/VibeCodingBuilders](#) - Join the community

 **Bluesky:** [@jenny-ouyang](#) - Connect

 **LinkedIn:** [Jenny Ouyang](#) - Connect

Chapter 2: Understanding the Shape of Apps

"You don't need to know how electricity works to use a light switch. You don't need to know how engines work to drive a car. And you don't need to know how code works to build an app."

The Restaurant Analogy

Think of a web application like a restaurant. This analogy will help you understand the three main pieces of any app.

The Dining Room (Front-End)

This is what customers see and interact with:

- The menu they read
- The tables they sit at
- The buttons they press to call the waiter
- The food they see presented on their plate

In an app, this is: The screens users see, the buttons they click, the forms they fill out, the images and text displayed.

You describe it like: "I want a login screen with email and password fields and a blue submit button."

The Kitchen (Back-End)

This is where the actual work happens, hidden from customers:

- Chefs preparing the food
- Following recipes
- Managing inventory
- Coordinating timing

In an app, this is: The logic that processes requests, makes decisions, and handles the real work.

You describe it like: "When someone submits the login form, check if their password is correct and log them in."

The Pantry (Database)

This is where ingredients and supplies are stored:

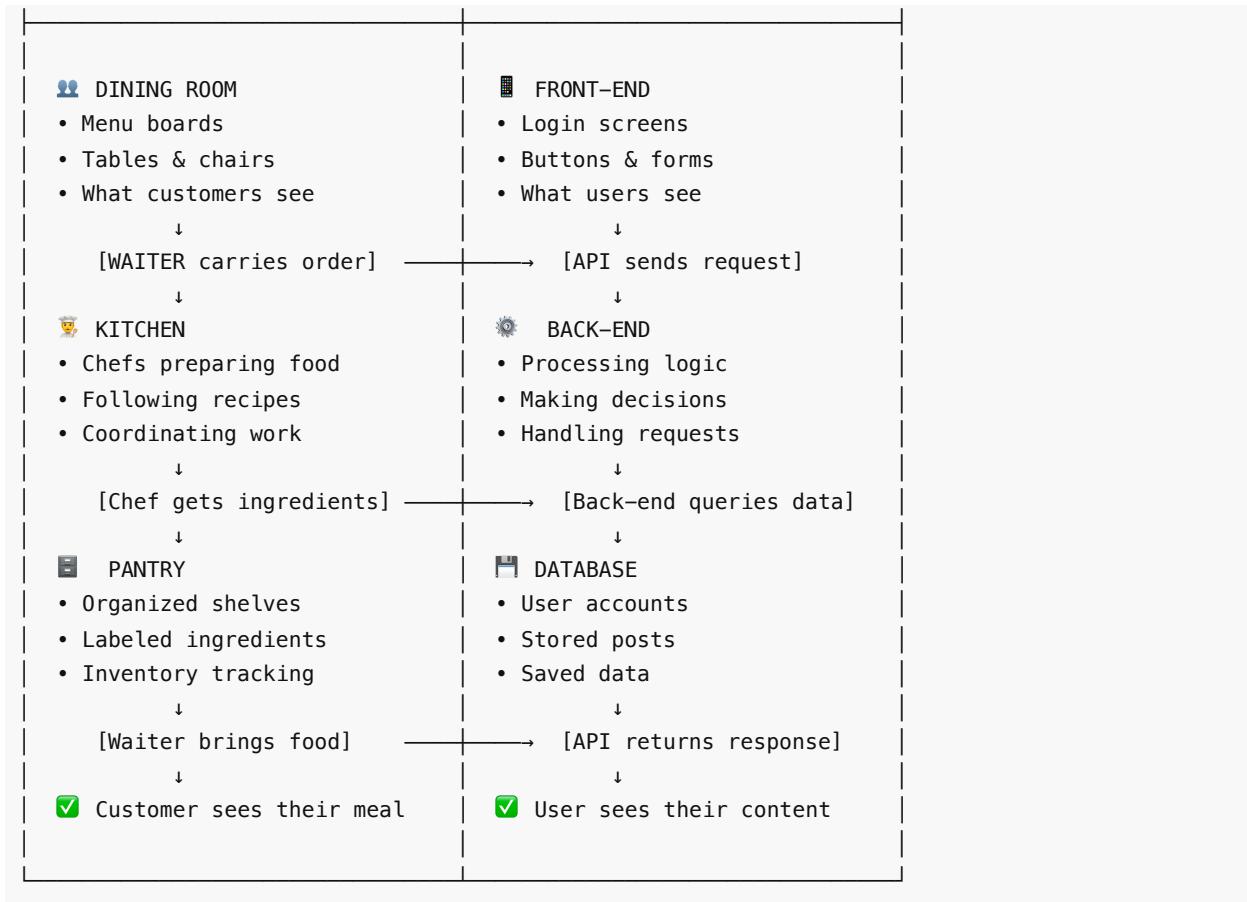
- Organized shelves
- Labels on everything
- Inventory tracking
- Relationships (tomatoes go with pasta, not desserts)

In an app, this is: Where all your data lives - user accounts, blog posts, uploaded files, everything that needs to be remembered.

You describe it like: "Store each user's email, password, and signup date. Remember which posts belong to which user."

Visual: How Restaurant Maps to App





This is your foundational mental model. When you get confused later, come back to this: dining room = what users see, kitchen = where work happens, pantry = where data lives, waiters = how they communicate.

The Waiters (APIs)

Waiters carry orders from dining room to kitchen and food from kitchen to dining room:

- Take customer orders
 - Deliver to kitchen
 - Bring back food
 - Handle special requests

In an app, this is: The communication system between front-end and back-end.

You describe it like: "When someone clicks 'Save Post', send their text to the back-end to be stored in the database."

Visual: Request Flow Diagram

```
sequenceDiagram
    participant U as  User<br/>(Browser)
    participant F as  Front-End<br/>(React)
    participant B as  Back-End<br/>(Next.js API)
    participant D as  Database<br/>(Supabase)
```

```

U-->F: 1. Clicks "Save Post"
Note over F: Captures form data
F-->B: 2. POST /api/posts<br/>{title, content}
Note over B: Validates data
B-->D: 3. INSERT INTO posts
D-->B: 4. Returns success + ID
B-->F: 5. Returns {success: true}
F-->U: 6. Shows "Post saved!"
Note over U: User sees confirmation

```

 **This flow happens in milliseconds** - users just see instant feedback.

What Happens When You Use an App

Let's walk through what happens when you post something on Instagram. You don't need to understand the technical details - just the flow:

1. You type a caption and tap "Share"

- The front-end (what you see) captures your text and photo

2. Your phone sends it to Instagram's servers

- Like a waiter carrying an order to the kitchen

3. Instagram's back-end processes it

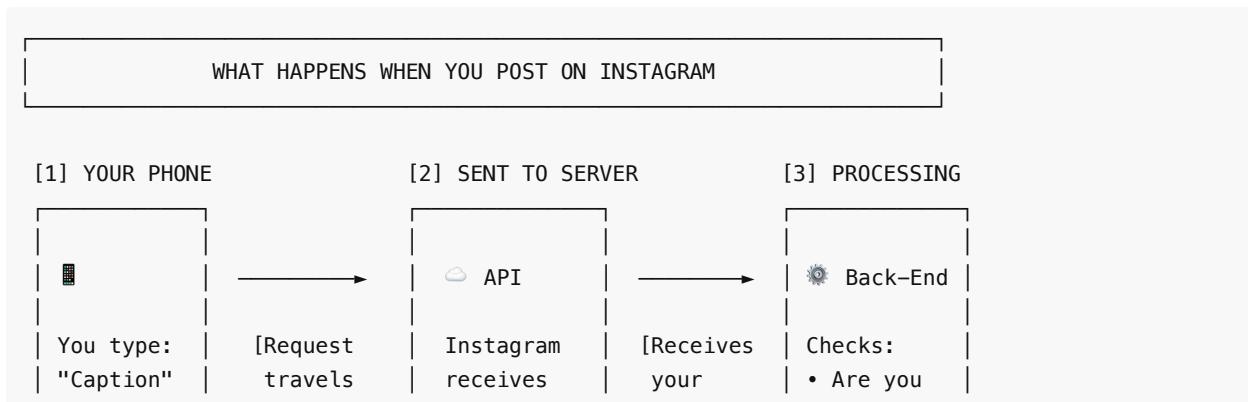
- Checks you're logged in
- Resizes your photo
- Saves everything to their database
- Updates feeds for your followers

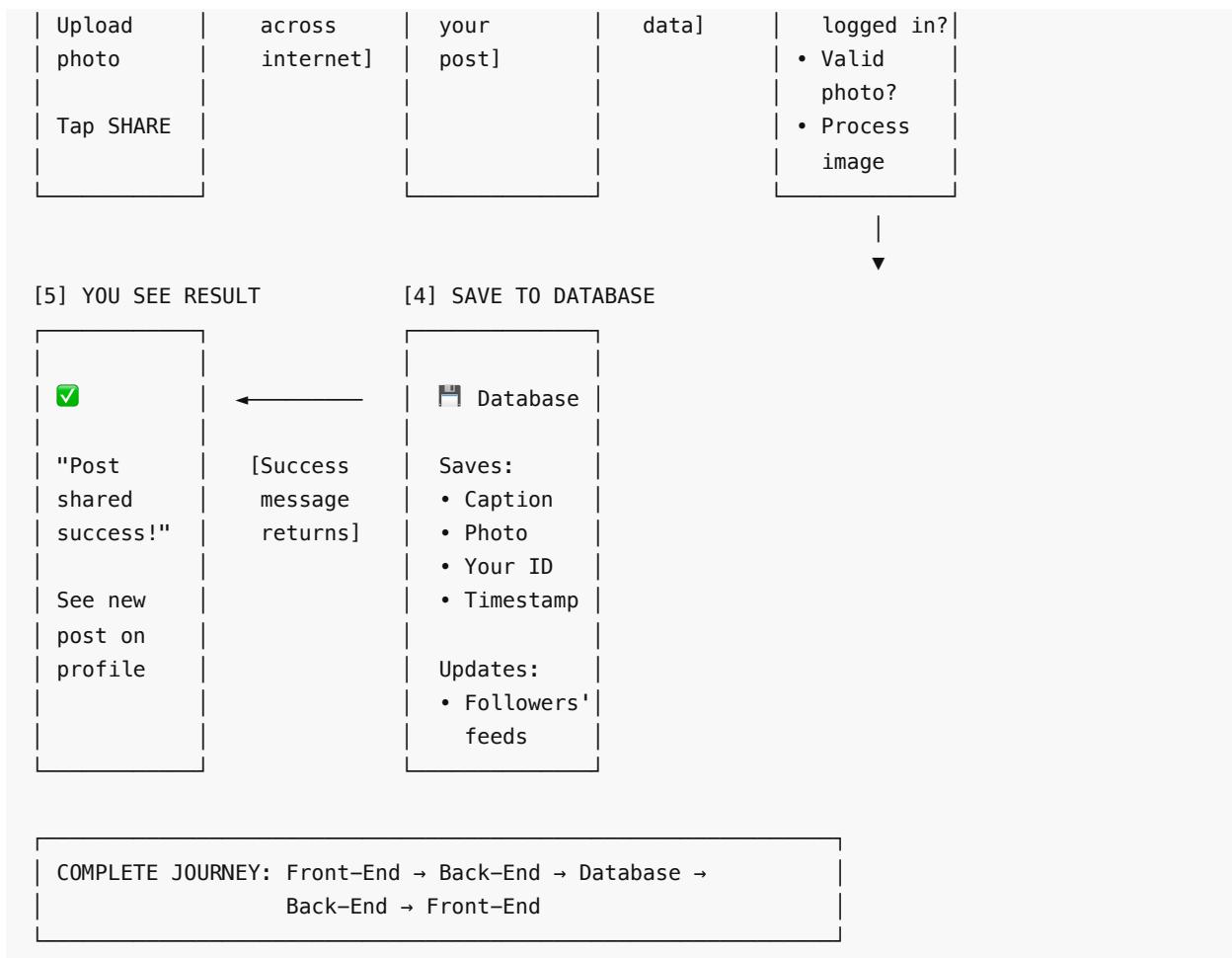
4. You see "Post shared successfully"

- The back-end sends confirmation back to your phone
- The front-end updates to show your new post

The entire journey: Front-end → Back-end → Database → Back-end → Front-end

Visual: What Happens When You Post on Instagram





Every app interaction follows this pattern. When you build your own features, you'll mentally trace this same journey.

You don't need to code this flow. You just need to describe: "Users should be able to type text, upload a photo, and share it. Then they should see their post appear in their profile."

The Three Core Pieces (In Plain English)

1. Display Layer (What Users See)

What it is: Everything visible on screen

- Login forms
- Navigation menus
- Profile pages
- Settings screens
- Loading indicators

What you control: Layout, colors, text, buttons, images, animations

How you describe it to AI:

- "Create a card layout showing each product with image, title, and price"
- "Add a navigation bar at the top with Home, About, and Contact links"

- "Make the submit button green and center it below the form"

What you ignore:

- How browsers render HTML
- CSS specificity rules
- JavaScript DOM manipulation
- Component lifecycle methods

2. Logic Layer (What Happens)

What it is: The rules and processes

- "If password is wrong, show error"
- "When user clicks save, store to database"
- "Every night at midnight, send email reminders"
- "If user isn't logged in, redirect to login page"

What you control: The rules, conditions, and flows

How you describe it to AI:

- "Only logged-in users can create posts"
- "When someone signs up, send them a welcome email"
- "If they upload a file over 10MB, show an error"

What you ignore:

- Exact syntax of if-statements
- How functions are structured
- Memory management
- Error handling implementation

3. Storage Layer (What Gets Remembered)

What it is: The data that persists

- User accounts
- Blog posts
- Uploaded images
- Settings and preferences
- Order history

What you control: What data to save and how it connects

How you describe it to AI:

- "Save user email, name, and bio"
- "Each post has a title, body, and author"
- "Connect comments to the post they're commenting on"

What you ignore:

- SQL syntax
- Database indexing
- Query optimization

- Connection pooling

How They Work Together: A Real Example

Let's trace what happens when you save a bookmark in our tutorial app (Chapter 4):

User Action: You paste a URL and click "Save Bookmark"

Display Layer:

1. Captures the URL you typed
2. Shows a loading spinner
3. Disables the save button (prevent double-clicks)

Logic Layer:

1. Receives the URL from display
2. Validates it's actually a URL
3. Checks you're logged in
4. Talks to storage layer: "Save this URL for this user"
5. Waits for confirmation
6. Sends success message back to display

Storage Layer:

1. Receives save request
2. Stores: URL, title, user_id, timestamp
3. Returns confirmation: "Saved successfully"

Display Layer (again):

1. Receives success confirmation
2. Hides loading spinner
3. Shows "Bookmark saved!" message
4. Adds bookmark to your list on screen

You described this as: "Users should be able to paste a URL and save it to their list. Show them a loading state while it saves, then add it to their bookmarks."

AI translated that into all the technical steps above.

What You Can Safely Ignore

As a vibe coder, here's what you never need to understand:

Computer Science Theory

- Big O notation
- Data structures and algorithms
- Binary trees and hash tables
- Complexity analysis

Why: AI knows all this. Your job is describing what you want, not how to optimize it.

Programming Language Details

- Variable declaration syntax
- For-loop structure
- Class inheritance
- Type systems

Why: You're not writing the code. AI is. You describe in English, AI writes in JavaScript/Python/whatever.

Infrastructure Details

- How servers handle requests
- Network protocols
- Load balancing
- Caching strategies

Why: Modern hosting platforms (Vercel, Railway) handle this automatically.

Security Implementation

- How to hash passwords properly
- SQL injection prevention
- CSRF token generation
- XSS attack mitigation

Why: AI implements security best practices automatically. You just describe: "Users should have secure login."

Mental Models That Actually Matter

These are the concepts worth understanding because they help you describe what you want:

1. Apps Are Conversations (Request/Response)

Every interaction is a back-and-forth:

- User: "Show me my profile"
- App: "Here's your profile data"
- User: "Update my bio to this new text"
- App: "Updated! Here's your new profile"

Why this matters: When describing features, think: "User asks for X, app responds with Y"

2. Data Has Shapes (Structure)

Data isn't just random text - it has structure:

A user looks like:

- Email (text)
- Name (text)
- Signup date (date)
- Profile picture (image)

A blog post looks like:

- Title (text)
- Body (long text)

- Author (connection to a user)
- Created date (date)

Why this matters: When describing what to store, think about the shape: "What pieces of information do I need for each [thing]?"

