BUILD SAFELY · BUILDER · 13 MIN READ

Test your app (and let AI write the tests)

Manual test plans, automated tests and CI: how to know your app works today and keeps working after the next AI change.

Pass the check (4 of 5) online to earn the “Test Pilot” badge:
https://digitalbuilders757.com/university/study/test-your-app

Why test when the AI wrote it?

Every change an AI makes can fix one thing and quietly break another. Tests are how you find out before your users do. They also make AI agents better: an agent that can run your tests can check its own work.

Start with a manual test plan

A list of the things a real person does, written as steps with an expected result:

- 'New visitor signs up with email → lands on the dashboard with their name.'
- 'Signed-out visitor opens /dashboard → is sent to sign in.'
- 'User A cannot see User B's notes.'
- Run it before every release. Ask AI to turn your app's features into a first draft of this list.

Three kinds of automated test

- Unit tests check one small piece, like a function that calculates a price. Fast and many.
- Integration tests check pieces together, like a server route plus the database.
- End-to-end (e2e) tests drive a real browser like a user: click, type, check the page. Playwright and Cypress are popular.
- Ask your coding agent: 'Write tests for this feature, including the empty, wrong and edge cases, and run them.'

Make tests run themselves: CI

Continuous integration (CI), such as GitHub Actions, runs your type check, tests and build on every pull request. A red check means don't merge. This is how teams (including this site) keep a main branch that always works.

Good habits

- When you fix a bug, add a test that would have caught it.
- Test the unhappy paths: empty forms, no internet, wrong password, someone else's data.
- Don't let AI 'fix' a failing test by deleting or weakening it; ask why it fails.
- Keep tests fast so people actually run them.

Key terms

Unit test
An automated check of one small piece of code, like a price function.

End-to-end (e2e) test
An automated test that drives a real browser like a user would.

Test plan
A list of steps a person follows with the expected result of each.

CI (continuous integration)
Automatic checks (tests, builds) that run on every push or pull request.

Regression
Something that used to work and broke after a change.

Bug
A mistake that makes software behave wrongly.

Pull request (PR)
A request to merge one branch into another, with review and checks.

Try it: Your first safety net

1. Write a five-line manual test plan for something you built.
2. Ask a coding agent to turn two of those lines into automated tests and run them.
3. Break the feature on purpose and watch a test fail.
4. Fix it, see green, and commit the tests.

KNOWLEDGE CHECK

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5 questions. Circle one answer for each; 4 or more correct passes. Answers are at the back.

1. What does an end-to-end test do?

A. Checks that one function returns the right value on its own
B. Tests the internet
C. Deletes old code
D. Drives a real browser like a user would

2. An AI suggests deleting a failing test so CI goes green. What should you do?

A. Ask why the test fails and fix the real cause
B. Accept it, since a green CI means the code is fine
C. Turn off CI
D. Rename the test so it runs last and stops blocking the build

3. What is a regression?

A. A type of chart
B. Something that used to work and broke after a change
C. A new feature
D. A faster build

4. After fixing a bug, a good habit is to:

A. Never mention it
B. Delete the logs
C. Add a test that would have caught it
D. Ship without checking, since the bug is already fixed

5. What does CI do on a pull request?

A. Merges the pull request as soon as it's opened
B. Writes missing tests for any new code in the pull request
C. Deploys the branch straight to your live site
D. Runs your tests and build automatically

Official sites

Playwright: https://playwright.dev
GitHub Actions: https://docs.github.com/en/actions

Last reviewed 2026-11-25. AI tools change fast; check each tool's own site for current features, plans and prices.

ANSWER KEY

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1. D: Drives a real browser like a user would
E2E tests click and type through the app the way a person does.

2. A: Ask why the test fails and fix the real cause
A failing test is information; removing it hides the bug.

3. B: Something that used to work and broke after a change
Tests catch regressions before users do.

4. C: Add a test that would have caught it
The test stops the same bug coming back.

5. D: Runs your tests and build automatically
CI gives every change the same automatic checks before merging.