Sorghum App Developer Documentation

Kansas State Extension Platform

Kansas State University | Spring 2020

Table of Contents

Program Structure Overview

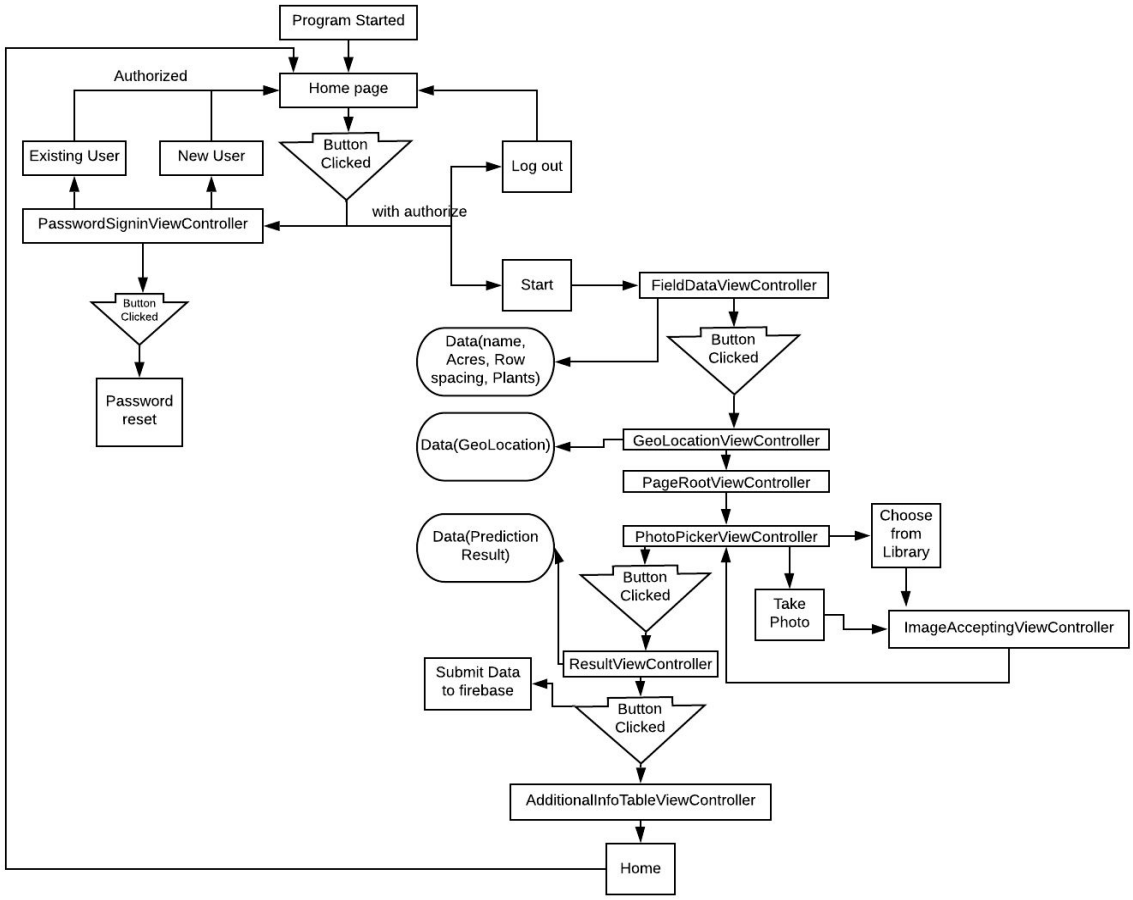


Figure 1.0

Figure 1.0 illustrates how this Sorghum App program Structure works. How it collecting data to fill out the needed information for the research table and yield prediction by interacting with the user command.