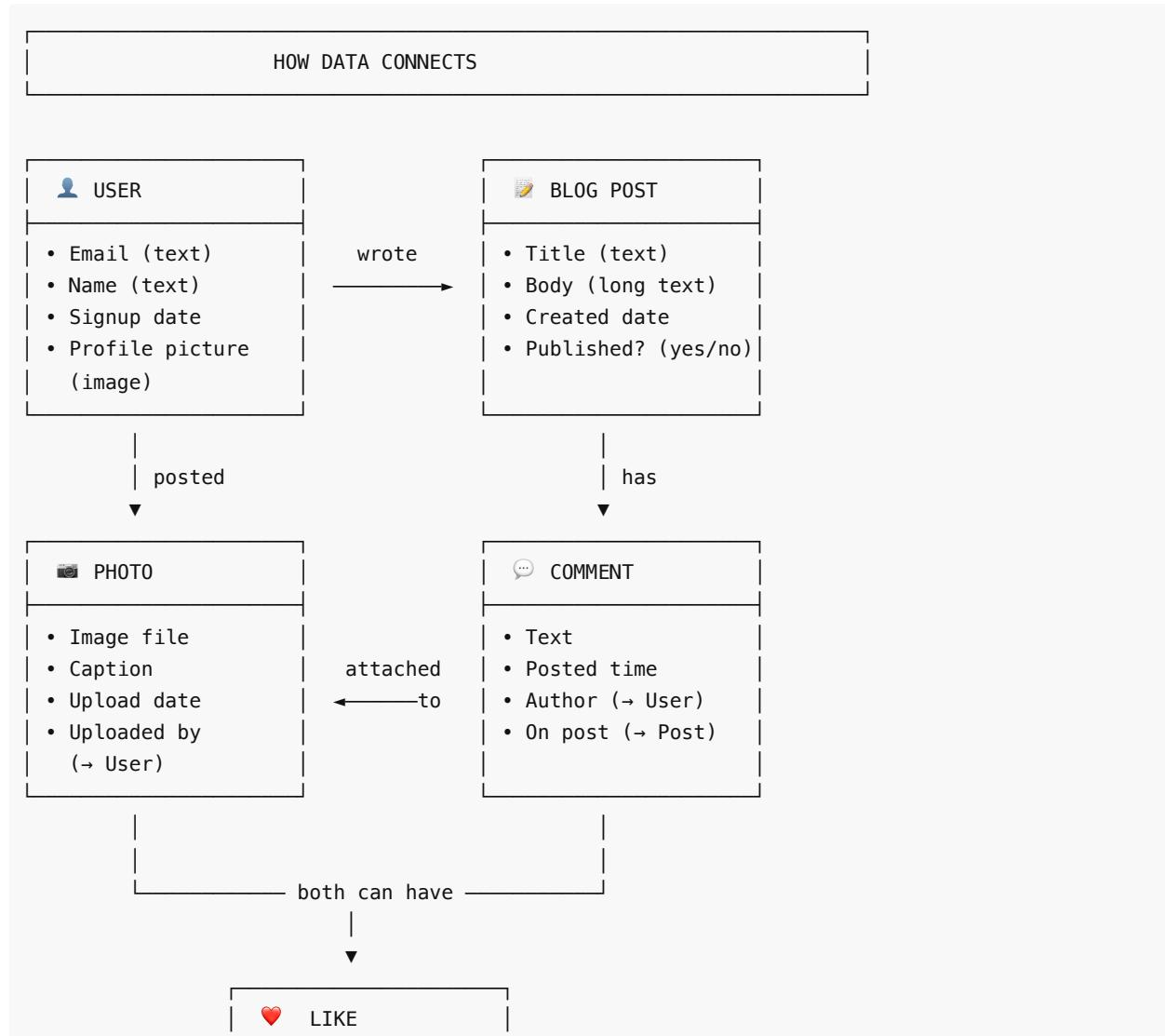
3. Everything Is Connected (Relationships)

Data connects to other data:

- Posts belong to users
- Comments belong to posts
- Likes connect users to posts
- Folders contain bookmarks

Why this matters: When describing features, think about ownership and connections: "Each post should know who wrote it. Each comment should know which post it's on."

Visual: How Data Connects



- Who liked (→ User)
- What liked
(→ Post or Photo)
- When liked

REAL EXAMPLE RELATIONSHIPS:

- Each POST belongs to ONE USER (the author)
- Each USER can have MANY POSTS
- Each COMMENT belongs to ONE POST and ONE USER
- Each LIKE connects ONE USER to ONE POST (or PHOTO)

Understanding these connections lets you describe features like "show me all the posts by this user" or "count how many comments this post has."

4. State Changes Over Time (Updates)

Things don't just exist - they change:

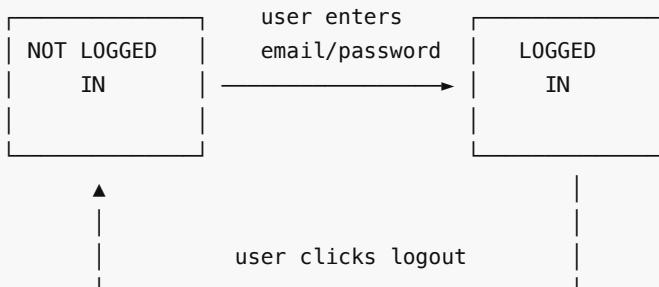
- User goes from "not logged in" to "logged in"
- Post goes from "draft" to "published"
- Order goes from "pending" to "paid" to "shipped"

Why this matters: When describing behavior, think about states and transitions: "When a user clicks publish, change the post from draft to published."

Visual: How Things Change Over Time

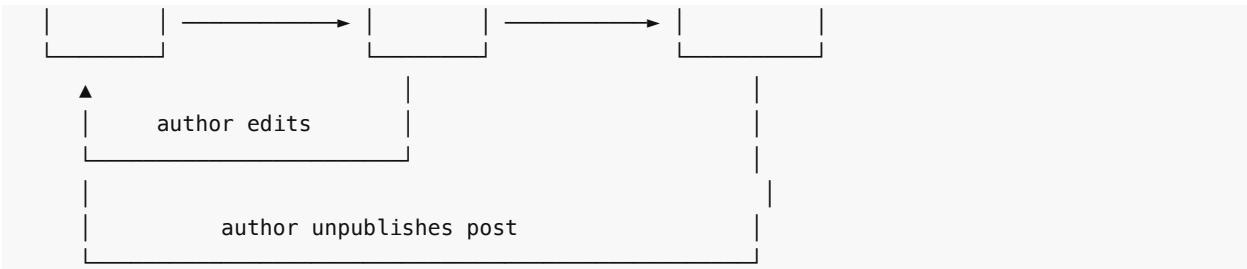
HOW THINGS CHANGE OVER TIME

EXAMPLE 1: USER LOGIN STATUS

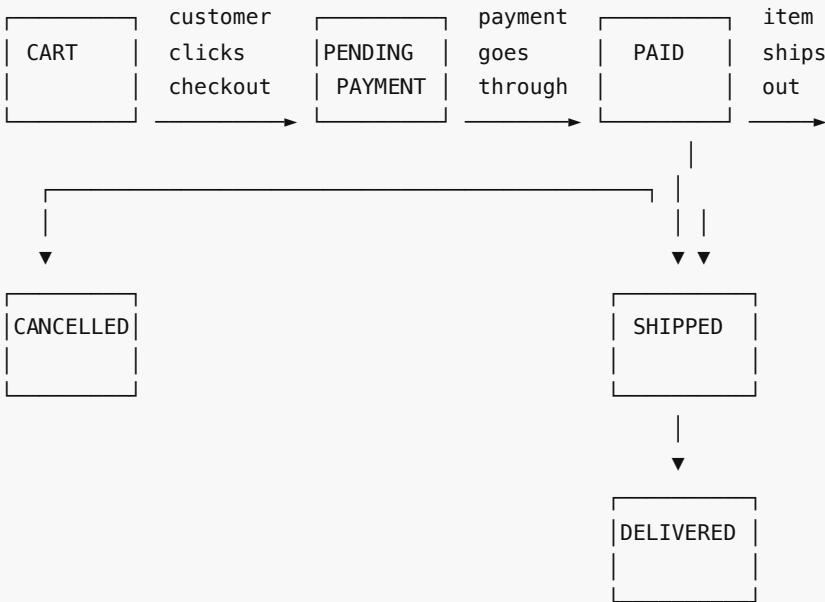


EXAMPLE 2: BLOG POST STATUS





EXAMPLE 3: ORDER LIFECYCLE



KEY CONCEPT: Things move through states based on actions

When you describe features to AI, think:

- What states exist? (draft, published, cancelled)
- What triggers transitions? (click publish, enter password)
- Can you go backwards? (unpublish, logout)

This teaches you to think about the lifecycle of things in your app, not just static snapshots.

Practical Examples: How to Describe What You Want

Bad: Too Vague

✗ "I need a user system"

Good: Specific Shape

✓ "Users should be able to sign up with email and password, log in, and have a profile page showing their name and bio"

Bad: Too Technical

✗ "Implement JWT-based authentication with bcrypt password hashing and refresh token rotation"

Good: Describe the Outcome

✓ "Users should stay logged in even if they close the browser. Login should be secure."

Bad: Implementation Details

✗ "Create a PostgreSQL table with foreign key constraints and a many-to-many junction table"

Good: Describe the Relationship

✓ "Users can save multiple bookmarks. Each bookmark should remember who saved it and when."

Bad: Mixing Concerns

✗ "Make the API endpoint return JSON with proper CORS headers and handle validation errors"

Good: User-Focused

✓ "When someone submits an invalid email, show them a helpful error message"

Visual: Good vs Bad Prompts

HOW TO DESCRIBE FEATURES TO AI (The difference between stuck and shipping)	
✗ DOESN'T WORK	✓ WORKS WELL
"I need a user system" ⚠ Problem: Too vague AI doesn't know what you want	"Users should sign up with email and password, log in, and have a profile page showing their name and bio" ✓ Specific outcome described ✓ Clear features listed
"Implement JWT-based auth with bcrypt and token rotation" ⚠ Problem: Too technical You're telling AI HOW to code	"Users should stay logged in even if they close the browser. Login should be secure" ✓ Describes behavior, not code ✓ Lets AI choose best method

"Create a PostgreSQL table with foreign keys and junction tables"	"Users can save multiple bookmarks. Each bookmark should remember who saved it and when"
⚠ Problem: Implementation AI knows database better	✓ Describes relationships simply ✓ Focuses on what, not how
"Fix the API endpoint to handle validation errors"	"When someone submits an invalid email, show them a helpful error message"
⚠ Problem: Mixing concerns Assumes technical knowledge	✓ User-focused outcome ✓ Clear cause and effect

THE PATTERN: Good Prompts Share These Traits

- ✓ Describe **WHAT** should happen, not **HOW** it should happen
- ✓ Use plain English, not technical jargon
- ✓ Focus on user experience and outcomes
- ✓ Include specific details (file types, size limits, text shown)
- ✓ Think in terms of "when X happens, do Y"

The question to ask yourself:

"If I was explaining this feature to a friend who isn't technical, could they understand what I want the app to do?"

If yes → good prompt. If no → too technical.

This is the make-or-break skill for vibe coding. Clarity beats technical accuracy every time.

The Flow of Building

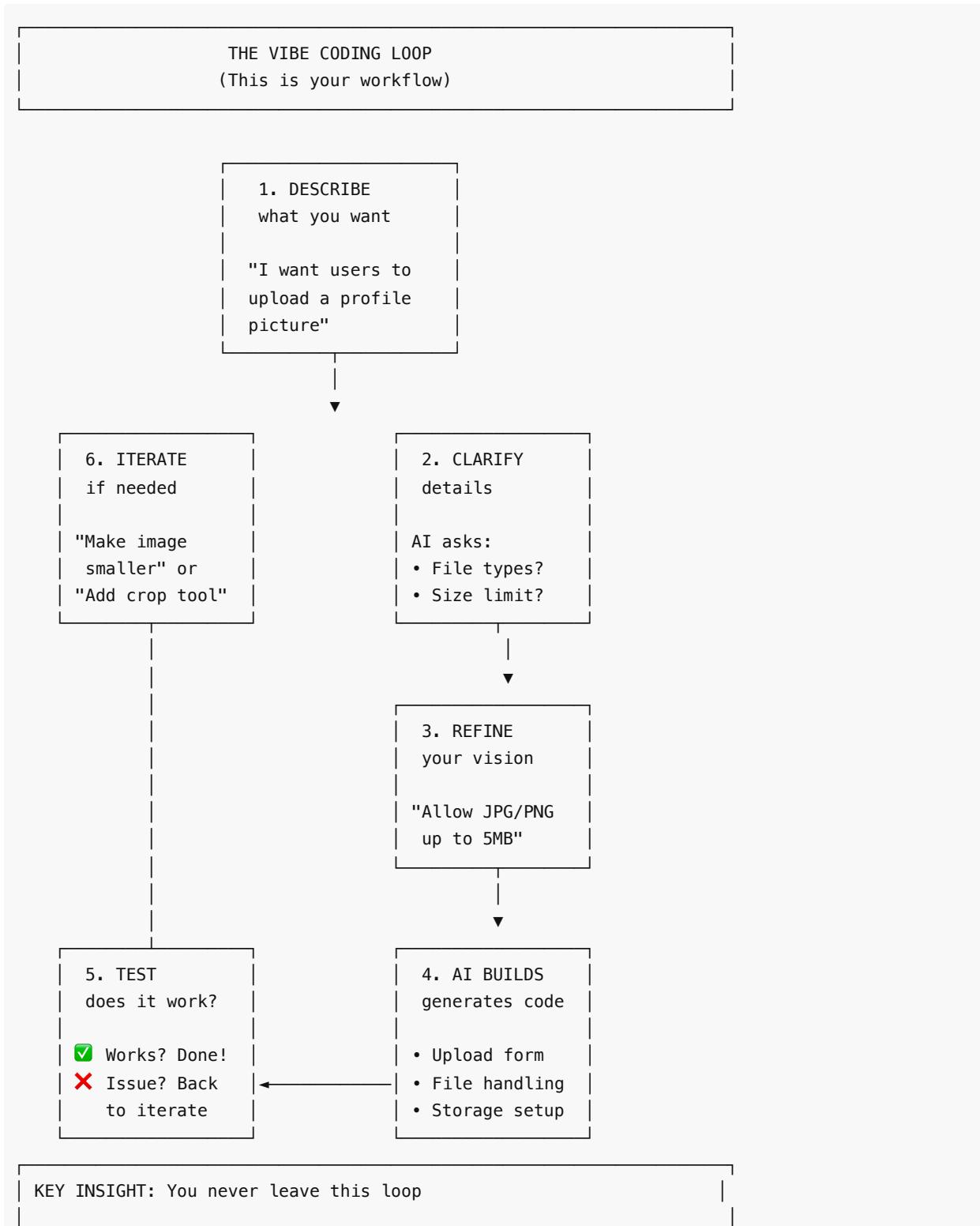
Here's the process you'll follow in Chapter 4 and beyond:

- 1. Describe the feature in plain English** "I want users to be able to upload a profile picture"
- 2. AI asks clarifying questions (or you anticipate them)** "What file types? Size limit? What happens if they don't upload one?"
- 3. You refine your description** "Allow JPG and PNG up to 5MB. Show a default avatar if they haven't uploaded one."
- 4. AI generates the code** Creates front-end upload form, back-end file handling, storage configuration
- 5. You test it** Try uploading an image - does it work?

6. You iterate if needed "The image is too big on the page, make it smaller" "Add a crop feature before uploading"

Notice: You never wrote code. You described, tested, refined. That's vibe coding.

Visual: The Vibe Coding Loop



| Building isn't linear—it's circular. You'll go through this loop
| hundreds of times. Each time you:
| • Describe more clearly
| • Test more thoroughly
| • Understand your product better

| This is normal. This is how vibe coding works.

| WHERE YOU SPEND YOUR TIME:

Describing/Clarifying:		40%
Testing:		30%
Iterating/Refining:		25%
Waiting for AI:		5%

| Notice: You spend almost NO time actually writing code.

When you hit frustration later ("why am I going back and forth so much?"), remember: this IS the process. You're doing it correctly.

Common Misconceptions

"I need to learn the basics first"

Wrong. The basics AI needs and the basics humans need are different. You need to understand shapes and flows. AI needs to understand syntax and implementation.

"I should understand how it works under the hood"

Wrong. You should understand what it does, not how it does it. You know what a login does (verifies identity). You don't need to know how password hashing works.

"Real developers would laugh at my code"

Wrong. AI writes better code than most developers. And besides - if it works and solves the problem, it's good enough.

"I need to start with simple projects"

Wrong. Start with projects you care about. Motivation matters more than simplicity. AI handles complexity for you.

What This Means for Building

When you get to Chapter 4 and start building, you'll be:

Describing shapes: "A bookmark has a URL, title, and save date" **Describing flows:** "When user clicks save, store it and show success" **Describing connections:** "Each bookmark belongs to the user who saved it" **Describing states:** "Bookmarks can be public or private"

You'll **never** be:

- Writing `function handleSubmit() {`
- Debugging `Cannot read property of undefined`
- Worrying about `async/await` syntax
- Configuring webpack or babel

That's all AI's job.

Your job is being clear about what you want. And as a domain expert, you're already great at that - you know exactly what problem you're solving and how it should work.

Ready to choose your tools and stack? Let's make some decisions.

Connect & Share

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 **LinkedIn:** [Jenny Ouyang](#) - Connect

Chapter 3: Choosing Your Stack

"The best tools are the ones you'll actually use. The best stack is the one you can ship with."

The Decision Paradox

There are hundreds of programming languages, frameworks, databases, and hosting platforms. Developers spend weeks researching "the best stack." This is decision paralysis disguised as due diligence.

Here's what actually matters: picking something that works and starting to build.

This chapter gives you three clear paths. Pick the one that matches your project type, follow it, and start building. You can always change later (and that's fine).

The Three Paths

Path 1: Simple Website or Landing Page

Choose this if: No user accounts, no database, just content **Examples:** Portfolio, marketing site, documentation, blog

Path 2: Web App with User Accounts

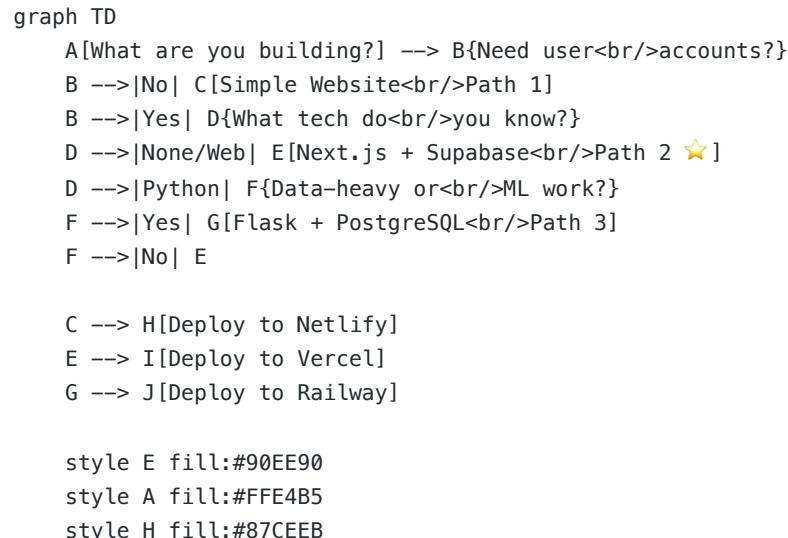
Choose this if: Users sign up, save data, interact with features **Examples:** SaaS tools, community platforms, booking systems

Path 3: Data-Heavy Python App

Choose this if: Processing data, analysis, ML, scientific computing **Examples:** Data dashboards, analysis tools, automation scripts

90% of people reading this guide need Path 2. If you're not sure, that's your path.

