How to Make a Minimal Reproduction

What is a reproducible test case?

A reproducible test case is a small Gatsby site built to demonstrate a problem - often this problem is caused by a bug in Gatsby or a Gatsby plugin. Your reproducible test case should contain the bare minimum features needed to clearly demonstrate the bug.

Why should you create a reproducible test case?

A reproducible test case lets you isolate the cause of a problem, which is the first step towards fixing it!

The most important part of any bug report is to describe the exact steps needed to reproduce the bug.

A reproducible test case is a great way to share a specific environment that causes a bug. Your reproducible test case is the best way to help people that want to help *you*.

Steps to create a reproducible test case

- Create a new Gatsby site with a starter, the official `gatsby-starter-minimal` starter is a great 'barebones' starting point here: `gatsby new bug-repro https://github.com/gatsbyjs/gatsby-starter-minimal`
- Add any Gatsby plugins that relate to the issue. For example, if you're having problems with Gatsby MDX you should install and configure `gatsby-plugin-mdx`. Only add plugins that are needed to demonstrate the problem.
- Add the code needed to recreate the error you've seen.
- Publish the code (your GitHub account is a good place to do this) and then link to it when creating an issue.

Places to develop a reproducible test case

- Locally with a starter: You can start with a starter locally and then build it on your own machine. Gatsby's official `gatsby-starter-minimal` is a good foundation for a reproducible test case.

- Host on CodeSandbox: You can develop a Gatsby site straight from your browser with CodeSandbox using their Gatsby template. CodeSandbox also hosts your site automatically, which can be useful to demonstrate the behavior of your site.

Benefits of reproducible test cases

- Smaller surface area: By removing everything but the error, you don't have to dig to find the bug.
- No need to publish secret code: You might not be able to publish your main site (for many reasons). Remaking a small part of it as a reproducible test case allows you to publicly demonstrate a problem without exposing any secret code.
- Proof of the bug: Sometimes a bug is caused by some combination of settings on your machine. A reproducible test case allows contributors to pull down your build and test it on their machines as well. This helps verify and narrow down the cause of a problem.
- Get help with fixing your bug: If someone else can reproduce your problem, they often have a good chance of fixing the problem. It's almost impossible to fix a bug without first being able to reproduce it.