Development Environment Setup

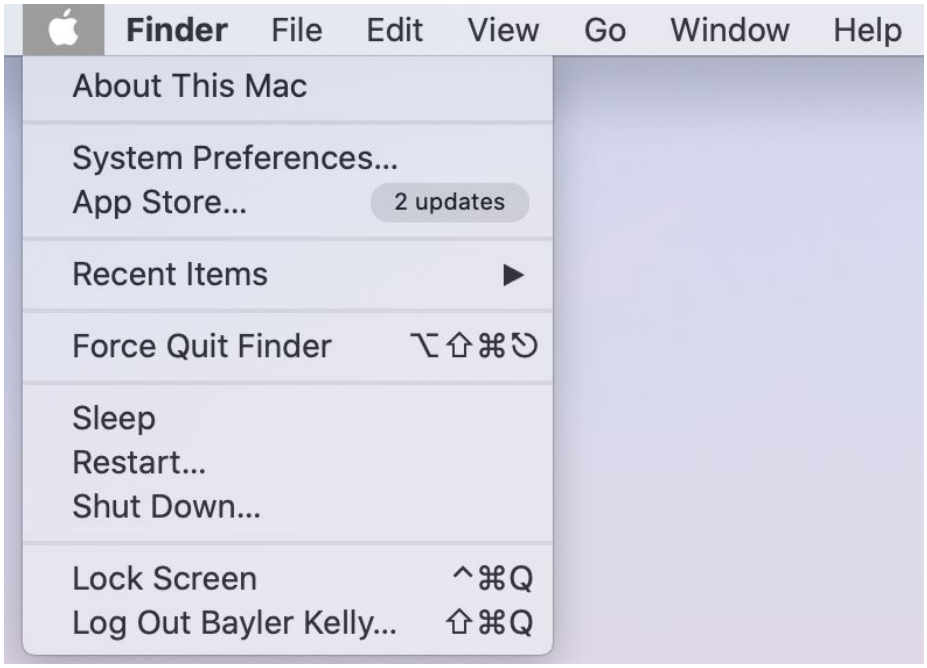
This section provides step-by-step instructions on how to install the proper IDE for this project, clone/download the current version of the sorghum application from GitHub, and prepare the system to run locally. These instructions are written for a Mac machine or a system virtually running this operating system.

Xcode 11 Setup

Check current OS version

Xcode 11 currently requires a Mac running macOS Mojave 10.14.4 or later. To check your system's current operating system, do the following:

- In the top-left corner of your screen, click the Apple icon. From this dropdown menu, select "About This Mac" to find information about your current machine.

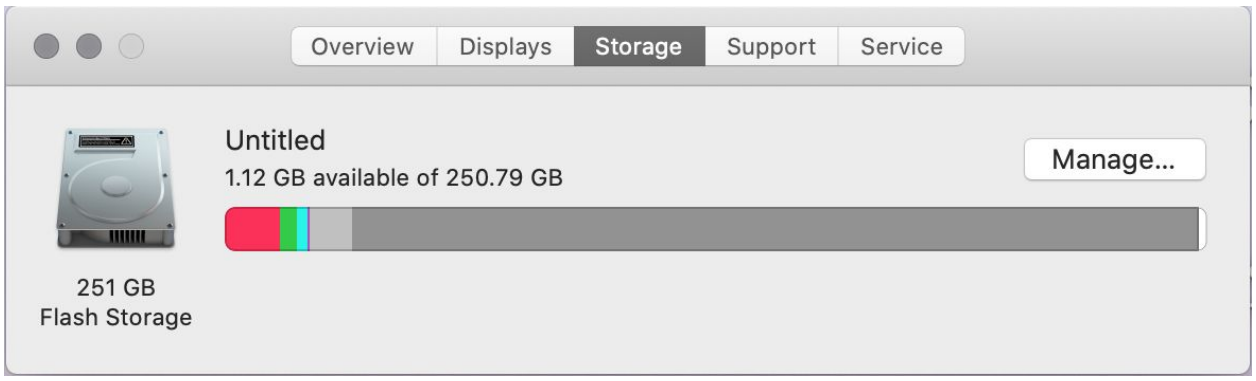


- From this page, you can find your current device, various component information, and your current Mac operating system. As long as your machine is running Mojave 10.14.4 and beyond or any version of Catalina beyond 10.15, it will be compatible with Xcode 11.

Check current available storage

Xcode 11 currently requires at least 8.1 GB of free storage on your harddrive. To check your system's current available storage, do the following:

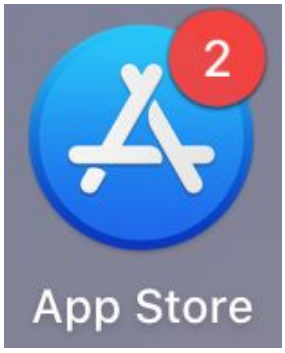
- Return to the "About This Mac" page from the above-noted instructions. From here, click the "Storage" tab along the navigation bar. It may take a moment to calculate your current storage usage. Your storage statistics will be displayed as done below.