Quick Decision Flowchart



```
style I fill:#87CEEB  
style J fill:#87CEEB
```

 **Most people should choose Path 2** (Next.js + Supabase) - it's the most versatile and AI-friendly.

Path 1: Simple Website / Landing Page

The Stack

- **Front-end:** React + Tailwind CSS
- **Hosting:** Netlify or Vercel (free)
- **Domain:** Namecheap (\$12/year)

What This Gets You

- Lightning-fast static website
- Perfect for SEO
- Free hosting with generous limits
- Easy to update and maintain
- No backend complexity

When to Choose This

- Building a portfolio or personal site
- Creating a landing page for your product
- Publishing documentation or guides
- Setting up a blog (with tools like MDX)
- Anything where content is the same for everyone

What You Can't Do (Yet)

- User accounts or login
- Saving user-generated content
- Processing payments
- Personalized experiences
- Any kind of database

Tools You'll Use

AI Assistant: Claude or ChatGPT **Code Editor:** Cursor **Version Control:** GitHub **Hosting:** Netlify (recommended for beginners)

Time to First Deploy

With AI: 2-4 hours to have something live

Cost Breakdown

Infrastructure:

- Hosting: \$0 (Netlify or Vercel free tier)
- Domain: \$13-15/year (optional - can use free subdomain initially)

AI Tools (essential for vibe coding):

- Claude Pro or ChatGPT Plus: \$240/year (\$20/month)
- Cursor Pro (optional): \$240/year (\$20/month) - free tier available

Realistic Total:

- Learning (free tiers): ~\$0-15/year (just domain)
- Building (one AI tool): ~\$253-268/year
- Optimal (both AI tools): ~\$493-508/year

Example Prompts

"Create a personal portfolio site with an about section, project showcase, and contact form" "Build a landing page for my newsletter with email signup and feature highlights" "Make a documentation site with a sidebar navigation and search"

Path 2: Web App with User Accounts ★ RECOMMENDED

The Stack

- **Framework:** Next.js (React-based)
- **Database:** Supabase (PostgreSQL)
- **Authentication:** Supabase Auth
- **Styling:** Tailwind CSS + shadcn/ui
- **Hosting:** Vercel (Next.js is from Vercel)

What This Gets You

- User signup and login (email or Google/GitHub)
- Database to store anything you want
- Real-time features (live updates without refresh)
- File storage for images/documents
- Production-ready from day one
- Scales automatically as you grow

When to Choose This

- Building a SaaS product
- Creating a community platform
- Making internal tools for your team
- Anything with user accounts and data
- Most web applications

This is the path we'll use in Chapter 4's tutorial.

What You Can Do

User accounts (email + password) Social login (Google, GitHub, etc.) Save and retrieve data File uploads (images, PDFs, etc.) Real-time features (chat, notifications) Payments (add Stripe) Email (add Resend or SendGrid) Everything you need for a real product

Tools You'll Use

AI Assistant: Claude or ChatGPT **Code Editor:** Cursor **Framework:** Next.js (latest stable version with App Router)

Database: Supabase (free tier: 500MB, up to 2 active projects) **Auth:** Supabase Auth (included) **UI Components:**

shadcn/ui (copy/paste components) **Hosting:** Vercel (free tier: 100GB bandwidth/month) **Version Control:** GitHub

Time to First Deploy

With AI: 4-8 hours for a working app with login and database

Cost Breakdown (Starting Out)

Infrastructure:

- Next.js: \$0 (free framework)
- Supabase: \$0 (free tier: 500MB database, 2 active projects)
- Vercel: \$0 (free tier: 100GB bandwidth, unlimited projects)
- Domain: \$13-15/year (optional - can use free subdomain initially)

AI Tools (essential for vibe coding):

- Claude Pro or ChatGPT Plus: \$240/year (\$20/month)
- Cursor Pro (optional): \$240/year (\$20/month) - free tier available

Realistic Total:

- Learning (free tiers): ~\$0-15/year
- Building (one AI tool): ~\$253-268/year
- Optimal (both AI tools): ~\$493-508/year

Cost Breakdown (With Growth - 100+ users)

Infrastructure:

- Supabase Pro: \$300/year (\$25/month for 8GB, auto-scaling, daily backups)
- Vercel: \$0-240/year (hobby tier often sufficient; Pro \$20/month if needed)
- Domain: \$13-15/year

AI Tools (same as above):

- Claude Pro or ChatGPT Plus: \$240/year
- Cursor Pro (optional): \$240/year

Total: ~\$553-808/year (infrastructure scales with usage, AI tools stay constant)

Why This Stack

Next.js: Modern, well-documented, huge community, AI knows it extremely well

Supabase: Handles database, auth, file storage, real-time in one place. You don't need to configure multiple services.

Vercel: Made by the Next.js team, deployment is literally one command. Auto-scales, global CDN, zero config.

Tailwind: Utility-first CSS that AI can write perfectly. No wrestling with CSS files.

shadcn/ui: Beautiful pre-built components you can copy/paste and customize. No package installation, just copy the code.

Example Prompts

"Create a Next.js app with Supabase where users can sign up, create bookmarks, and see their saved list" "Add Google authentication so users can sign in with their Google account" "Let users upload a profile picture that gets stored in Supabase storage" "Create a dashboard showing user statistics from the database"

Path 3: Data-Heavy Python App

The Stack

- **Back-end:** Flask (Python)
- **Database:** PostgreSQL on Railway
- **Hosting:** Railway or Oracle Cloud
- **Front-end:** Keep it simple (templates) or separate React app

What This Gets You

- Full Python ecosystem for data processing
- Use pandas, NumPy, scikit-learn, etc.
- Custom API endpoints
- More control over backend logic
- Cost-effective at scale

When to Choose This

- Processing large datasets
- Building data analysis tools
- Creating ML/AI features
- Automating workflows with Python
- Backend APIs for mobile apps
- Team already knows Python well

What You Can Do

Complex data processing Integration with Python libraries Custom business logic API for mobile or separate frontend Background jobs and scheduled tasks Data analysis and visualization

Tools You'll Use

AI Assistant: Claude or ChatGPT **Code Editor:** Cursor **Language:** Python (latest stable version, 3.11+) **Framework:**

Flask (lightweight) or FastAPI (modern) **Database:** PostgreSQL **Hosting:** Railway (easiest) or Oracle Cloud (free tier)

Version Control: GitHub

Time to First Deploy

With AI: 6-10 hours for a working API

Cost Breakdown (Starting Out)

Infrastructure:

- Railway: \$5 trial credit (30 days), then ~\$5-10/month (includes database + hosting)
- Oracle Cloud: \$0 (free tier alternative, good for learning)
- Domain: \$13-15/year (optional initially)

AI Tools (essential for vibe coding):

- Claude Pro or ChatGPT Plus: \$240/year (\$20/month)
- Cursor Pro (optional): \$240/year (\$20/month) - free tier available

Realistic Total:

- Learning (Oracle free tier): ~\$253-268/year (AI tool + domain)
- Building (Railway): ~\$313-388/year (AI tool + Railway + domain)
- Optimal (both AI tools + Railway): ~\$553-628/year

Why This Stack

Python: You probably already know it or want to learn it. Huge ecosystem for data work.

Flask: Simple, minimal, gets out of your way. Easy for AI to generate.

PostgreSQL: Industry standard, reliable, works everywhere.

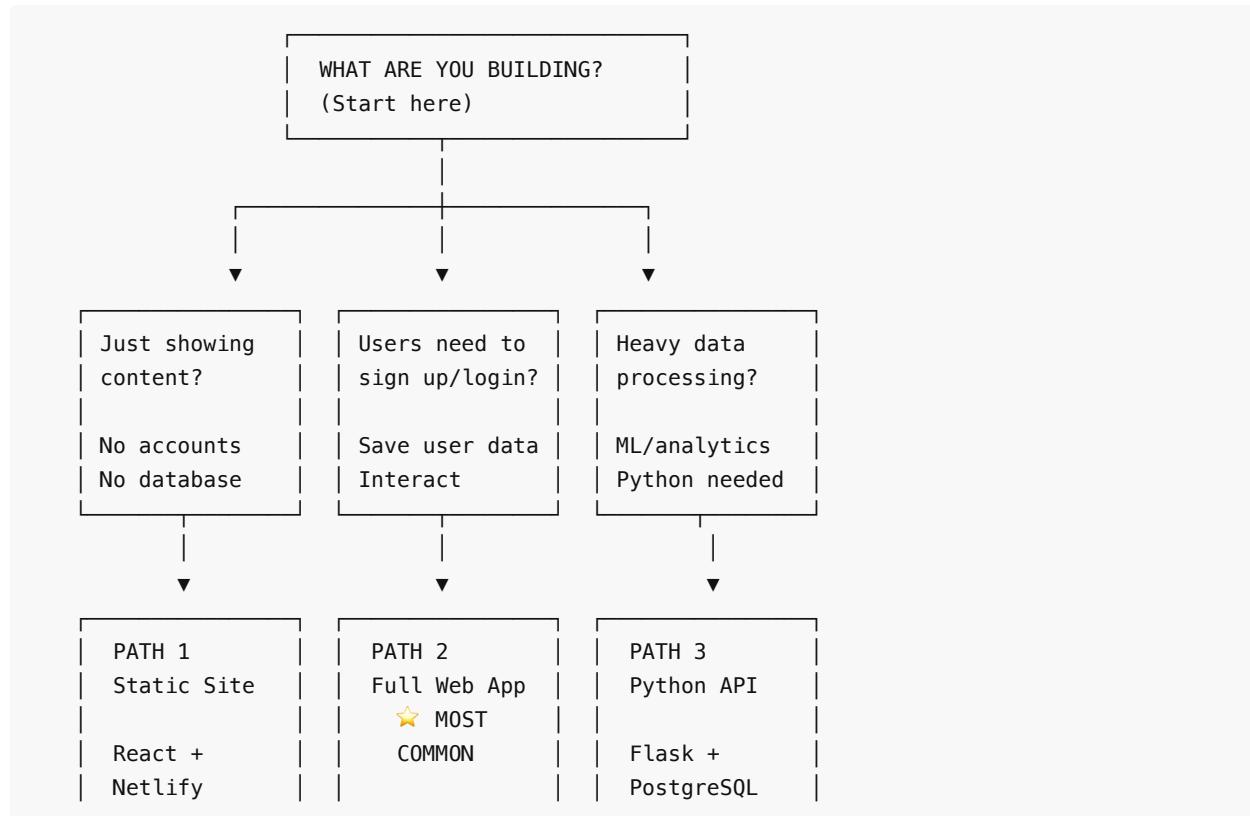
Railway: Dead simple deployment for Python apps. No DevOps knowledge required.

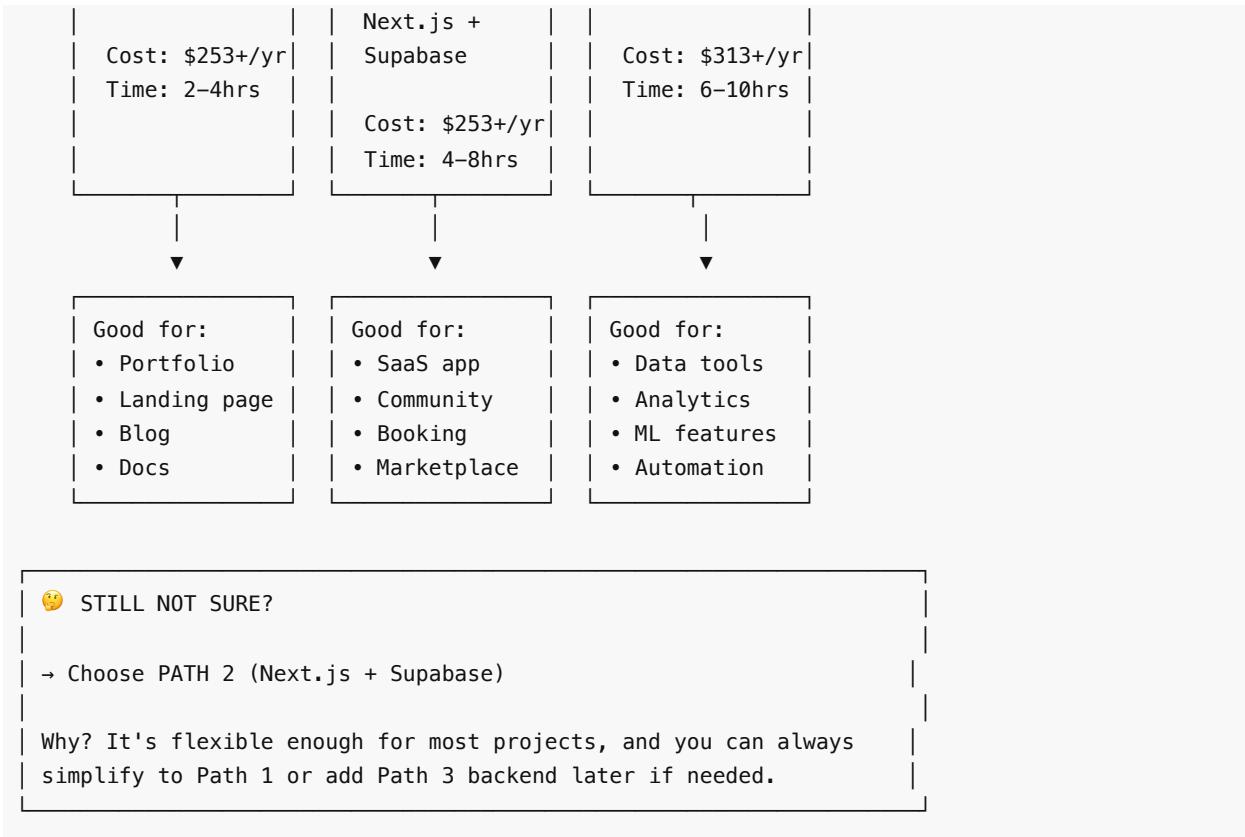
Example Prompts

"Create a Flask API that accepts CSV uploads, processes them with pandas, and returns summary statistics" "Build an endpoint that runs a scheduled job every day at midnight to process data" "Make a dashboard that queries the database and shows analytics charts" "Create API endpoints for a mobile app to fetch and update user data"

Decision Tree (Visual Guide)

Start here: What are you building?





This makes the decision quick and visual. You should be able to identify your path in under 30 seconds.

Just content (no user interaction)?

→ **Path 1: Static Site** (React + Netlify)

- Portfolio
- Marketing page
- Blog
- Documentation

Web app with users?

→ **Path 2: Next.js + Supabase** ★

- SaaS product
- Community platform
- Booking system
- Content management
- Most web applications

Heavy data processing?

