

# Hangar

## Open Source Hackathon Platform

Tristen Even, tge160130@utdallas.edu; Razvan Preotu, rnp170130@utdallas.edu;  
Tatum Hutton, tah180000@utdallas.edu; Michael Nguyen, mkn170030@utdallas.edu



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Department of Computer Science  
Erik Jonsson School of Engineering & Computer Science  
The University of Texas at Dallas  
Richardson, TX 75080, USA



### Abstract

Hangar is an open-source hackathon management platform developed by American Airlines. Throughout the semester the UTD capstone team collaborated with a group of American Airlines developers to help them further develop Hangar. The team adopted an agile development strategy, prioritizing and categorizing issues based on a two-week implementation schedule. Assigned issue topics ranged from frontend development, backend development, discord/slack integration, testing, and documentation. The team's UT Design project completed in a six-week timeline aims to enhance the user experience of setting up Hangar. The project consists of the creation of a setup page, which is meant to be used by the user when configuring the app for the first time, and a 'Hangar for Dummies' page that gives user detailed navigation through app setup.

**Keywords:** UI/UX, Agile Development, Documentation

### Results

#### Setup

Enter your respective values for the configuration items below, then press submit.

If using Slack, leave Discord fields blank.  
If using Discord, leave Slack fields blank.

Enter the Admin Secret. Must be between 6-20 characters

enter value...

Discord: Enter Discord Channel ID. If multiple IDs, separate with a comma.

id1, id2, id3

Discord: Enter the Discord Bot Token

enter value...

Slack: Enter the Slack Bot Token

enter value...

Slack: Enter the Slack Signing Secret

enter value...

Submit

Setup Page on App Startup

Work in Progress

Hangar Setup (Technical)

Hangar Setup for Dummies

Grabbing the files

Dependencies

Node

Downloading node

Installing node

Finishing Node Setup

Using npm

Postgres

Downloading Postgres

Installing Postgres

Setting up a Postgres Database

Connecting the Database to the App

Slack or Discord?

Slack

Slack API Setup

Installing and running ngrok

Running and Setting Up Hangar

Finishing Off with Slack API

Smoke Test

Discord

Discord Application

#### Hangar Setup for Dummies

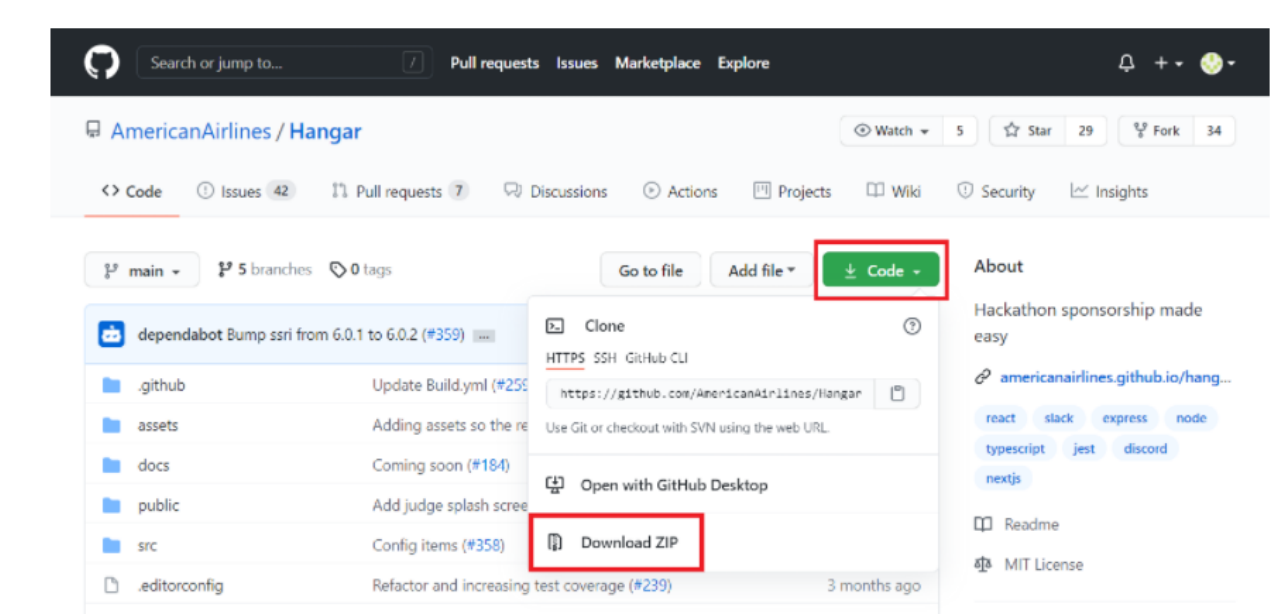
You don't need to be technical to create your own instance of Hangar. This guide is designed to walk you through every step necessary to set things up, and includes a visual element to help along anyone who is uncomfortable with technology.

If you're more confident in your technical abilities, feel free to skip to the more succinct section titled Hangar Setup (Technical) down below.

#### Grabbing the files

You might be reading this on the GitHub docs site and be wondering how to get the files yourself. If you have git installed or are comfortable cloning a git repository, we highly recommend doing so, but if you're short on time or simply want to test out the app quickly, then you can download a zip file containing everything directly from the GitHub page. We'll assume that anyone who can clone the repository has done so, and the rest of this section will be catered toward those who want to keep things as simple as possible.

Head over to the AmericanAirlines/Hangar GitHub page, and click on the green button that says "Code". Then, click where it says "Download ZIP" from the dropdown menu that pops up, like so:



Full User Guide with Visuals

### Architecture

Frontend  
- React.js  
- Docsify



Backend  
- Node.js  
- Express



Database  
- PostgreSQL



Testing  
- Jest

### Impact

Hangar is designed to be easy to use and enjoyable for everyone. Our project contributes to this design principle by providing a simpler setup process to the user.

#### Before

- App didn't start if any of the required configuration entities were missing. User had to directly set these values in the database
- Setup instructions consisted of a simple markdown with few visuals

#### After

- App can start without any configuring entities and there is a setup page to set these values
- "Hangar for Dummies" page acts as a full user setup guide with visuals

### Performance

- All undertaken tasks completed.
- Initial estimate of 20 tasks was cut significantly in favor of tasks with larger scope.
- All functional expectations met.
- Content of each task considered valuable by team and company.

### Summary

- Removed the need for certain external tools to begin using app
- Overhauled and streamlined app setup
- Created a full installation guide for lay users that requires zero technical knowledge
- Helped overhaul testing suite to minimize future tech debt