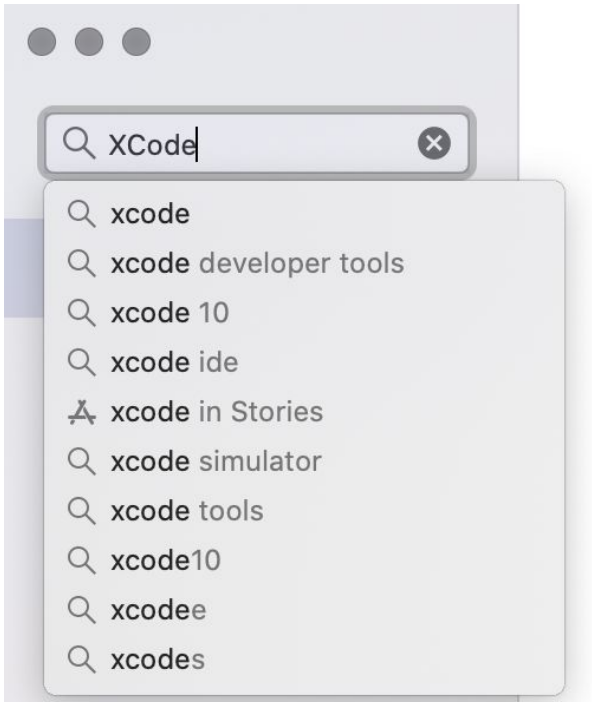
Install Xcode 11

Once you've met the above requirements, you are reading to install Xcode 11 on your machine. To begin this process, do the following:

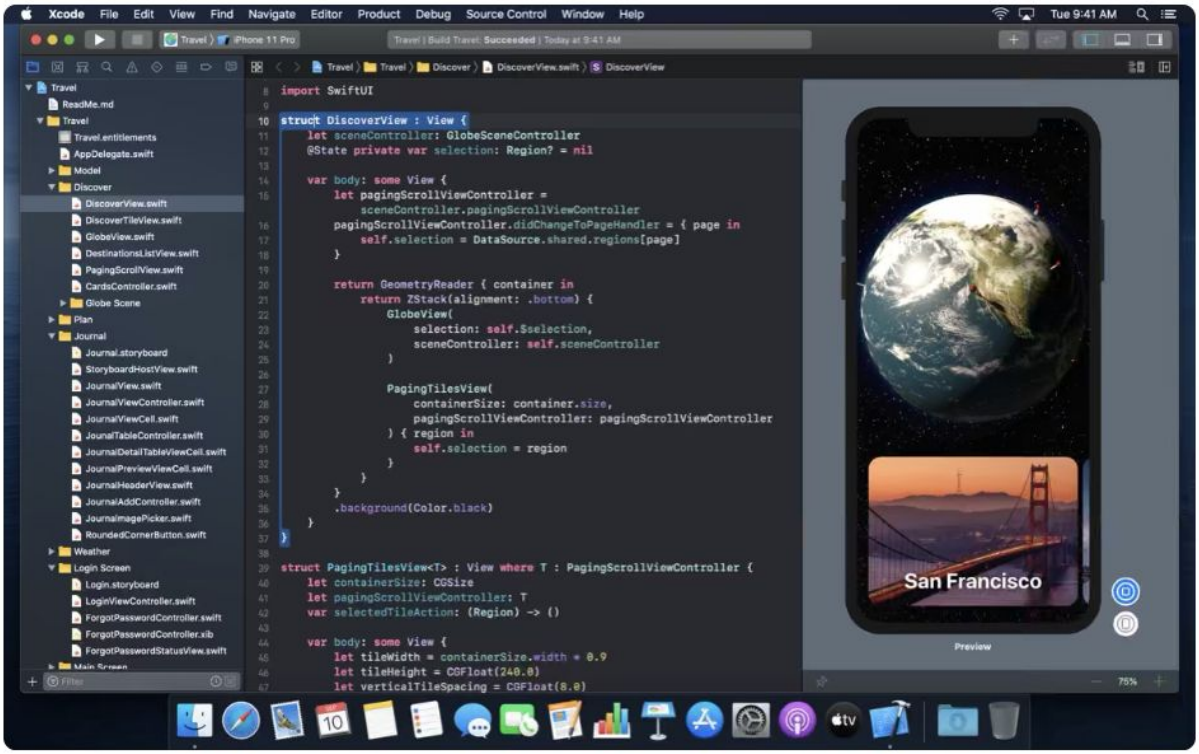
- Begin by navigating to the App Store. This application can, by default, be found on the Dock, but is also available using the Launchpad. Once it has been located, click the icon to open the App Store



- Once the App Store has loaded properly, find the search bar in the top-left corner of the application. Type "XCode" into the entry box and click on the result labeled "xcode".