→ **Path 3: Flask + PostgreSQL**

- Data analysis
- ML features
- Automation

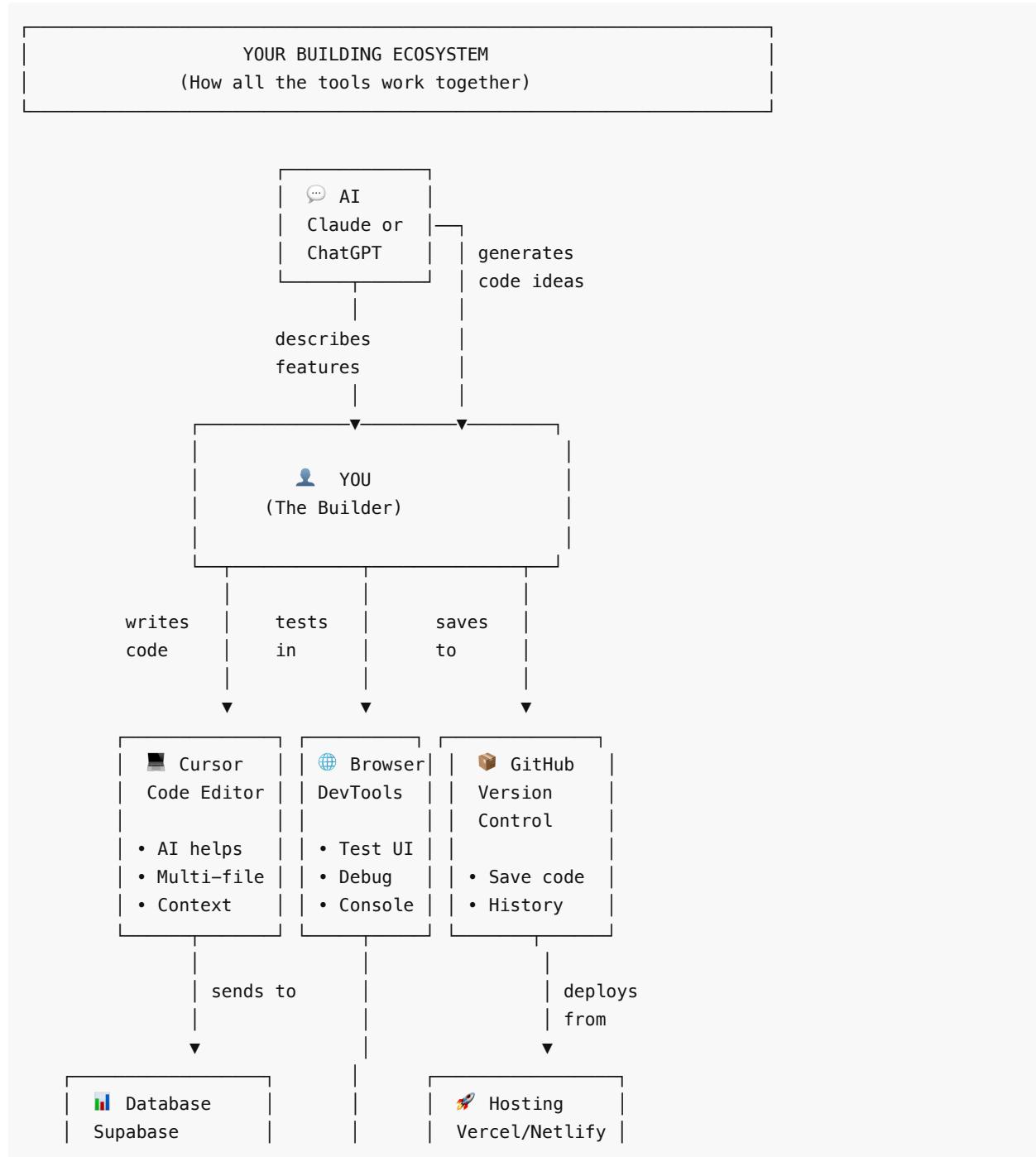
- Custom APIs

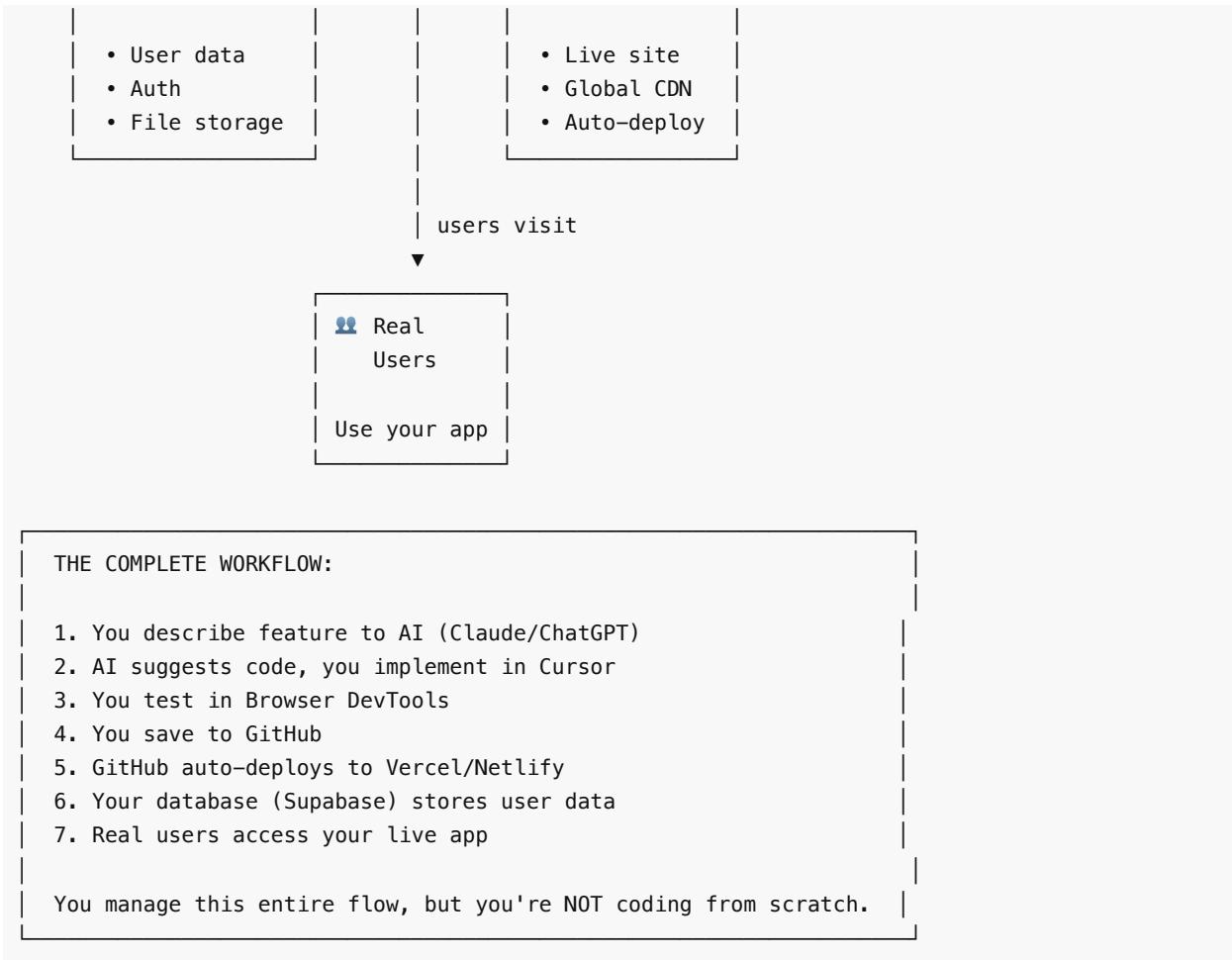
Still unsure? Choose Path 2. It's the most flexible and you can always add Python backend later if needed.

The Tools You'll Actually Use

Regardless of which path you choose, these tools are essential. Here's how they all work together:

Visual: Your Building Ecosystem





Each tool has ONE job. You orchestrate them, not master them.

1. AI Assistant (Required)

Claude (Anthropic) or ChatGPT (OpenAI)

Pick one. I recommend Claude because:

- Better at understanding context
- More helpful with debugging
- Stronger at code generation
- (You're already reading this in Claude!)

Pricing (verified December 2025):

- Claude Pro: \$20/month (or \$17/month billed annually at \$200/year)
- ChatGPT Plus: \$20/month (monthly billing only)
- Free tiers available for both (limited usage, good for initial learning)

Starting tip: Free tiers work for learning (1-2 weeks), but for actual building you'll need Pro. Budget \$20-40/month for AI tools as essential infrastructure, not optional extras.

2. Code Editor (Required)

Cursor (AI-powered code editor)

Why Cursor specifically:

- Built-in AI that understands your entire codebase
- Can make changes across multiple files
- Accepts natural language commands

Pricing (verified December 2025):

- Free tier: ~2,000 completions + 50 premium requests/month (enough for learning)
- 2-week Pro trial included
- Pro: \$20/month (unlimited basic completions + priority access)
- Pro+: \$60/month (truly unlimited, for heavy users)

Starting tip: Free tier works for first 2-3 weeks. Upgrade to Pro (\$20/month) once you're building daily. Budget this as essential infrastructure.

3. Version Control (Required)

GitHub

This is how you:

- Save your code safely
- Deploy to hosting platforms
- Share with others
- Track changes over time

Cost: Free Learn: Just the basics (git add, commit, push)

4. Browser Dev Tools (Built-in)

Chrome DevTools or Firefox Developer Tools

This is how you:

- See what went wrong
- Test your app
- Inspect elements
- Check network requests

Cost: Free (built into browser) Learn: Just how to open it (F12 or Cmd+Option+I)

What About Other Tools You've Heard Of?

"Should I use TypeScript?"

For beginners: No. JavaScript is fine. AI can write either. **When to add it:** Once you're comfortable, TypeScript adds safety. But start with JavaScript.

"What about Docker?"

For beginners: You don't need it. Modern hosting handles this. **When you need it:** For complex deployments or team collaboration. Not day one.

"Should I learn Git before starting?"

Minimum needed: `git add .`, `git commit -m "message"`, `git push` **That's it.** AI can help with the rest when you need it.

"What about testing?"

For beginners: Ship first, test later. **When to add it:** After you have users and need to maintain quality. Not before you ship.

"MongoDB vs PostgreSQL?"

For beginners: PostgreSQL (what Supabase uses). **Why:** More predictable, better tooling, easier to understand relationships.

Common Questions

"What if I pick the wrong stack?"

You won't. These are all good choices. And if you really need to change later, AI can help you migrate. But usually you don't need to.

Reality check: Most successful startups launched with whatever they knew and migrated years later (if ever).

"Can I mix and match?"

Yes! Common patterns:

- Next.js frontend + Flask backend (Path 2 + 3)
- Static site now, add backend later (Path 1 → Path 2)
- Start simple, add complexity as needed

But for your first project: **pick one path and stick with it until you ship.**

"What about mobile apps?"

For beginners: Build a web app first (Path 2). Make it responsive. Most "apps" are really just websites.

When you need native: Use React Native with the same Next.js backend. But not on day one.

"What's the 'best' stack?"

The one you ship with. Seriously. The best stack is:

- The one you understand
- The one AI can help you with
- The one that lets you move fast
- The one you actually finish

Perfect choice paralysis beats imperfect shipped product every time. Choose and move.

Complete Pricing Breakdown (Verified December 2025)

Understanding real costs helps you plan. Here's everything broken down honestly:

AI Tools (Essential for Vibe Coding)

These are NOT optional - they're your development team.

AI Assistant (Pick one):

- Claude Pro: \$20/month or \$17/month annually (\$200/year)
- ChatGPT Plus: \$20/month (no annual option)
- Free tiers: Available for learning (1-2 weeks max for serious building)

Code Editor:

- Cursor Free: \$0 (~2,000 completions + 50 premium requests/month, good for learning)
- Cursor Pro: \$20/month (unlimited basic completions, recommended)
- Cursor Pro+: \$60/month (truly unlimited, for heavy users)
- 2-week free Pro trial included

Version Control:

- GitHub: \$0 (free for individuals and open source)

Realistic AI Tool Budget:

- Learning path: \$0 (free tiers, 2-4 weeks max)
- Minimal path: \$240/year (one AI assistant)
- Recommended path: \$480/year (AI assistant + Cursor Pro)
- Power user path: \$680/year (AI assistant + Cursor Pro+)

Infrastructure Costs (Per project, scales with usage)

Path 1: Static Site

- Hosting (Netlify/Vercel): \$0 (free tier covers most use cases)
- Domain: \$13-15/year (optional - can use free subdomain)
- **Infrastructure only: ~\$0-15/year**
- **With AI tools (realistic): ~\$240-255/year**

Path 2: Web App with Database (Most Common)

Starting out (0-100 users):

- Supabase: \$0 (free tier: 500MB database, 2 active projects)
- Vercel: \$0 (free tier: 100GB bandwidth, unlimited projects)
- Domain: \$13-15/year (optional initially)
- **Infrastructure only: ~\$0-15/year**
- **With AI tools (realistic): ~\$240-255/year (minimal) or \$480-495/year (recommended)**

With growth (100-10,000+ users):

- Supabase Pro: \$300/year (\$25/month: 8GB database, auto-scaling, daily backups)
- Vercel: \$0-240/year (hobby tier often sufficient; Pro \$20/month if needed)
- Domain: \$13-15/year
- **Infrastructure: ~\$313-555/year**
- **With AI tools: ~\$553-795/year (minimal) or \$793-1,035/year (recommended)**

Path 3: Python Data App

- Railway: \$5 trial (30 days), then ~\$60-120/year (\$5-10/month)
- Oracle Cloud: \$0 (free tier alternative, good for learning)
- Domain: \$13-15/year (optional initially)
- **Infrastructure only: ~\$0-135/year**
- **With AI tools (realistic): ~\$240-375/year (minimal) or \$480-615/year (recommended)**

Add-On Services (When You Need Them)

Email (Transactional):

- Resend: \$0 (free tier: 3,000 emails/month) or Pro \$240/year (\$20/month for 50,000 emails)
- SendGrid: Similar pricing structure

Payments:

- Stripe: 2.9% + \$0.30 per transaction (no monthly fee)
- \$15 chargeback fee (per disputed transaction)

File Storage (if beyond Supabase):

- Included in Supabase free tier (1GB)
- Supabase Pro includes 100GB
- Usually sufficient for most apps

The Learning Path (Free Tiers)

You CAN start with \$0 - but only for 2-4 weeks of learning:

Free tier everything:

- Claude or ChatGPT (free tier: limited, good for tutorials)
- Cursor (free tier: 2,000 completions/month + 2-week Pro trial)
- GitHub (free forever)
- Vercel or Netlify hosting (free forever for hobby use)
- Supabase (free tier: 500MB, good for learning)
- Use a free subdomain (yourapp.vercel.app) - skip buying domain initially

Reality check: Free tiers are genuinely useful for learning and following Chapter 4's tutorial. But for building a real product daily, you'll need paid AI tools within 2-4 weeks.

When to upgrade (inevitable for real building):

- AI Assistant: After 1-2 weeks of daily use (free tier too limiting) - **Budget \$20/month**
- Cursor: After 2-3 weeks if building intensively - **Budget \$20/month** (optional but recommended)
- Domain: When you want professional branding - **~\$13/year**
- Supabase/Infrastructure: Only when you exceed free limits (can take months/years)

Realistic Monthly Costs

Learning phase (Weeks 1-4):

- \$0 (free tiers only - enough for tutorials and learning)

Building phase (Months 2-6):

- \$20 minimum (AI assistant - essential)
- \$40 recommended (AI assistant + Cursor Pro)
- Infrastructure stays free during building

Launched with early users (Months 6-12):

- \$40-60 (AI tools + maybe domain)
- Infrastructure usually stays free (under 100 users)

Growing product (100+ users):

- \$45-85/month (AI tools + Supabase Pro \$25 + domain)
- Add Vercel Pro (\$20) only if needed

Bottom line: Budget \$20-40/month for AI tools as essential operating costs. Infrastructure often stays free much longer than you expect.

My Recommendation for This Guide

We're going to use **Path 2** (Next.js + Supabase) in Chapter 4 because:

1. It's what 90% of you need
2. It scales from MVP to millions of users
3. Free to start, grows with you
4. One service handles database + auth + storage
5. AI tools know it extremely well
6. Huge community = easy to find help

If you need **Path 1 or 3**, the principles in Chapter 4 still apply - just different tools. The mental models are the same.

Ready to build something real? Chapter 4 is where we get our hands dirty.

Connect & Share

-  **Newsletter:** [Build to Launch](#) - Weekly AI building tips, templates, and real builder stories
-  **Medium:** [AI Builders](#) - Read more articles and guides
-  **Reddit:** [r/VibeCodingBuilders](#) - Join the community
-  **Bluesky:** [@jenny-ouyang](#) - Connect
-  **LinkedIn:** [Jenny Ouyang](#) - Connect

Chapter 4: Your First AI-Built App in One Hour

What you're about to do: Describe what you want in one comprehensive prompt. Watch AI build it. Deploy it live. That's it.

Time: 60 minutes total

- Setup: 10 minutes
- Understanding the prompt: 5 minutes
- Building: 30-40 minutes
- Deploy: 5 minutes

What you'll build: A personal bookmark manager that saves links, adds descriptions, and organizes them with tags.

The shift: You're not following 28 steps. You're describing what you want once, then letting AI figure out the how.

Part 1: Setup (10 Minutes)

You need three accounts and one download. That's it.

Create These Accounts:

1. **Supabase** (supabase.com) - Your database
2. **Vercel** (vercel.com) - Your hosting
3. **Cursor** (cursor.sh) - Your AI coding tool

All free tiers. Sign up with GitHub for fastest setup.

Install Cursor:

Download from cursor.sh and install. It looks like VS Code because it's built on top of it.

That's your setup. No environment variables yet. No configuration files. We'll handle those when AI asks for them.

Part 2: The Master Prompt (5 Minutes)

Here's what most people don't understand: **One comprehensive prompt can replace 28 step-by-step instructions.**

The difference is specificity. Not "build a bookmark app." Not even "build a bookmark app with tags and search."

You describe:

- What it does
- What the user sees
- How data flows
- What tech to use
- What constraints to follow

The Bookmark Manager Master Prompt

Copy this entire prompt. This is what you'll paste into Cursor:

GOAL: Build a personal bookmark manager web app

WHAT IT DOES:

- Save website URLs with descriptions
- Add multiple tags to each bookmark
- View all bookmarks in a clean list
- Search bookmarks by title, description, or tags
- Click a bookmark to open in new tab
- Delete bookmarks I no longer need

USER EXPERIENCE:

- Landing page with input form at top (URL field, description field, tag input)
- Below form: list of all saved bookmarks
- Each bookmark shows: title (from URL), description, tags as pills, timestamp
- Click bookmark title to visit site
- Each bookmark has a delete button
- Search bar filters bookmarks in real-time
- Clean, minimal design (like Notion or Linear)

TECHNICAL REQUIREMENTS:

Stack:

- Next.js with App Router
- TypeScript
- Tailwind CSS for styling
- Supabase for database

Database Schema:

- Bookmarks table: id, url, title, description, tags (array), created_at
- Use Supabase's built-in auth (optional for v1, but set up the structure)

Features:

- Auto-fetch page title from URL when saving
- Tag input with autocomplete from existing tags
- Responsive design (works on mobile)
- Loading states for all actions
- Error handling with user-friendly messages

CODING CONSTRAINTS – FOLLOW THESE RULES:

BEFORE YOU CODE:

1. Summarize what you understand about the requirement
2. Ask specific questions about any uncertainties
3. List files you plan to create and why
4. Get confirmation before proceeding

WHILE CODING:

1. Make ONLY the changes needed for the specific requirement
2. Do NOT add features, enhancements, or "improvements" not requested
3. Do NOT refactor or reorganize code while building
4. If you modify the same file 3+ times, STOP and explain what you're trying to do

WHEN COMPLETE:

1. Verify the specific requirement works
2. Test all user actions (add bookmark, search, delete)
3. Provide clear deployment instructions

Start by confirming you understand this project, then ask any clarifying questions before generating code.

What Makes This Prompt Work

Goal clarity: First line states exactly what we're building

User perspective: Describes the experience, not just features

Technical specificity: Exact stack, schema, and requirements

Constraints included: The coding constraints prevent AI from over-building

Control maintained: AI must confirm understanding before coding

This is the formula. Goal → Experience → Technical → Constraints → Confirmation.

Part 3: Building (30-40 Minutes)

Step 1: Start the Conversation

1. Open Cursor
2. Create a new folder: `bookmark-manager`
3. Open that folder in Cursor
4. Open the chat panel (Cmd+L or Ctrl+L)
5. Paste the entire master prompt

What happens next: AI will read everything, then respond with:

- A summary of what it understood
- Clarifying questions (maybe 2-5)
- A list of files it plans to create

Step 2: Answer Questions

AI might ask:

- "Should the tag autocomplete be case-sensitive?"
- "Do you want tags to be created on-the-fly or pre-defined?"
- "Should there be a limit on number of tags per bookmark?"

Your job: Answer honestly. Don't overthink it. "Case-insensitive is fine," "On-the-fly," "No limit needed."

If you don't know: "Your call, make it user-friendly."

Step 3: Give Permission to Build

Once questions are answered, AI will show you a file plan:

```
I'll create:  
- app/page.tsx (main UI)  
- app/api/bookmarks/route.ts (API endpoints)  
- lib/supabase.ts (database connection)  
- components/BookmarkForm.tsx  
- components/BookmarkList.tsx  
- components/SearchBar.tsx
```

You type: "Looks good, proceed."

Step 4: Watch It Build

AI will generate all files. You'll see them appear in your file tree.

Don't panic. You don't need to read every line right now. The point is to see it work first.

Step 5: Set Up Supabase

Cursor will hit a pause point: "I need your Supabase credentials."

1. Go to your Supabase project
2. Settings → API → Copy these two values:
 - o Project URL
 - o anon/public key
3. Create `.env.local` in your project root
4. Paste this template with your actual values:

```
# Supabase Configuration  
NEXT_PUBLIC_SUPABASE_URL=https://your-project.supabase.co  
NEXT_PUBLIC_SUPABASE_ANON_KEY=your-anon-key-here  
  
# IMPORTANT:  
# - Never commit .env.local to git (it's in .gitignore by default)  
# - Use different values for production (add in Vercel dashboard)  
# - Restart dev server after adding/changing variables: Ctrl+C, then npm run dev
```

Tell Cursor: "Added the environment variables."

Step 6: Create the Database Table

AI will give you SQL to run. Copy it.

1. Go to Supabase → SQL Editor
2. Paste the SQL
3. Run it
4. Tell Cursor: "Table created."

Step 7: Run It Locally

Cursor will tell you to run:

```
npm install  
npm run dev
```

Do it. Open `localhost:3000` in your browser.

Step 8: Test Everything

Try these actions:

- Add a bookmark with a URL
- Add some tags
- Add another bookmark
- Use the search
- Delete a bookmark

If something breaks: Copy the error, paste it in Cursor chat, say "This error appeared, fix it."

This is the magic moment. You described what you wanted 30 minutes ago. Now you're using it.

Part 4: Deploy It Live (5 Minutes)

Make It Public

1. Push to GitHub:

```
git init  
git add .  
git commit -m "Built with AI"  
git remote add origin YOUR_GITHUB_REPO_URL  
git push -u origin main
```

2. Go to Vercel → New Project → Import your GitHub repo

3. Vercel will detect Next.js automatically

4. Add your environment variables in Vercel:

- `NEXT_PUBLIC_SUPABASE_URL`
- `NEXT_PUBLIC_SUPABASE_ANON_KEY`

5. Click Deploy

In 2-3 minutes: You have a live URL. Send it to friends. Use it on your phone. It's real.

Part 5: What You Just Did

Let's reflect on what actually happened here.

The Old Way vs The New Way

Old way (traditional coding):

1. Learn React
2. Learn Next.js
3. Learn Tailwind
4. Learn Supabase
5. Then build

New way (what you just did):

1. Describe what you want
2. AI builds it
3. You learn by using it

You Didn't Write Code, But You Built Software

What you actually did:

- Defined requirements clearly
- Made architecture decisions (Next.js, Supabase, Tailwind)
- Answered design questions (how tags work, what UI looks like)
- Tested user experience
- Debugged errors
- Deployed to production

That's product building. The code was the implementation detail.

Understanding What AI Built

You don't need to read every line, but you should understand the structure:

app/page.tsx: Your main UI - the form and bookmark list **app/api/bookmarks/route.ts:** Handles save/delete actions
lib/supabase.ts: Connects to your database **components/:** Reusable UI pieces

Open `app/page.tsx`. You'll recognize things: the form fields, the button, the list. It's React, but you can read it.

The confidence shift: You went from "I don't know React" to "I can see how this React app works."

How to Modify It

Want to add a feature? Use the same approach:

Prompt:

Add a feature: When I save a bookmark, automatically fetch and save the page's favicon (small icon). Display it next to each bookmark in the list.

Follow the same coding constraints as before. Ask questions if unclear.

AI will ask questions, explain what files to modify, make changes.

You're not coding. You're directing.

What This Chapter Actually Taught You

The One Prompt Method

Not: "Build this, then do this, then do that, then..." **But:** "Here's everything I want. Ask questions. Build it."

This is the shift. Comprehensive prompts replace step-by-step tutorials.

The Builder Mindset

You just:

- Defined a product
- Made tech choices
- Managed AI as a developer
- Tested user experience
- Shipped to production

That's the full cycle. You're not "learning to code." You're building products with AI as your implementation partner.

The Confidence You Gained

Before this chapter: "I need to learn Next.js and React and Supabase and..."

After this chapter: "I can describe what I want and get a working app."

That's not arrogance. That's reality. You just proved it to yourself.

Next Steps

Modify Your Bookmark App

Try these changes (each is one prompt):

1. **Add folders:** Organize bookmarks into folders/categories
2. **Add export:** Button to export all bookmarks as CSV
3. **Add sharing:** Generate a public link to share specific bookmarks
4. **Add dark mode:** Toggle between light and dark themes

Each one is practice. Each one builds confidence.

Try a Different App

Use the same master prompt structure for:

- **Expense tracker:** Log expenses, categorize, view totals
- **Habit tracker:** Check off daily habits, see streak counts
- **Recipe saver:** Save recipes with ingredients and instructions

Same pattern:

- Goal
- User experience
- Technical requirements
- Coding constraints
- Build it

Understand the Tools Deeper

Now that you've used the stack:

- Read Next.js docs (you'll understand them now)
- Explore Supabase features (realtime, auth, storage)
- Learn Tailwind patterns (you've seen them in your code)

The difference: You're learning by extending something real, not building todo apps from tutorials.

The Unlock

This chapter was different from traditional coding tutorials on purpose.

Traditional tutorial: "Here's 28 steps. Follow them exactly. Type this. Type that. Now you have an app."

What we just did: "Here's a comprehensive prompt. Describe what you want. Let AI build it. Now you have an app."

The result is the same: Working software in production.

The feeling is different: You feel capable, not hand-held.

That's the confidence shift. That's vibe coding.

You didn't learn syntax. You learned to build.

Connect & Share

 **Newsletter:** [Build to Launch](#) - Weekly AI building tips, templates, and real builder stories

 **Medium:** [AI Builders](#) - Read more articles and guides

 **Reddit:** [r/VibeCodingBuilders](#) - Join the community

 **Bluesky:** [@jenny-ouyang](#) - Connect

 **LinkedIn:** [Jenny Ouyang](#) - Connect

Chapter 5: Common Building Blocks

"Most apps are built from the same set of pieces. Learn these once, use them everywhere."

This chapter is your reference guide. You don't need to read it start to finish - come back when you need a specific feature. Each section tells you what it is, when you need it, and exactly what to tell AI.

Authentication (User Accounts)

What It Is

The system that lets users sign up, log in, and stay logged in. Includes:

- Creating accounts (registration)
- Verifying identity (login)
- Staying logged in (sessions)
- Resetting passwords
- Social login (Google, GitHub, etc.)

When You Need It

You need authentication if:

- Users have personalized data
- Users create content
- You need to know who's doing what
- Different users see different things
- You have any concept of "my stuff"

You don't need authentication if:

- Same content for everyone
- No user-specific features
- Landing pages, blogs, portfolios
- Pure content sites

How to Describe It to AI

Basic setup:

Set up authentication using Supabase Auth where users can:

- Sign up with email and password
- Log in with email and password
- Stay logged in even after closing the browser
- Log out when they want

Social login:

Add Google authentication so users can sign up/log in with their Google account. Configure the OAuth flow with Supabase.

Password reset:

Add password reset functionality where:

- Users can request a reset email
- They click a link in the email
- They enter a new password
- They're automatically logged in

Protected routes:

Protect the /dashboard route so only logged-in users can access it. Redirect non-authenticated users to /login.

Common Patterns

Email verification: "Require users to verify their email before they can use the app. Send a confirmation email on signup."

Remember me: "Add a 'Remember me' checkbox that keeps users logged in for 30 days instead of the default session duration."

Profile completion: "After users sign up, redirect them to a profile setup page where they add their name and profile picture before accessing the app."

Session management: "Check if the user's session is still valid on page load. If expired, log them out and redirect to login."

What AI Handles for You

Password hashing (bcrypt) Session token generation CSRF protection OAuth flows Secure cookie management Token refresh logic

You describe: "Users should be able to log in" AI implements: All the security best practices

Databases (Storing Data)

What It Is

Where all your app's data lives permanently. Think of it as organized filing cabinets where each cabinet is a "table" and each file is a "row."

Key concepts:

- **Tables:** Collections of similar data (users table, posts table)
- **Columns:** Properties of each item (email, name, created_at)
- **Rows:** Individual items (one row = one user)
- **Relationships:** How data connects (post belongs to user)

When You Need It

You need a database if:

- Data needs to persist (survive page refresh)
- Multiple users have their own data
- You're creating, reading, updating, or deleting anything

- Users need to save their work

You don't need a database if:

- All data can be calculated on the fly
- Nothing needs to be saved
- Pure display/presentation sites

How to Describe It to AI

Creating tables:

Create a Supabase table called "recipes" with these columns:

- id (auto-generated UUID)
- user_id (links to auth.users)
- title (text, required)
- ingredients (text array)
- instructions (long text)
- prep_time (integer, minutes)
- is_public (boolean, default false)
- created_at (timestamp, auto)

Relationships:

Create a "comments" table where:

- Each comment belongs to one post (foreign key to posts.id)
- Each comment belongs to one user (foreign key to auth.users.id)
- Store the comment text and timestamp

Querying data:

Fetch all recipes where:
 - user_id matches the current user
 - OR is_public is true
 Order by created_at descending
 Limit to 20 results

Updating data:

When user clicks "Make Public", update that recipe's is_public field to true in the database.

Deleting data:

Add a delete button that removes the recipe from the database and updates the UI immediately.

Common Patterns

Soft deletes: "Instead of actually deleting recipes, add a 'deleted_at' timestamp column. Hide rows where deleted_at is not null. This lets users undo deletion."

Pagination: "Load 20 recipes at a time. Add a 'Load More' button that fetches the next 20 using offset."

Search: "Add a search input that filters recipes by title or ingredients using Supabase's text search."

Real-time updates: "Use Supabase real-time subscriptions so when one user adds a comment, other users see it appear immediately without refreshing."

Data validation: "Before inserting a recipe, check that title is not empty and prep_time is a positive number. Show error if invalid."

What AI Handles for You

✓ SQL query syntax ✓ Indexing for performance ✓ Connection pooling ✓ Type safety ✓ Error handling ✓ Race conditions

You describe: "Store user posts with title and body" AI implements: Proper table structure with relationships and constraints

File Uploads (Images, PDFs, Documents)

What It Is

Letting users upload files from their device to your app. Files are stored separately from your database (usually in "blob storage" or "object storage").

Common use cases:

- Profile pictures
- Document attachments
- Product images
- Resume uploads
- CSV imports

When You Need It

You need file uploads if:

- Users share images or documents
- You have media-heavy features
- Users need to back up files
- Profile pictures, cover photos, etc.

You don't need file uploads if:

- Text-only content
- URLs to external images are fine
- No user-generated media

How to Describe It to AI

Basic upload:

```
Add a profile picture upload where:  
- Users can select an image file (JPG, PNG)  
- Max size 5MB  
- Preview the image before uploading
```

- Upload to Supabase Storage in "avatars" bucket
- Save the public URL to user's profile in database

Multiple files:

- Let users upload multiple images for a product listing:
- Allow selecting multiple files at once
 - Show preview thumbnails
 - Upload to "products" bucket with unique filenames
 - Store array of URLs in products table

File restrictions:

- Only allow PDF uploads with:
- Max size 10MB
 - Show error if wrong file type
 - Display file name and size before upload
 - Show upload progress bar

Direct camera access:

- On mobile, show "Take Photo" button that:
- Opens device camera
 - Lets user take picture
 - Uploads directly without saving to device

Common Patterns

Image resizing: "After upload, automatically resize images to 800px width for display and 100px width for thumbnails. Store both versions."

File validation: "Check file type on both client and server. Reject files that aren't images with a helpful error message."

Upload progress: "Show a progress bar while files upload. Display percentage complete."

Delete functionality: "Add a delete button that removes the file from storage and updates the database URL to null."

Drag and drop: "Create a dropzone where users can drag files from their desktop instead of clicking a file input."

What AI Handles for You

Multipart upload handling File type validation Unique filename generation Public URL generation CORS configuration Bucket permissions

You describe: "Users can upload profile pictures" AI implements: Complete upload flow with preview and validation

Payments (Stripe Integration)

What It Is

Collecting money from users. Stripe is the industry standard for online payments - it handles credit cards, subscriptions, invoices, and compliance.

Common use cases:

- One-time purchases
- Monthly subscriptions
- Pay-per-use billing
- Marketplace commissions

When You Need It

You need payments if:

- You're charging money (obviously)
- Users buy products or services
- Subscription-based access
- Freemium with paid upgrades

You don't need payments if:

- Free product forever
- Monetizing through ads
- Not ready to charge yet

How to Describe It to AI

One-time payment:

Integrate Stripe for one-time payments:

- Add a "Buy Now" button (\$29 price)
- Open Stripe Checkout when clicked
- After successful payment, save purchase to database
- Grant user access to premium features
- Send confirmation email

Monthly subscription:

Set up Stripe subscriptions:

- Create a \$9/month subscription plan
- Show "Subscribe" button
- Handle Stripe Checkout
- Listen for Stripe webhooks
- Update user's subscription status in database
- Handle cancellations and failed payments

Usage-based billing:

Implement pay-per-use with Stripe:

- Track API calls per user in database
- Calculate bill at end of month
- Charge users based on usage tier
- Send invoice

Common Patterns

Free trial: "Offer 14-day free trial before charging. Capture card details but don't charge until trial ends. Send reminder email 3 days before charging."

Payment plans: "Let users choose between monthly (\$9) and annual (\$90, two months free). Show savings for annual plan."

Failed payment handling: "When payment fails, retry automatically 3 times. Email user after each failed attempt. Downgrade to free plan after 3 failures."

Upgrade/downgrade: "Let users upgrade from \$9/month to \$19/month plan. Prorate the difference and charge immediately."

Refunds: "Add admin interface to issue refunds. When refunded, downgrade user and send confirmation email."

What AI Handles for You

✓ Stripe API integration ✓ Checkout session creation ✓ Webhook signature verification ✓ Subscription lifecycle ✓
Payment intent handling ✓ PCI compliance setup

You describe: "Users pay \$29 to unlock features" AI implements: Complete Stripe integration with webhooks and database updates

Important Note

Start without payments. Get users first, add billing later. Many successful products launched free and added payments months later once they proved value.

Email (Sending Messages)

What It Is

Programmatically sending emails from your app. Used for notifications, updates, marketing, and transactional messages.

Common use cases:

- Welcome emails
- Password reset links
- Purchase confirmations
- Weekly digests
- Team invitations

When You Need It

You need email if:

- Users need notifications
- Onboarding flows
- Password resets
- Purchase confirmations
- Any off-app communication

You don't need email if:

- In-app notifications are enough
- No user accounts
- Early MVP stage

How to Describe It to AI

Transactional email (Resend recommended):

Set up Resend for transactional emails:

- Install Resend SDK
- Configure with API key
- Send welcome email when user signs up
- Include: greeting, what to do next, link to dashboard
- Use plain HTML template with good styling

Password reset email:

When user requests password reset:

- Generate secure reset token
- Store token with expiry in database
- Send email with reset link containing token
- Link goes to /reset-password?token=xyz page

Notification email:

When someone comments on user's post:

- Get post author's email from database
- Send notification email
- Include: commenter name, comment text, link to post
- Add unsubscribe link at bottom

Common Patterns

HTML templates: "Create reusable email templates with variables for user name, link URL, etc. Use inline CSS for styling."

Bulk emails: "Send weekly digest to all users with new features. Queue emails to avoid hitting rate limits. Track open rates."

Email verification: "Send verification email with 6-digit code on signup. User must enter code before accessing app."

Drip campaigns: "After signup, send day 1 welcome, day 3 tips, day 7 case study. Track which emails user has received."

Unsubscribe: "Add unsubscribe link to all marketing emails. Store preference in database. Don't send to unsubscribed users."

What AI Handles for You

SMTP configuration HTML email formatting Rate limiting Retry logic Error handling Template rendering

You describe: "Send welcome email when users sign up" AI implements: Complete email flow with proper formatting and error handling

Recommended Services

Transactional (automated emails):

- **Resend** - \$20/month, 50k emails, excellent DX
- **SendGrid** - Free tier: 100 emails/day
- **Postmark** - Pay per email, great deliverability

Marketing (newsletters):

- **ConvertKit** - \$29/month, designed for creators
- **Mailchimp** - Free tier: 500 contacts
- Keep it separate from app emails

Deployment (Going Live)

What It Is

Making your app accessible on the internet. Deployment platforms host your code, serve it to users, and handle scaling.

Key concepts:

- **Build**: Converting your code to optimized production files
- **Deploy**: Uploading to hosting platform
- **Environment**: Production vs development settings
- **Domain**: Custom URL (yourapp.com)

When You Need It

You deploy when:

- App is functional enough to test
- Ready for first users
- Want feedback from others
- Need a public URL

Don't wait for:

- Perfect features
- Beautiful design
- Zero bugs
- Complete functionality

Ship early, iterate publicly.

How to Describe It to AI

Initial Vercel deployment:

Deploy this Next.js app to Vercel:

- Connect my GitHub repository
- Set up environment variables
- Configure build settings
- Set up automatic deployments on git push

Custom domain:

Connect my custom domain (myapp.com) to Vercel:

- Add domain in Vercel settings
- Configure DNS records
- Set up SSL certificate
- Redirect www to non-www

Environment variables:

Set up different environment variables for production vs development:

- Use local database in development
- Use production database in production
- Keep API keys secure

Common Patterns

Preview deployments: "Every git branch gets its own preview URL. Test features before merging to main."

Rollback: "If deployment breaks something, roll back to previous version instantly."

Custom build commands: "Run database migrations before each deployment. Fail deployment if migrations fail."

Environment-specific behavior: "Use Stripe test mode in development, live mode in production. Show developer banner in staging."

Analytics: "Add Vercel Analytics to track pageviews, performance, and errors in production."

What AI Handles for You

Build configuration Optimization settings Cache configuration SSL certificates CDN setup Edge functions

You describe: "Deploy my app to production" AI implements: Complete deployment pipeline with best practices

Recommended Platforms

For Next.js/React:

- **Vercel** - Best for Next.js, free tier generous
- **Netlify** - Great for static sites
- **Cloudflare Pages** - Fast, global, generous free tier

For Python/Flask:

- **Railway** - Easiest Python deployment, \$5/month
- **Render** - Good free tier, easy setup

- **Fly.io** - Good for global deployment

For Databases:

- **Supabase** - Free tier: 500MB, 50k monthly users
 - **Railway** - Includes PostgreSQL, \$5/month
 - **PlanetScale** - Serverless MySQL, generous free tier
-

How These Pieces Work Together

Real apps combine these building blocks:

Example: Simple SaaS Tool

1. **Authentication** - Users sign up and log in
2. **Database** - Store user data and preferences
3. **File Uploads** - Let users upload CSVs to process
4. **Email** - Send welcome email and weekly reports
5. **Deployment** - Live on custom domain

Example: Marketplace

1. **Authentication** - Buyers and sellers have accounts
2. **Database** - Products, orders, reviews
3. **File Uploads** - Product images
4. **Payments** - Stripe for transactions
5. **Email** - Order confirmations, seller notifications
6. **Deployment** - Scaled to handle traffic

Example: Content Platform

1. **Authentication** - Writers create accounts
2. **Database** - Articles, comments, likes
3. **File Uploads** - Cover images, author photos
4. **Email** - New post notifications
5. **Deployment** - Fast global CDN

Notice the pattern: Most apps need 3-5 of these building blocks. You're not building something completely unique - you're arranging familiar pieces in a new way.