- As soon as your entries have loaded properly, the first result should look like the following image. This is the IDE that we want to install to our machine. Click “GET” to begin this installation.
    - After doing so, you’ll be prompted to input your Apple ID and password to complete this transaction, depending on your account settings. At this point, any prompts are necessary to complete the Xcode installation.



- Once the download and installation has completed, Xcode will be available for use in the Launchpad. The application looks like the image below.

Running the Sorghum app locally

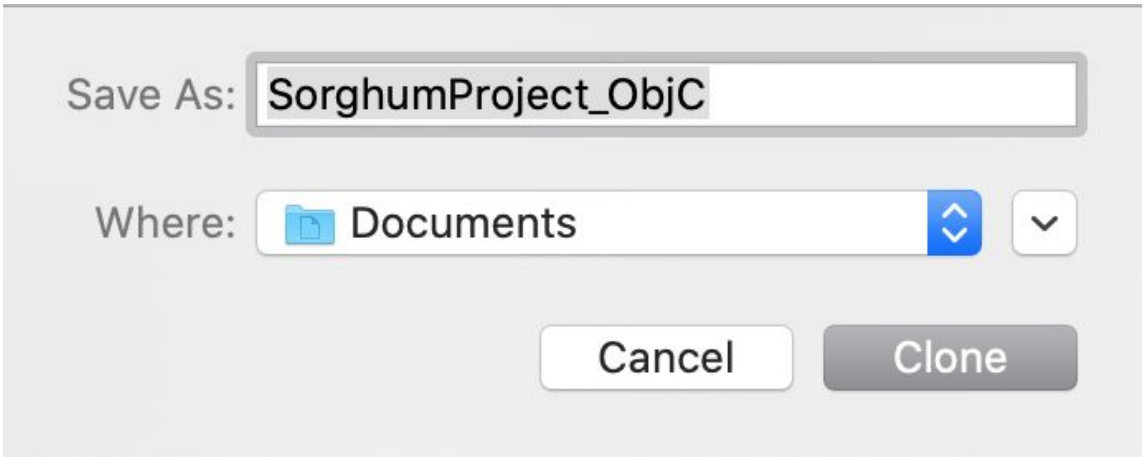
Cloning the current GitHub repository

The first necessary step now that we have Xcode 11 properly installed is to run the application and clone the current Sorghum app repository so that it can be run locally. To begin this process, do the following:

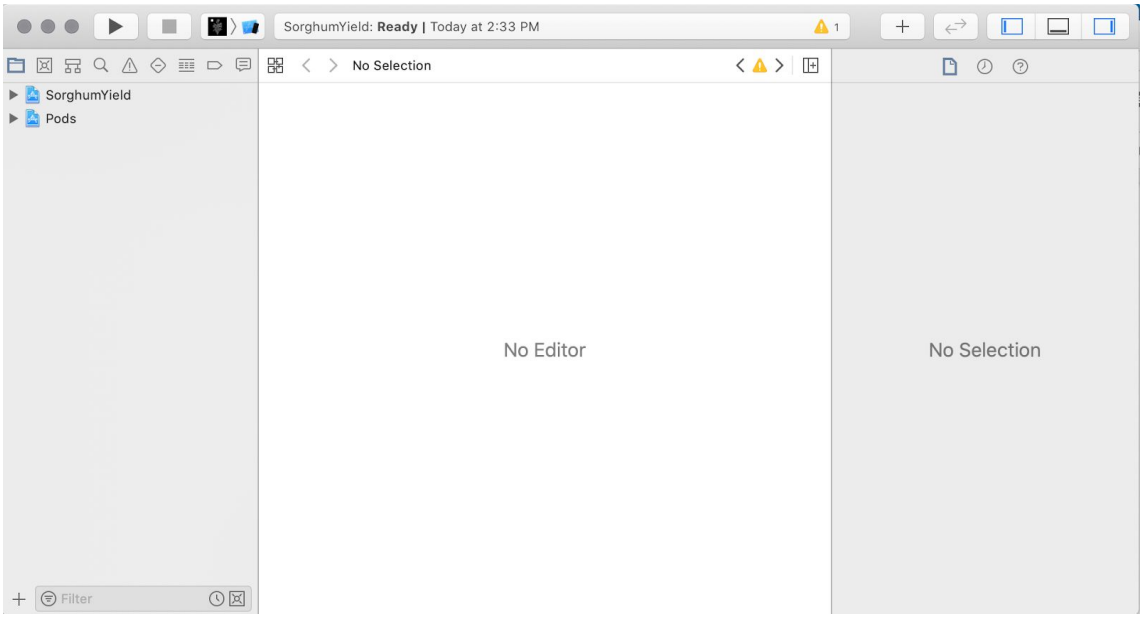
- Once it launches, you will be prompted with the window below. From this page, click "Clone an existing project" in the bottom-left area.

- After this, a new window will open asking for a link to a current project's repository. In the entry box, input the current GitHub cloning link for the Sorghum app. Proceed to the next step by clicking the "Clone" button in the bottom-right corner of the window.
    - Current clone link: https://github.com/BaylerKelly/SorghumProject_ObjC.git

- Following this, you will be prompted to indicate a location to save the cloned repository to. Determine where you would like to save this project and click the “Clone” button to continue.
    - After clicking the “Clone” button, Xcode will begin cloning the project from the GitHub repository. This may take a few minutes, depending on your internet connection.



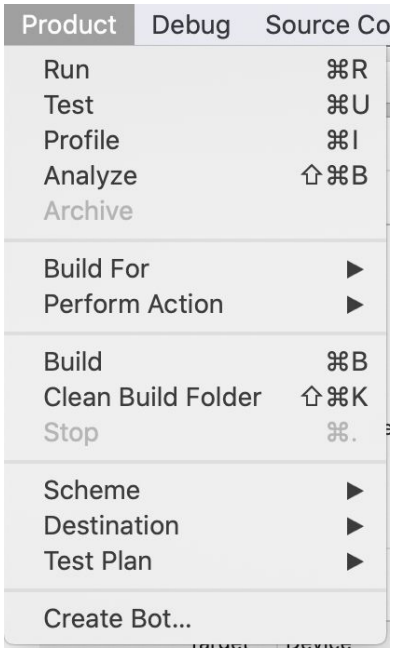
- Once the cloning process has completed, Xcode will open the cloned project. It will open the project to the main editor screen like the following:



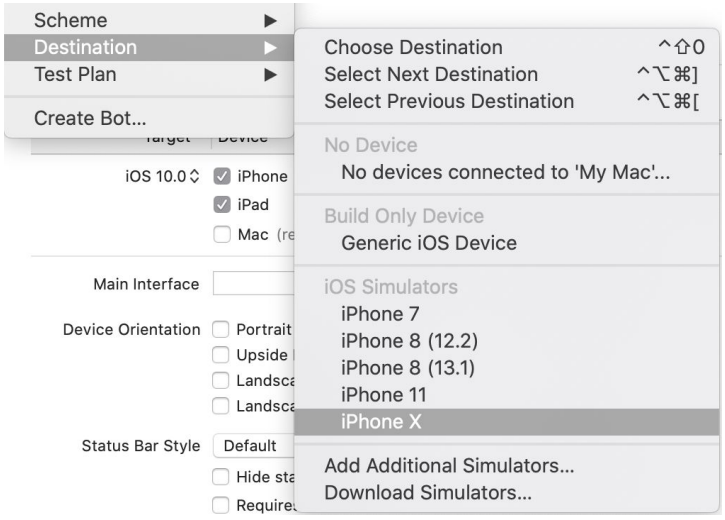
Running the project

The final step is to run the project locally on an Xcode simulator. To setup a proper simulator and run the application, do the following:

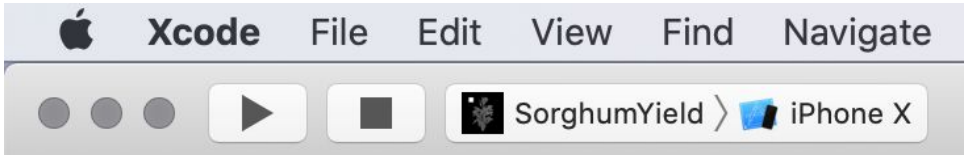
- Along the top navigation bar for Xcode, click “Product” to display the drop-down menu



- Once the drop-down menu is enabled, highlight “Destination” with your cursor. This will display a list of possible destinations to deploy/run the project on. Click any of the valid iOS simulators listed to set on which iOS device the project will run locally.



- The final step of this process is to the run project. In the top-left region of the Xcode window, click the grey play button icon to run the current build.



information.