Quick Reference Card

Save this for when you're building:

"I need users to log in" → Authentication section "I need to save data" → Database section "Users upload images" → File Uploads section "I need to charge money" → Payments section "Send notifications" → Email section "Make it live" → Deployment section

Each section tells you exactly what to tell AI. Come back to this chapter whenever you need a specific feature.

What You Don't See Here

Some building blocks are more advanced and not needed for your first few projects:

Background jobs - Tasks that run periodically (we cover this in the Technical Playbook) **Real-time features** - Live chat, collaborative editing (advanced, we cover this in Technical Playbook) **Search** - Full-text search engines (start with simple database queries) **Analytics** - User behavior tracking (add after you have users) **Testing** - Automated tests (add after you ship)

Focus on the core six building blocks above. They'll get you 90% of the way to a shipped product.

Now let's talk about what happens when things don't work as expected.

Connect & Share

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Chapter 6: When Things Break

"Bugs are not failures. They're conversations with your code about what it needs."

The Most Important Lesson

Things will break. That's not a sign you're doing it wrong - it's a sign you're building.

Every developer, from beginners to 20-year veterans, spends significant time debugging. The difference is that experienced developers don't panic. They have a process.

As a vibe coder, your process is simpler: you describe the problem to AI, and AI fixes it. But knowing how to describe problems effectively is a skill worth developing.

The Debugging Mindset

What's Different for Vibe Coders

Traditional debugging:

1. Read error message
2. Find the line of code
3. Understand what the code is doing
4. Figure out why it's wrong
5. Fix the code

Vibe coding debugging:

1. Notice something's wrong
2. Describe what's happening vs what should happen
3. Copy any error messages
4. Ask AI what's wrong and how to fix it
5. Apply the fix

You don't need to understand the code. You just need to describe the symptoms accurately.

The Three Types of Breaks

- 1. Errors (something crashes)** Example: App shows error message, nothing loads
- 2. Wrong behavior (works but does wrong thing)** Example: Login button logs you out instead
- 3. Silent fails (should work but doesn't)** Example: Form submits but data doesn't save

Each needs a slightly different approach, but the core process is the same.

Reading Error Messages

Error messages look scary. They're not.

Anatomy of an Error

```
Unhandled Runtime Error
Error: Invalid `prisma.user.findUnique()` invocation:

  at PrismaClient.user.findUnique
  at Object.handler (/app/api/user/route.ts:12:34)
  at async eval (webpack-internal:///rsc./app/api/user/route.ts:12:34)
```

What this actually means:

- **First line:** Something crashed
- **Second line:** What went wrong (the important part)
- **Remaining lines:** Where it happened (less important for you)

What you care about: "Invalid prisma.user.findUnique() invocation"

Translation: The database query is wrong somehow.

How to Read Any Error

Look for these patterns:

"**Cannot read property X of undefined**" → Trying to access something that doesn't exist → Usually means missing data

"**Failed to fetch**" → Network request failed → Usually API endpoint wrong or server down

"**[Something] is not a function**" → Calling something that isn't callable → Usually wrong import or typo

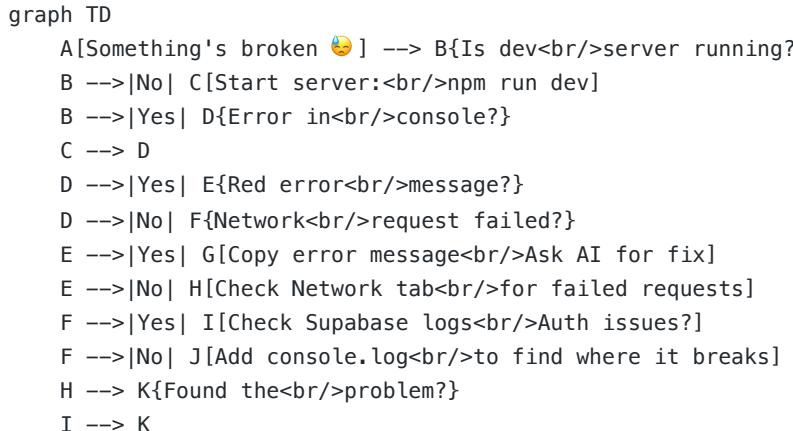
"**[Something] is required**" → Missing required parameter → Usually form validation or API call

"**Authentication required**" → User not logged in → Usually session expired or redirect issue

Don't memorize these. Just know: error messages tell you what's wrong in plain English (mostly). Copy them to AI.

The Debug Process

Debugging Decision Tree



```

J --> K
G --> L[Apply AI's fix]
K -->|Yes| L
K -->|No| M[Ask in<br/>Discord/Reddit]
L --> N{Fixed?}
N -->|Yes| O[ Ship it!]
N -->|No| P{Spent 2+<br/>hours?}
P -->|Yes| Q[Start fresh]
P -->|No| G

style A fill:#FFB6C1
style O fill:#90EE90
style Q fill:#FFE4B5

```

⚠️ Pro tip: If you're stuck for 2+ hours, starting fresh is often faster than debugging deeper.

Step 1: Notice the Problem

Be specific about what's broken:

Bad: "It's not working" Good: "When I click the submit button, nothing happens"

Bad: "The data is wrong" Good: "The dashboard shows 50 users but I only have 5"

Bad: "Login is broken" Good: "After I enter my password and click login, the page refreshes but I'm not logged in"

What you're doing: Creating a clear description of the symptom.

Step 2: Check the Obvious

Before diving deep, check these:

For "nothing happens":

- Is the dev server running? (Check terminal)
- Did you save the file? (Cmd+S)
- Did you refresh the browser? (Cmd+R)

For "data not saving":

- Are you logged in?
- Check browser Network tab - did the request go out?
- Check Supabase dashboard - is data there but not showing?

For "page not loading":

- Is the URL correct?
- Check browser console for errors (F12)
- Try in incognito mode (rules out extension issues)

30% of bugs are solved by: Save, refresh, restart server.

Step 3: Gather Information

Open browser DevTools (F12 or Cmd+Option+I)

Check Console tab:

- Red errors? Copy them.
- Warnings? Note them.
- Nothing? That's information too.

Check Network tab:

- Click "XHR" or "Fetch" filter
- Look for red (failed) requests
- Click on them to see why they failed

Check Supabase dashboard (if using):

- Go to Table Editor
- Check if data actually saved
- Go to Logs to see database queries

What you're doing: Collecting evidence about what's happening.

Step 4: Describe to AI

Open Cursor (or ChatGPT/Claude)

Use this template:

I'm trying to: [what you were doing]

Expected: [what should happen]

Actually happening: [what is happening]

Error message: [copy exact error if there is one]

What I've checked:

- [thing 1]
- [thing 2]

Relevant code: [paste the file that's probably related]

Example:

I'm trying to: Save a new bookmark when user clicks the submit button

Expected: Bookmark appears in the list below the form

Actually happening: Form submits but bookmark doesn't appear. No error shown.

Error message: In browser console I see:

"Failed to fetch POST http://localhost:3000/api/bookmarks"

What I've checked:

- I'm logged in
- The form fields have values
- Other API calls work fine

Relevant code: [paste components/BookmarkForm.tsx]

What AI does: Analyzes the symptoms, checks the code, identifies the issue, suggests a fix.

Step 5: Apply the Fix

AI will give you a solution. Usually it's one of:

"Replace this code with this new code" → Copy the new code, paste it in the file, save

"Add this new file" → Create the file, paste the content, save

"Change this environment variable" → Update `.env.local`, restart server

"Run this command" → Copy to terminal, press Enter

Then test it. Did it work?

- Yes → Great! Move on.
- No → Reply to AI with what happened, get next fix.

Common Issues & Quick Fixes

"Port already in use"

Symptom: Can't start dev server, says port 3000 in use

Fix in terminal:

```
# Kill whatever's using port 3000
kill $(lsof -t -i:3000)

# Then start your server again
npm run dev
```

"Module not found"

Symptom: Error says "Cannot find module '@/components/Something'"

Fix:

1. Check if file exists at that path
2. Check spelling (case-sensitive)
3. If it's a package: `npm install [package-name]`

"Environment variable undefined"

Symptom: Says "NEXT_PUBLIC_SUPABASE_URL is undefined"

Fix:

1. Check `.env.local` has the variable
2. Variable name matches exactly
3. Restart dev server (Ctrl+C, then `npm run dev`)
4. No quotes around values in `.env.local`

"Authentication error" / "Session expired"

Symptom: Logged out unexpectedly, can't access protected pages

Fix:

1. Clear cookies: DevTools → Application → Cookies → Delete all
2. Log out and log in again
3. Check Supabase dashboard → Authentication → Users

"Data not appearing"

Symptom: Save works but data doesn't show in list

Possibilities:

1. Data saved but fetch query is wrong → Check Supabase Table Editor
2. Data didn't save → Check browser Network tab for failed request
3. UI not updating → Check React state management in component

Debug: Add `console.log()` statements to see what data you're getting

"CSS not applying"

Symptom: Tailwind classes not working

Fix:

1. Check `tailwind.config.js` includes your files
2. Make sure dev server is running
3. Try a different class to verify Tailwind works
4. Check for typos in class names

Advanced Debugging Techniques

Using `console.log()`

This is your best friend for understanding what's happening.

Where to put them:

```
// Before database call
console.log("About to fetch bookmarks for user:", userId)

// After database call
console.log("Fetched bookmarks:", bookmarks)
```

```
// In event handler
console.log("Button clicked, form values:", formData)
```

What this does: Shows you what data exists at each step. Helps you find where things go wrong.

Remove them before deploying (or AI will do it for you).

Network Tab Deep Dive

Why it's useful: Shows all requests your app makes

How to read it:

1. Open DevTools → Network tab
2. Perform the action that's broken
3. Look for red (failed) requests

Click on a request to see:

- Request URL (is it correct?)
- Status code (200 = success, 404 = not found, 500 = server error)
- Response body (what error message came back?)

Common status codes:

- 200: Success
- 400: Bad request (you sent wrong data)
- 401: Not authenticated
- 403: Not authorized
- 404: Not found
- 500: Server error

Supabase Logs

When to check: Database-related issues

How:

1. Go to Supabase dashboard
2. Click "Logs" in sidebar
3. Filter to "Errors only"

Look for:

- Row Level Security blocks
- Invalid queries
- Missing columns
- Foreign key violations

When to Start Over vs When to Fix

Keep Fixing When:

- ✓ The error makes sense and AI can fix it ✓ You're learning something from the debugging ✓ It's been less than 30 minutes on this issue ✓ The fix is localized (one file, one feature)

Start Over When:

- ✗ Multiple cascading errors that keep appearing ✗ You've lost track of what changes you made ✗ AI gives contradictory advice ✗ It's been 2+ hours with no progress ✗ You've broken something fundamental

Starting over isn't failure. Sometimes the fastest path forward is:

1. Create new project
2. Copy over only the working parts
3. Rebuild the broken feature from scratch with better prompts

You'll know more the second time. Many experienced developers do this regularly - it's faster than untangling a mess.

Prevention Is Better Than Cure

How to Avoid Common Issues

Commit often:

```
git add .
git commit -m "Working bookmark save"
git push
```

Why: You can always go back to a working version.

Test incrementally: Don't build five features then test. Build one, test, commit. Build next, test, commit.

Use TypeScript: Catches many errors before you even run the code. AI writes TypeScript as easily as JavaScript.

Be specific with AI: "Add a bookmark save feature with validation" is better than "make bookmarks work"

Read AI's code before applying: Not the whole thing - just scan for anything obviously wrong. AI makes mistakes too.

Getting Unstuck

If AI Isn't Helping

Try a different prompt: Instead of "fix this error", try:

- "Explain what this error means in simple terms"
- "What are the 3 most likely causes of this?"
- "Show me how to debug this step by step"

Break it down: Instead of "why isn't authentication working", try:

- "Is the Supabase client configured correctly?"
- "Is the session being stored?"
- "Is the protected route checking auth?"

Start a new conversation: Sometimes AI gets confused by long threads. Start fresh with a clear problem statement.

If You're Completely Stuck

Options:

1. **Take a break** (seriously, step away for an hour)
2. **Google the exact error message** (someone else has had it)
3. **Check the library docs** (Supabase docs, Next.js docs)
4. **Ask in communities:**
 - r/webdev on Reddit
 - Supabase Discord
 - Next.js Discord

When asking:

- Be specific about what's wrong
- Include code snippet (use pastebin.com for longer code)
- Say what you've tried already
- Say what error message you're getting

People are helpful if you show you've tried to solve it yourself.

Learning from Breaks

Every bug teaches you something:

"**I forgot to restart the server after env changes**" → Now you know env changes need restart

"**I was missing await on the database call**" → Now you understand async operations matter

"**Row Level Security was blocking my query**" → Now you understand security policies

"**I was using user.id instead of user.uid**" → Now you know to check exact property names

Keep a "lessons learned" list. When you hit an issue twice, it's time to remember it.

Debugging Checklist

When something breaks, run through this:

- Is the dev server running?
- Did I save all files?
- Did I refresh the browser?
- Any red errors in console?
- Any failed requests in Network tab?
- Am I logged in (if needed)?
- Are environment variables set?
- Did I commit before breaking it?

If all checked:

- Copy error message
- Check what changed recently
- Ask AI with full context

If still stuck:

- Try incognito mode
 - Restart dev server
 - Clear browser cache
 - Start fresh conversation with AI
-

Real Examples

Example 1: Silent Form Failure

Problem: "Form submits but bookmark doesn't save"

Process:

1. Open Network tab
2. Submit form
3. See 401 error on POST request
4. Check response: "User not authenticated"
5. Test: Am I logged in? No.
6. Fix: Redirect to login page before showing form

Lesson: Silent fails often mean auth issues. Check that first.

Example 2: Data Shows Wrong

Problem: "Bookmarks showing but they're all the same"

Process:

1. Check database - data is correct
2. Add console.log to see what's being fetched
3. Console shows: correct data fetched
4. Add console.log to see what's being rendered
5. Console shows: Only using first item in loop
6. Tell AI: "I'm mapping over bookmarks array but all cards show the same data"
7. AI: "You're using bookmark[0] instead of bookmark in your map function"
8. Fix: Use correct variable

Lesson: When data exists but displays wrong, problem is in the UI logic.

Example 3: Mysterious Crashes

Problem: "App crashes when I click edit"

Process:

1. Console shows: "Cannot read property 'title' of undefined"
2. Tell AI: "Getting undefined error when editing bookmark"

3. AI asks: "Can you show me the edit function?"
4. Paste code
5. AI: "You're accessing bookmark before checking if it exists"
6. Fix: Add null check

Lesson: "Undefined" errors mean you're accessing data that doesn't exist yet.

The Psychology of Debugging

Frustration is normal. Even after 20 years, developers get frustrated debugging. You're not alone.

Breaks help. If you've been stuck for 30+ minutes, walk away. Solutions often appear when you stop thinking about them.

Document your wins. When you solve something tricky, write down what was wrong and how you fixed it. Future you will thank you.

Celebrate the fix. Debugging is problem-solving. Each fix is progress. Don't discount it just because "it should have worked the first time."

Remember: The goal isn't perfect code. The goal is shipped code. Bugs are temporary obstacles, not permanent failures.

When Something Works, Don't Question It

Developer instinct: "Wait, why did that work?" **Vibe coder instinct:** "Cool, it works! Moving on."

Both are valid. You don't need to understand every fix. If AI fixed it and it works, that's a win. You can always ask "why did that fix it?" later if you're curious.

Shipping beats understanding. Perfect understanding prevents shipping. Shipped products with some mystery are better than unshipped products you fully understand.

Now let's talk about what to do once you've shipped your first project.

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Chapter 7: How to Know It Actually Works

"You're not writing tests. You're being thorough."

The Reality

Al built your app. It works on your computer. But how do you know it'll work for everyone else?

You don't need unit tests or test-driven development. You need to be systematic about checking if things work before real users find the problems.

This chapter teaches you: How to catch obvious issues before launch, and build confidence that your app is ready.

The Three Testing Phases

Phase 1: Before You Deploy

Test locally. Catch the obvious stuff.

Phase 2: After You Deploy (Before Telling Anyone)

Test live. Make sure deployment didn't break anything.

Phase 3: When You Add Features

Test the new thing and make sure you didn't break the old things.

Phase 1: Before You Deploy

The Happy Path Test

What it is: Use your app exactly as you expect users to use it.

For the bookmark app:

1. Sign up with email/password
2. Add a bookmark
3. See it in your list
4. Search for it
5. Delete it
6. Log out

Do this 3 times. If something breaks on attempt 2 or 3, you found a bug.

The "What If I'm Dumb?" Test

What it is: Try to break things like a confused user would.

Try these:

- Leave fields empty, hit submit
- Type weird stuff (`<script>` , emoji, super long text)

- Click submit 10 times rapidly
- Hit back button randomly
- Refresh mid-action

Look for:

- Helpful error messages (not "Error 500")
 - App doesn't crash
 - Can't get "stuck" in a broken state
-

The Device Test

What it is: Test on different devices and screen sizes.

Minimum tests:

- Your phone (small screen)
- Your computer (large screen)
- Try both portrait and landscape on phone

Check:

- Can you see all the buttons?
 - Can you tap/click everything?
 - Does text overflow weirdly?
 - Are forms usable on mobile?
-

The Browser Test

What it is: Test in multiple browsers.

Test these:

- Chrome (most users)
- Safari (iPhone users)
- Firefox (privacy-conscious users)

Open incognito/private mode each time (clears cache and cookies).

The Slow Internet Test

What it is: See what happens when things take time.

How:

- Chrome DevTools → Network tab → Throttle to "Slow 3G"
- Do your happy path test again

Check:

- Do you see loading states?
 - Does anything feel "broken" because it's slow?
 - Are there helpful messages while waiting?
-

Phase 2: After You Deploy

You deployed to Vercel/Netlify. Before you tell anyone:

The Deployment Check

Visit your live URL. Test again:

- Sign up with a NEW email (test email sending)
- Do the happy path test
- Try a few "dumb user" tests

Why this matters: Environment variables might be wrong. Database might not be connected. Email might not send. Things that work locally can fail in production.

The Fresh Eyes Test

Ask 1-2 friends to try it. Don't tell them how to use it.

Watch them:

- Where do they get confused?
- What do they click that doesn't work?
- What do they expect that isn't there?

Take notes. Users will try things you never imagined.

The Real Device Test

Test on actual devices, not just Chrome's device simulator:

- Your phone
- Friend's Android phone (if you have iPhone)
- Tablet if you have one

Simulators lie. Real devices show real problems.

Phase 3: When You Add Features

Every time you add something new:

The New Feature Test

1. **Test the new feature** thoroughly
2. **Test the old features** to make sure you didn't break them

Example: You added "export bookmarks to CSV"

Test the new thing:

- Export with 1 bookmark
- Export with 100 bookmarks
- Export with 0 bookmarks
- Does the file download?

- Can you open it in Excel/Google Sheets?

Test the old things:

- Can you still add bookmarks?
- Can you still delete bookmarks?
- Does search still work?

AI makes changes across multiple files. It might break something you didn't expect.

Common Problems You'll Catch

Forms That Don't Validate

- Submit empty fields
- Paste 10,000 characters in a field
- Use special characters

Broken Navigation

- Click back button
- Type URL directly
- Try to access pages you shouldn't

State Management Issues

- Do the same action twice
- Refresh in the middle of something
- Open app in two tabs

Mobile Issues

- Buttons too small to tap
- Text overlaps
- Keyboard covers input fields
- Can't scroll properly

Loading State Problems

- No indication something is happening
 - Looks broken when it's just slow
 - Can click buttons while loading (creates duplicates)
-

Tools That Help

Chrome DevTools (Free)

Console tab: Shows errors in red. Copy them, paste to AI, say "fix this"

Network tab: Shows what requests are happening. Useful for seeing if API calls fail

Device simulation: Test different screen sizes without multiple devices

How to open: Right click anywhere → "Inspect"

Actual Phones

Nothing beats real devices. Test on actual phones. Borrow friends' phones if needed.

iOS vs Android: They behave differently. Test both if possible.

When to Stop Testing

You'll never catch everything. Real users will always find something.

Ship when:

- Happy path works reliably
- Major "dumb user" scenarios don't crash
- Works on your phone and computer
- 1-2 friends tested it successfully

Don't wait for:

- Every possible edge case
- Perfect mobile experience
- Zero bugs

Perfect is the enemy of shipped.

What Happens When Users Find Bugs

They will. Here's how to handle it:

1. Thank Them

"Thanks for reporting this! I'm looking into it."

2. Reproduce It

Ask them exactly what they did. Try to make it happen on your end.

3. Fix It

Copy the error, paste to AI, describe what happened, let AI fix it.

4. Deploy the Fix

Push to GitHub, Vercel auto-deploys. Usually live in 2-3 minutes.

5. Tell Them It's Fixed

"Just deployed a fix, should work now. Let me know if you still see issues!"

Users respect builders who fix things fast more than builders who ship perfect products late.

The Testing Mindset

You're Not Writing Tests

You're **clicking around systematically** to catch obvious problems.

You're Not Paranoid

You're **thorough**. There's a difference.

You're Not Trying to Be Perfect

You're trying to **ship with confidence**.

Checklist for Every App You Build

Print this. Keep it by your computer.

Before Deploy:

- Happy path works (3 times)
- Empty form fields handled
- Works on my phone
- Works in Chrome, Safari, Firefox
- Tested with slow internet

After Deploy:

- Works at live URL
- New signup works (email sends)
- 1-2 friends tested it
- Tested on real phone

Adding Features:

- New feature works
 - Old features still work
 - Tested on phone
 - Deployed and checked live
-

The Reality Check

Your first app will have **bugs**. So will your tenth app. Professional developers ship bugs all the time.

The difference: You caught the obvious ones. You tested systematically. You're confident the main flows work.

That's enough to ship.

Testing isn't about perfection. It's about **catching the stuff that would embarrass you** before users see it.

Next Steps

- Build your next feature
- Test it with this checklist
- Ship it
- Fix bugs as users report them
- Learn what breaks and why

The more you build, the better you get at knowing what to test.

This is learned through doing, not through reading. Go test something.

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Chapter 8: What's Next

"You've learned to build. Now learn to ship consistently."

What You've Accomplished

Let's take a moment to appreciate how far you've come.

You went from "I can't code" **to** "I built and deployed a web application."

You learned:

- How apps are structured (front-end, back-end, database)
- How to choose your tech stack
- How to set up authentication
- How to work with databases
- How to deploy to production
- How to debug when things break

You built:

- A real application with user accounts
- Database integration
- Multiple features working together
- Something live on the internet

Most importantly: You proved you don't need to learn traditional programming to build real products.

This isn't just a tutorial you completed. This is evidence that you can build. That's a different identity. You're now someone who ships.

The Path Forward

You have three options from here:

Option 1: Build Your Next Project

If you have a product idea, build it. You know enough now. Use the same process:

1. Describe what you want to AI
2. Build incrementally
3. Test as you go
4. Deploy early
5. Iterate based on feedback

Start simple:

- One core feature that solves a real problem
- Basic authentication if needed
- Simple UI (polish comes later)
- Deploy as soon as it does anything useful

Common second projects:

- Internal tool for your current job
- Side project to solve your own problem
- Freelance client project
- Productized service

Timeline: 2-4 weeks to first version

Option 2: Deepen Your Skills

If you want to get better before starting your own project, build variations:

Different app types:

- Build a blog with comments (content-focused)
- Build a task manager (CRUD operations)
- Build a link-in-bio tool (simple but useful)
- Build a form builder (meta: build a tool to build tools)

Add new features:

- Add payments to your bookmark app (monetize it)
- Add collaboration (invite others to your workspace)
- Add API (let others integrate with your app)
- Add mobile responsiveness (works great on phones)

Learn new stacks:

- Try Flask instead of Next.js (Python lovers)
- Try mobile with React Native
- Try Chrome extension with the same skills

Timeline: 1-2 weeks per project

Option 3: Ship Something Today

If you want to prove you can ship fast, build micro-products:

One-page tools:

- Calculator for your industry
- Unit converter
- Form generator
- Simple game

Landing pages:

- For your newsletter
- For your services
- For a product idea (before building it)
- Template you can sell

Timeline: 4-8 hours

Why this matters: Shipping builds muscle memory. The more you ship, the easier shipping becomes.

Ready for Production-Grade Builds?

This free guide taught you the fundamentals: how to build, deploy, and ship your first app using AI.

But what about building complex, production-ready applications?

The kind that:

- Handle thousands of users
- Integrate multiple APIs (OpenAI, Stripe, email services)
- Need proper error handling and edge cases
- Require systematic architecture planning
- Demand quality control at every phase

That's where the advanced methodology comes in.

The 7-Phase Build Flow

When you're building real products with paying customers, you need more than "describe and hope." You need a systematic approach that prevents:

- Scope creep (AI adding features you didn't ask for)
- Architecture mistakes (building on shaky foundations)
- Integration failures (APIs that don't play nice)
- Quality gaps (things that work in dev but break in production)

The 7-Phase Build Flow methodology is the system I use to build production applications:

Phase 0: State the Goal - Get AI to internalize your complete product vision

Phase 1: Requirements Clarification - AI asks targeted questions to eliminate all ambiguity

Phase 2: Architecture Lock - Confirm exact tech stack, data flow, and system design before any code

Phase 3: Phase Breakdown - Break complex builds into 3-7 clean, testable phases

Phase 4-6: Systematic Execution - Each phase includes kickoff, clarification, high-level design, then coding

Phase 7: Integration Check - Catch gaps and inconsistencies before deployment

Example project: AI Daily Digest - an AI-powered RSS aggregator that fetches articles from multiple feeds, summarizes each with OpenAI, auto-categorizes content, stores everything in Supabase, and displays in a dashboard. Plus UI for adding feeds and refreshing on demand.

That's production-level complexity. The 7-phase methodology makes it manageable.

The Production Playbook

A comprehensive playbook for builders who completed this free guide and want to ship production-grade AI products:

What's included:

- Complete 7-Phase Build Flow methodology with templates
- AI Daily Digest full walkthrough (with all the prompts)
- Advanced prompting techniques for complex builds
- Error handling and edge case patterns

- Production deployment checklists
- Battle-tested code templates
- Real examples from shipped products

Who it's for: Builders who finished this guide and want to ship apps with paying customers, not just portfolio projects.

Price: \$29-49 (pricing for newsletter subscribers)

Learn more at buildtolaunch.substack.com

Join the Build to Launch Community

You're not learning in isolation.

The **Build to Launch newsletter** is where non-technical builders share what they're shipping, what they're stuck on, and what they're learning.

What you'll get:

Weekly:

- New AI building techniques
- Real builder case studies
- Common patterns and solutions
- Tool recommendations
- Framework comparisons

Monthly:

- Deep-dive tutorials
- Expert interviews
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Plus access to:

- Monthly office hours with me
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Why this matters: Building alone is hard. Building with a community of people who understand your journey is energizing.

Subscribe at: buildtolaunch.substack.com

Free tier: Weekly tips and case studies **Premium tier:** \$90/year - Everything plus templates, community, office hours

Ideas for Your Next Build

Stuck on what to build? Here are proven ideas that solve real problems:

For Your Current Job

Internal tools are the best first projects because:

- You know the problem deeply
- You have immediate users
- Feedback is instant
- Can prove value to your employer

Examples:

- Report generator (save 2 hours/week)
- Data dashboard (visualize KPIs)
- Form automation (reduce manual work)
- Booking system (replace spreadsheets)
- Knowledge base (organize team docs)

Start Monday: Identify one task you do manually that takes 30+ minutes per week.

For A Specific Audience

Vertical SaaS - tools for specific industries:

- CRM for real estate agents
- Booking system for yoga studios
- Menu planner for dietitians
- Case tracker for lawyers
- Gig tracker for musicians

Why these work: Generic tools are too broad. Specific tools win specific audiences.

Micro-SaaS

Small, focused tools that do one thing well:

- Email signature generator
- Screenshot beautifier
- Social media scheduler
- Link tracker
- Invoice generator

Why these work: Solve a specific pain point. Can charge \$5-20/month. Grow organically.

Content Tools

Tools for creators:

- Newsletter archive (like you built)
- Podcast transcript search
- YouTube video summarizer
- Twitter thread compiler
- Blog post generator

Why these work: Creators pay for tools that save time or improve content.

Personal Productivity

Tools you'd use:

- Habit tracker
- Reading list manager
- Recipe organizer
- Expense tracker
- Learning journal

Why these work: If you'd pay for it, others will too.

The Builder's Framework

Here's the process I use for every project:

Week 1: Validate

Before building anything:

1. Talk to 5 people in target audience
2. Describe the problem (not the solution)
3. Ask: "How do you handle this now?"
4. Ask: "Would you pay \$X to solve this?"
5. Document their exact words

Red flag: People say "cool idea" but won't pay **Green light:** People say "where do I sign up?"

Week 2: Build MVP

Absolute minimum features:

- One core workflow
- Basic UI (ugly is fine)
- Manual onboarding (you email them login)
- No billing (pay later)

Ship it to those 5 people from week 1.

Week 3: Learn

Watch them use it:

- Where do they get confused?
- What features do they ask for?
- What do they use most?
- What do they ignore?

Iterate based on behavior, not opinions.

Week 4: Polish

Now make it good:

- Fix the confusing parts
- Add the requested features
- Polish the UI
- Set up billing
- Write real landing page

Launch to more people.

Ongoing: Grow

Focus on:

- One acquisition channel at a time
- Talk to every user who cancels
- Build what people pay for
- Ignore feature requests from non-payers

This framework works because you don't waste time building things nobody wants.

Shipping Consistently

The difference between people who build once and people who build careers is consistency.

How to Ship Every Week

Sunday: Brainstorm ideas (30 min) **Monday:** Pick one, validate with 3 people (1 hour) **Tuesday-Thursday:** Build core feature (3-4 hours each) **Friday:** Deploy and share (2 hours) **Saturday:** Rest or respond to feedback

That's 12-15 hours per week to ship something new.

Can't do weekly? Ship monthly. Consistency matters more than frequency.

How to Get Faster

First project: 40 hours (this guide) **Second project:** 25 hours (same patterns) **Third project:** 15 hours (reuse code)
Fourth project: 10 hours (templates ready) **Fifth project:** 6 hours (mostly assembly)

Speed comes from: Recognizing patterns, reusing solutions, having templates, making fewer mistakes.

By project 10, you'll ship substantial apps in a weekend.

Common Fears (And Why They're Wrong)

"My idea isn't original"

Good. Unoriginal ideas have proven demand. You're not trying to invent Facebook. You're solving a real problem for a specific group of people.

Every successful product has 10+ competitors. They still succeed because execution and positioning matter more than originality.

"I don't know if people will pay"

Find out fast. Build a landing page, write the copy, add a "Join Waitlist" button. Share it. If nobody signs up, don't build it. If people do, you have validation.

Money talks. Excitement is free. Paying customers are real.

"What if it doesn't work?"

Then you learned something. Every failed project teaches you:

- What people actually want
- How to build faster next time
- What tech stack works for you
- How to ship despite fear

Successful builders have 10x more failed projects than successful ones. The winners are just the ones who kept building.

"Real developers will judge my code"

Real developers are too busy building. The ones who judge aren't building anything worth judging.

Also: AI writes better code than most developers anyway. Your code quality is fine.

"I should learn 'proper' programming first"

No. That's just fear disguised as professionalism. You'll learn programming concepts through building. That's how everyone actually learns - the tutorials are theater.

Start building today. Learn what you need when you need it.

Resources You Might Need

Learning Resources

This guide - Foundation **Next.js Docs** - When you need specific Next.js info (nextjs.org/docs) **Supabase Docs** - When you need database help (supabase.com/docs) **Tailwind Docs** - When you need specific styling (tailwindcss.com/docs)

Communities

r/SideProject - Share what you're building **Indie Hackers** - Founders building in public **Next.js Discord** - Technical Next.js help **Supabase Discord** - Database and auth help

Tools

Claude Pro - \$20/month, best AI for building **Cursor** - \$20/month, AI-powered code editor **Supabase** - Free tier, upgrade at \$25/month **Vercel** - Free tier, rarely need to upgrade **Stripe** - Free, pay 2.9% + \$0.30 per transaction

Total monthly cost to build: \$40 **Total monthly cost** to run: \$0 (until you have users)

Inspiration

Follow builders shipping:

- @levelsio - Location independence, building in public

- @stephsmithio - From writing to building
- @dannypostmaa - Designer who builds
- @buildtolaunch - Me! Domain experts → builders

The best way to learn is watching others build and ship.

My Challenge to You

Build and deploy something in the next 7 days.

It doesn't have to be big. It doesn't have to be original. It doesn't have to be perfect.

It just has to be **shipped**.

Ideas:

- A calculator for your industry
- A simple form that emails you results
- A landing page for something you might build
- A tool you'd use yourself
- A one-page game

7 days from now, you should be able to share a link that shows something you built.

Why? Because you'll prove to yourself that you can ship. And once you know you can ship, everything changes.

Final Thoughts

You picked up this guide because you had an idea but thought "I can't code."

Now you know: You don't need to code. You need to describe what you want and let AI translate that into code.

This changes everything:

- Teachers can build classroom tools
- Consultants can build internal tools for clients
- Marketers can build landing pages without developers
- Designers can build their designs without handoff
- Anyone with domain expertise can build for their industry

The barrier isn't technical anymore. The barrier is deciding to start.

You've proven you can build. You built something real, deployed it, and learned the fundamentals.

What you do next is up to you.

You can:

- Build your idea
- Build for your job
- Build to learn
- Build to earn
- Build because it's fun

All of these are valid. The only invalid choice is not building because you "can't code."

You can build.

Go ship something.

One Last Thing

Building can feel lonely. You'll have days where nothing works, where you question if this is worth it, where you want to quit.

Those days are normal. Every builder has them.

What separates people who ship from people who don't isn't talent or intelligence or even persistence. It's community.

Join us: buildtolaunch.substack.com

Share what you're building. Ask for help when you're stuck. Celebrate your wins. Learn from others.

Building is more fun together.

I'm excited to see what you create.

— Jenny

Quick Links

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Keep Building

Remember:

Vibe coding isn't about writing perfect code. It's about shipping real products.

You're not a "non-technical person trying to code." You're a builder using modern tools.

The goal isn't to become a developer. The goal is to build products that matter.

Start today. Ship this week. Repeat next week.

Welcome to the community of builders.

Now go build something.

 **Subscribe at buildtolaunch.substack.com for weekly building tips, real builder stories, and exclusive templates**

Acknowledgments

This guide wouldn't exist without:

The vibe coding community - For showing that domain expertise + AI > traditional programming

The builders who ship - For proving this works and sharing your journey

AI tools that enable us - Claude, ChatGPT, Cursor, and everyone pushing the boundaries

You - For taking the leap and proving you can build

Thank you for reading. Now go ship.

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Glossary: Vibe Coding Terms

Your non-jargon guide to technical terms. No condescension, just clarity.

A

API (Application Programming Interface) The waiter in the restaurant analogy. It's the communication system that carries messages between different parts of your app - like taking an order from the front-end to the kitchen (back-end), and bringing back the results.

Example: When you click "Save Post" on Instagram, an API carries that post to Instagram's servers and brings back a confirmation.

Authentication (Auth) The bouncer at the door of your app. It's the system that lets users create accounts, prove who they are (log in), and stay recognized as they use your app.

Example: When you log into Netflix and it remembers you're watching Season 2 of that show - that's authentication working.

Avatar A profile picture or image that represents a user. Usually small, square, and shows up next to their name throughout the app.

Example: The circular photo next to your name in Gmail.

B

Back-End The kitchen in the restaurant analogy. It's where the real work happens behind the scenes - processing data, making decisions, talking to the database, and handling all the logic users never see.

Example: When you submit a login form, the back-end checks if your password is correct and decides whether to let you in.

bcrypt A security tool that scrambles passwords into unreadable text before storing them. You'll never touch it directly - AI handles this automatically when you say "users should have secure login."

*Example: It turns "MyPassword123" into something like
"\$2a\$10\$N9qo8uLOickgx2ZMRZoMyeljZAgcfI7p92ldGxad68LJZdL17lhWy"*

Blob Storage / Object Storage A digital warehouse where files (images, PDFs, videos) are stored. Different from a database - this is specifically for files, not structured data like names or numbers.

Example: All the photos you upload to your app live in blob storage, while your account name lives in the database.

Build The process of converting your human-readable code into optimized files that browsers and servers can run super fast. Like translating a recipe into restaurant kitchen shorthand.

Example: Your Next.js code gets "built" into static files and optimized JavaScript before going live.

Bug When something in your app doesn't work the way you intended. Could be a button that doesn't click, data that doesn't save, or any unexpected behavior.

Example: "There's a bug where the profile picture won't upload" means that feature is broken.

C

CDN (Content Delivery Network) A network of servers around the world that store copies of your website. When someone visits from Tokyo, they get the version from a Tokyo server instead of waiting for data from a US server.

Example: Like having franchise locations of your restaurant in every major city instead of making everyone fly to the original location.

Claude An AI assistant made by Anthropic that can understand your requests, write code, help you debug, and explain technical concepts. Think of it as your co-developer who never sleeps.

Example: You tell Claude "I need users to be able to save bookmarks" and it generates all the code to make that happen.

Column A single category of information in a database table. Think of it like a column in a spreadsheet - one column for names, another for emails, another for signup dates.

Example: In a "users" table, you might have columns for email, password, name, and signup_date.

CORS (Cross-Origin Resource Sharing) Security rules that control which websites can talk to your app's back-end. AI handles this automatically - you just need to know it exists in case you see the error.

Example: Without CORS setup, your app at myapp.com couldn't request data from api.myapp.com.

Cursor An AI-powered code editor that lets you write natural language requests and generates code across your entire project. Like VS Code with a brain.

Example: You can highlight code and type "make this mobile-friendly" and Cursor rewrites it.

CSS (Cascading Style Sheets) The styling language that makes websites look good - colors, fonts, layouts, animations. With Tailwind (see below), you rarely write CSS directly.

Example: CSS is what makes a button blue with rounded corners instead of a boring gray rectangle.

D

Database The pantry in the restaurant analogy. It's where all your app's data lives permanently - user accounts, posts, comments, settings, everything that needs to be remembered.

Example: When you save a bookmark, it goes into a database so it's still there when you come back tomorrow.

Deploy / Deployment The act of taking your app from your computer and putting it live on the internet where other people can actually use it. Like opening your restaurant to the public.

Example: "I deployed to Vercel" means your app is now live at a real URL that anyone can visit.

Domain Your app's address on the internet, like myapp.com. You buy these from domain registrars like Namecheap for about \$12/year.

Example: "buildtolaunch.com" is the domain for Jenny's newsletter.

Drip Campaign A series of automated emails sent over time, usually for onboarding or nurturing users. Day 1: welcome. Day 3: tips. Day 7: case study.

Example: When you sign up for a newsletter and receive a carefully timed series of emails introducing the topic.

E

Environment Variable Secret information your app needs but shouldn't be visible in code - like API keys, database passwords, or Stripe secret keys. Stored separately and securely.

Example: Your Stripe secret key is stored as an environment variable so it's not visible in your code on GitHub.

Edge Function Code that runs on servers close to your users geographically, making your app faster. Vercel and other platforms handle this automatically.

Example: A user in Australia gets their data from a server in Sydney, not from a server in California.

F

Flask A lightweight Python framework for building web applications. Popular for data-heavy apps because Python has powerful data processing libraries.

Example: If you're building a data analysis tool and already know Python, Flask is a good choice for the back-end.

Foreign Key A reference in one database table that points to data in another table. This is how you create relationships between data.

Example: In a "posts" table, the user_id column is a foreign key that points to the user who wrote that post.

Framework A pre-built foundation for building apps. Instead of building everything from scratch, you build on top of a framework that already solves common problems.

Example: Next.js is a framework that gives you routing, optimization, and deployment tools out of the box.

Front-End The dining room in the restaurant analogy. It's everything users see and interact with - buttons, forms, images, text, navigation. The visual part of your app.

Example: The login screen with email and password fields is the front-end. What happens when you click submit is the back-end.

G

Git A version control system that tracks every change you make to your code. Like "Track Changes" in Microsoft Word but for code. Lets you undo anything and collaborate with others.

Example: You make changes, use git to save a snapshot with a message like "Added login feature", and can always go back to that version.

GitHub A website where you store your code online using Git. Think of it as Google Drive for code, with collaboration features.

Example: You push your code to GitHub, and then Vercel automatically deploys it whenever you update it.

Google OAuth The "Sign in with Google" button. OAuth is the secure process that lets users log into your app using their Google account without you ever seeing their Google password.

Example: "Sign in with Google" where you click, approve access, and you're logged in - that's OAuth.

H

Hash / Hashing A security process that turns passwords into scrambled text that can't be unscrambled. One-way encryption. You never need to implement this - AI does it automatically.

Example: Your password "hello123" gets hashed to "8b1a9953c4611296a827abf8c47804d7" before being stored.

Hosting Platform A service that keeps your app running on the internet 24/7. You deploy your code to them, they handle the servers, scaling, and uptime.

Example: Vercel, Netlify, and Railway are hosting platforms. You push code, they make it accessible at a URL.

HTML (Hypertext Markup Language) The basic structure language of websites. With modern frameworks like Next.js, you rarely write raw HTML - you write React components instead.

Example: <button>Click me</button> is HTML that creates a button.

I

Index / Indexing A database optimization that makes searches faster. Like the index in the back of a book - instead of reading every page to find something, you can look it up directly.

Example: If you search users by email frequently, the database creates an index on the email column to speed up those searches.

Integration Connecting your app to external services like Stripe for payments, SendGrid for emails, or Google for authentication.

Example: "Integrating Stripe" means adding code that communicates with Stripe's system to process payments.

J

JavaScript The programming language of web browsers. Most modern web apps are built with JavaScript or frameworks that use it. AI writes JavaScript for you - you just describe what you want.

Example: When you click a button and see something change on the page without reloading, that's JavaScript in action.

JWT (JSON Web Token) A secure way to keep users logged in by giving them a token their browser sends with each request. You never implement this manually - AI does it when you set up authentication.

Example: After you log in, your browser gets a JWT token it shows the server to prove "I'm still this user" on each page.

L

Landing Page A standalone web page designed for a specific purpose - usually marketing, signups, or product launches. Often the first page people see.

Example: A simple page with "My New App" headline, features list, and "Sign Up" button.

Load Balancing Distributing incoming traffic across multiple servers so no single server gets overwhelmed. Hosting platforms like Vercel handle this automatically.

Example: On Black Friday when everyone visits your store at once, load balancing splits visitors across multiple servers.

M

Markdown A simple way to write formatted text using plain text characters. Used for documentation, blog posts, and comments.

*Example: `**bold**` becomes **bold**, `*italic*` becomes italic. Much simpler than HTML.*

MDX Markdown with the ability to include interactive components. Used for rich blog posts and documentation that have more than just text.

Example: A blog post written in Markdown that includes a live calculator component.

Migration (Database) A script that changes your database structure - adding new columns, creating tables, or modifying relationships. Think of it as renovation instructions for your database.

Example: You realize users need a "bio" field, so you create a migration that adds a bio column to the users table.

MVP (Minimum Viable Product) The simplest version of your product that solves the core problem and can be tested with real users. Not feature-complete, just barely functional enough to be valuable.

Example: Instagram's MVP was just photo sharing with filters - no stories, reels, or messaging.

N

Netlify A hosting platform great for static websites and simple web apps. Free tier is generous. Similar to Vercel but originally focused on static sites.

Example: You push your portfolio site to GitHub, Netlify automatically deploys it and gives you a URL.

Next.js A modern React framework that makes building full-stack web apps easier. It handles routing, optimization, server-side rendering, and API routes. Recommended for Path 2 in this guide.

Example: Instead of setting up routing manually, Next.js automatically creates routes based on your file structure.

Node.js JavaScript that runs on servers (back-end) instead of just browsers (front-end). Lets you use JavaScript for your entire app.

Example: Your Next.js back-end runs on Node.js, even though you're just writing JavaScript.

O

OAuth A secure protocol for logging in with existing accounts like Google, GitHub, or Facebook. You never implement OAuth from scratch - services like Supabase handle it.

Example: "Sign in with GitHub" - you're redirected to GitHub, approve access, and return to the app logged in.

ORM (Object-Relational Mapping) A tool that lets you work with databases using code instead of writing SQL. Makes database operations feel more natural.

*Example: Instead of writing SQL like `SELECT * FROM users WHERE email = ?`, you write `users.find({ email: 'test@example.com' })`.*

P

Pagination Loading data in chunks instead of all at once. Like showing 20 results per page instead of 10,000 results that crash the browser.

Example: Google search shows 10 results per page with "Next" button - that's pagination.

PCI Compliance Security standards for handling credit card information. You never worry about this because Stripe handles all credit card data for you.

Example: By using Stripe Checkout, you're automatically PCI compliant because cards never touch your servers.

PostgreSQL A powerful, industry-standard database. This is what Supabase uses. Pronounced "post-gres-Q-L" or just "postgres."

Example: Your user data, posts, and comments all live in a PostgreSQL database.

Preview Deployment A temporary version of your app that gets created for each code change before it goes live. Let you test features before launching.

Example: You create a new feature on a branch, and Vercel gives you a preview URL to test it before merging to production.

Production The live, real version of your app that actual users are using. As opposed to "development" which is you testing on your computer.

Example: "The bug is in production" means real users are experiencing it right now on the live site.

Prompt The instructions you give to AI. In vibe coding, prompts describe what you want your app to do.

Example: "Create a sign-up form with email, password, and password confirmation" is a prompt for AI.

R

Railway A hosting platform that makes deploying Python apps and databases super easy. Good for Flask apps and PostgreSQL databases.

Example: You connect your GitHub repo to Railway, and it automatically deploys your Flask app and sets up a database.

React A JavaScript library for building user interfaces. Next.js is built on React. You describe what the UI should look like, React handles updating it.

Example: When data changes, React automatically updates the parts of the page that need to change without reloading.

Real-Time Features that update instantly without refreshing the page. Like seeing new messages appear in a chat as soon as someone sends them.

Example: Google Docs where you see other people's changes appear live as they type.

Render A hosting platform similar to Railway and Vercel. Good free tier for small projects.

Example: You can deploy a Flask back-end and PostgreSQL database on Render's free tier.

Resend An email service designed for developers. Makes sending transactional emails (welcome, password reset, notifications) very easy.

Example: When a user signs up, Resend sends them a welcome email from your app.

Responsive Design that adapts to different screen sizes - desktop, tablet, phone. A responsive site looks good on all devices.

Example: The navigation menu shows as a full bar on desktop but becomes a hamburger icon on phones.

REST API A standard way for front-end and back-end to communicate using HTTP requests. The most common API style.

Example: Your front-end sends a GET request to `/api/posts` and receives a list of posts as JSON.

Rollback Reverting to a previous version of your app when something breaks. Like undo for deployments.

Example: You deploy a new feature but it breaks login, so you rollback to the previous version in 30 seconds.

Route / Routing The system that determines what page shows up based on the URL. `/login` shows the login page, `/dashboard` shows the dashboard.

Example: In Next.js, creating a file at `app/about/page.js` automatically creates the `/about` route.

Row A single item in a database table. One row = one user, or one post, or one comment.

Example: In the users table, each row represents one person's account information.

S

SaaS (Software as a Service) Software you access through a web browser by paying a subscription. Like Netflix for business tools.

Example: Gmail, Notion, and Slack are SaaS products - you pay monthly and access them online.

Scaling Your app handling more users and traffic without slowing down or crashing. Good hosting platforms scale automatically.

Example: Your app works great with 100 users. Scaling means it still works great with 10,000 users.

Server A computer that runs your back-end code and responds to user requests. Hosting platforms manage servers for you.

Example: When you visit a website, your browser talks to a server that sends back the webpage.

Session The period of time a user is logged in. Sessions remember who you are as you navigate through an app.

Example: You log in once, and your session keeps you logged in as you click around for the next hour.

shadcn/ui A collection of pre-built UI components you can copy and paste into your app. Beautiful, accessible, and customizable.

Example: Instead of building a dropdown menu from scratch, you copy shadcn's dropdown component and adjust the styling.

Soft Delete Marking data as deleted without actually removing it from the database. Lets users undo deletions.

Example: Gmail's trash - emails are "deleted" but still exist for 30 days in case you want them back.

SQL (Structured Query Language) The language for talking to databases. With AI and modern tools like Supabase, you rarely write raw SQL.

*Example: `SELECT * FROM users WHERE email = 'test@test.com'` is SQL that finds a user by email.*

SSL Certificate What makes your website use "https" instead of "http" - it encrypts data between users and your site. Hosting platforms provide this automatically for free.

Example: The lock icon in your browser's address bar means SSL is working.

Stack The combination of technologies you use to build your app. "Next.js + Supabase + Vercel" is a stack.

Example: "What's your stack?" means "What tools/frameworks are you building with?"

Static Site A website where the content is the same for everyone. No personalization, no user accounts, no database. Fast and simple.

Example: A portfolio website or blog where every visitor sees the same pages.

Stripe The most popular payment processing service. Handles credit cards, subscriptions, invoices, and all payment complexity.

Example: When you buy something online and enter your card info in a Stripe checkout page.

Subscription A recurring payment model - users pay monthly or annually to keep access. Handled by Stripe.

Example: Netflix charges \$15/month - that's a subscription.

Supabase An open-source Firebase alternative that gives you a PostgreSQL database, authentication, file storage, and real-time features in one service. Generous free tier.

Example: Instead of setting up separate services for database, auth, and storage, Supabase handles all three.

T

Table A collection of similar data in a database. Like a spreadsheet tab. You have a users table, posts table, comments table, etc.

Example: The "users" table stores all user accounts, with one row per user.

Tailwind CSS A CSS framework that works with utility classes. Instead of writing custom CSS, you apply classes like `bg-blue-500` and `text-center`.

Example: `<button className="bg-blue-500 text-white px-4 py-2 rounded">Click me</button>` creates a styled blue button.

Token A random string used to identify or verify something - like a login session or password reset request.

Example: When you reset your password, the link contains a token like `?token=a8b9c7d6e5f4` that identifies your reset request.

Transactional Email Automated emails triggered by user actions - welcome emails, password resets, purchase confirmations. Different from marketing emails.

Example: When you sign up for a service and immediately get a "Welcome!" email.

TypeScript JavaScript with type safety - the code knows what kind of data each variable should hold. Helps catch bugs but adds complexity. Optional for beginners.

Example: In TypeScript you declare that `age` must be a number, so it yells at you if you try to store text in it.

U

UI (User Interface) Everything users see and interact with. Buttons, forms, menus, text - the visual design of your app.

Example: "The UI needs work" means the app looks ugly or is hard to use.

URL (Uniform Resource Locator) A web address like `https://myapp.com/dashboard`. Each page in your app has a URL.

Example: `https://buildtolaunch.com/about` is the URL for the about page.

UUID (Universally Unique Identifier) A long random ID used to identify things in databases. Looks like `550e8400-e29b-41d4-a716-446655440000`.

Example: Instead of user IDs like 1, 2, 3 which are guessable, UUIDs are impossible to guess and globally unique.

UX (User Experience) How it feels to use your app. Good UX means users can accomplish their goals easily without confusion.

Example: "Great UX" means the app is intuitive and pleasant to use. "Bad UX" means users get lost or frustrated.

V

Validation Checking that user input is correct before accepting it. Like verifying an email address has an @ symbol.

Example: "Please enter a valid email" appears when you type "notanemail" into an email field - that's validation.

Variable A named container for storing data in code. Like a labeled box. You rarely deal with these directly - AI writes the code with variables.

Example: `let userName = "Jenny"` stores the name "Jenny" in a variable called `userName`.

Vercel The best hosting platform for Next.js apps (made by the same team). Free tier is generous, deployment is one command, auto-scales.

Example: You push code to GitHub, Vercel automatically builds and deploys it to a URL within minutes.

Version Control A system (usually Git) that tracks every change to your code so you can see history, undo changes, and collaborate with others.

Example: Like "Track Changes" in Word but for code - you can see exactly what changed and when.

Vibe Coding The method of building software by describing what you want to AI, which writes the code for you. You focus on vision and user needs, AI handles implementation.

Example: You say "users should be able to save bookmarks," AI generates all the code to make that happen.

W

Webhook A way for external services to notify your app when something happens. Like a doorbell that rings when an event occurs.

Example: When a payment succeeds on Stripe, Stripe sends a webhook to your app saying "payment completed for user X."

Workflow A sequence of steps or processes. Can refer to your development process or automated steps in your app.

Example: "My workflow is: describe feature to AI, test it, deploy" or "The checkout workflow is: cart → payment → confirmation."

X

XSS (Cross-Site Scripting) A security vulnerability where malicious code gets injected into your app. AI implements protections automatically when you use modern frameworks.

Example: Without XSS protection, someone could post a comment with malicious code that runs on other users' browsers.

Y

YAML A human-readable format for configuration files. Looks like organized lists with indentation. Used for some config files.

Example:

```
name: My App
version: 1.0
features:
  - auth
  - payments
```

Terms You Can Safely Ignore

Some technical terms exist but don't matter for vibe coding. If you see these in documentation, don't worry about understanding them:

- **Binary trees** - Computer science data structure

- **Big O notation** - Algorithm efficiency measurement
- **Kubernetes** - Container orchestration (way overkill)
- **Microservices** - Complex architecture pattern
- **Webpack** - Build tool (frameworks handle this)
- **Babel** - JavaScript compiler (frameworks handle this)
- **Redux** - State management (use simpler options)

AI handles all of these automatically. Your job is describing what you want, not understanding how computers optimize things.

How to Use This Glossary

When building: If AI mentions a term you don't understand, look it up here. If it's not here, it's probably too technical and you can ask AI "explain that in simple terms."

When learning: Don't try to memorize these. Reference them as needed. You'll naturally learn the important ones through building.

When stuck: If an error message includes a term you don't know, check here first. Understanding the term often makes the error message much clearer.

Remember: You don't need to know all these terms to start building. You'll learn them as you go, when you actually need them.

 Get weekly AI building tips, templates, and real builder stories at buildtolaunch.substack.com