Scenario Test: Software Engineer - Platform Services (Django)

Thank you for your interest in Crowdbotics, and congratulations on making it through the earlier phases of our interview process.

Introduction

Rather than make you work through a series of whiteboarding problems - most of which have no relevance to your actual job - we figured it would be better to give you a chance to work on a problem on your own time. Once you are done with solving the problem, you will get a chance to present your solution to members of Crowdbotics' engineering team where you can explain the choices you made, discuss the technical aspects of your solution, and determine if there are ways in which your solution can be optimized.

Scenario Brief

You are being asked to use the Crowdbotics platform to create a backend service for a (highly simplified) version of the Crowdbotics dashboard. The Crowdbotics dashboard is the single interface from which users manage all the apps under their account.

The backend service would expose a set of REST API endpoints that enables a user to:
- Create, retrieve, update, and delete applications that they own.
- Associate a subscription with a pricing plan (from a preconfigured list of pricing plans)
- Read the subscription details for an app.
- Update the subscription for an app.

The user would also need to be able to register, login, and reset their password.

Specifications

Model Summary

App

An app the user has created in our platform. Includes metadata about the app such as name and description.

Plan

Plans to which a user can subscribe their app. Plans are billed on a monthly basis. Price can be 0.

Your app should have three plans: Free ($0), Standard ($10), Pro ($25).

Subscription

Subscription tracks what plan is associated with an app. For record keeping subscriptions are never deleted, their `active` attribute is set to `False`.

Complete API and model specifications can be found here: https://hiring-example-25770.botics.co/api-docs/

The `User` model and related API endpoints are preconfigured for you by out platform.

Getting Started

1. Register for an account on the Crowdbotics app builder (https://app.crowdbotics.com/dashboard/).
2. Login to the app builder, and create a new Web App (refer screenshot below).
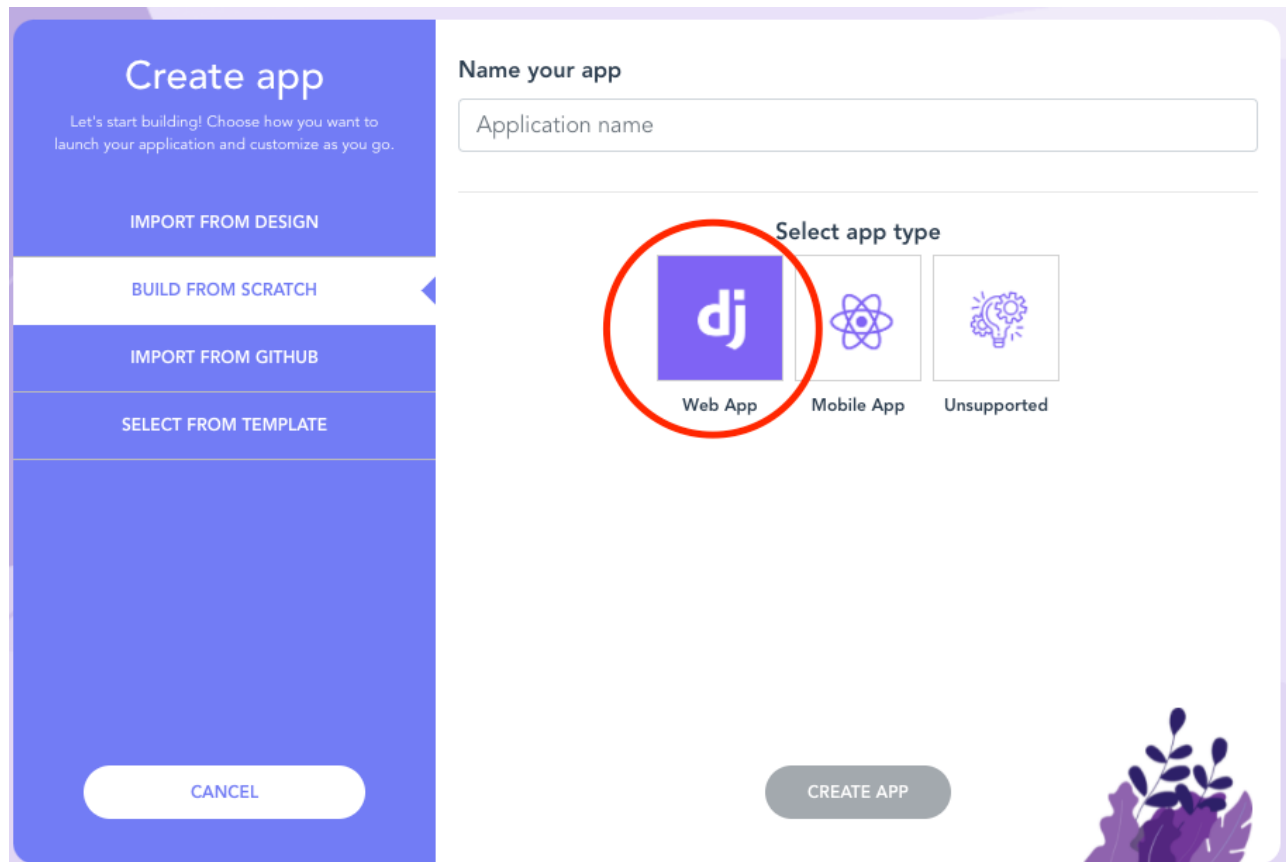
3. You need to verify your email address, and connect your GitHub account to the Crowdbotics App Builder. To connect your GitHub account, click on Account > View Profile (refer screenshot below):
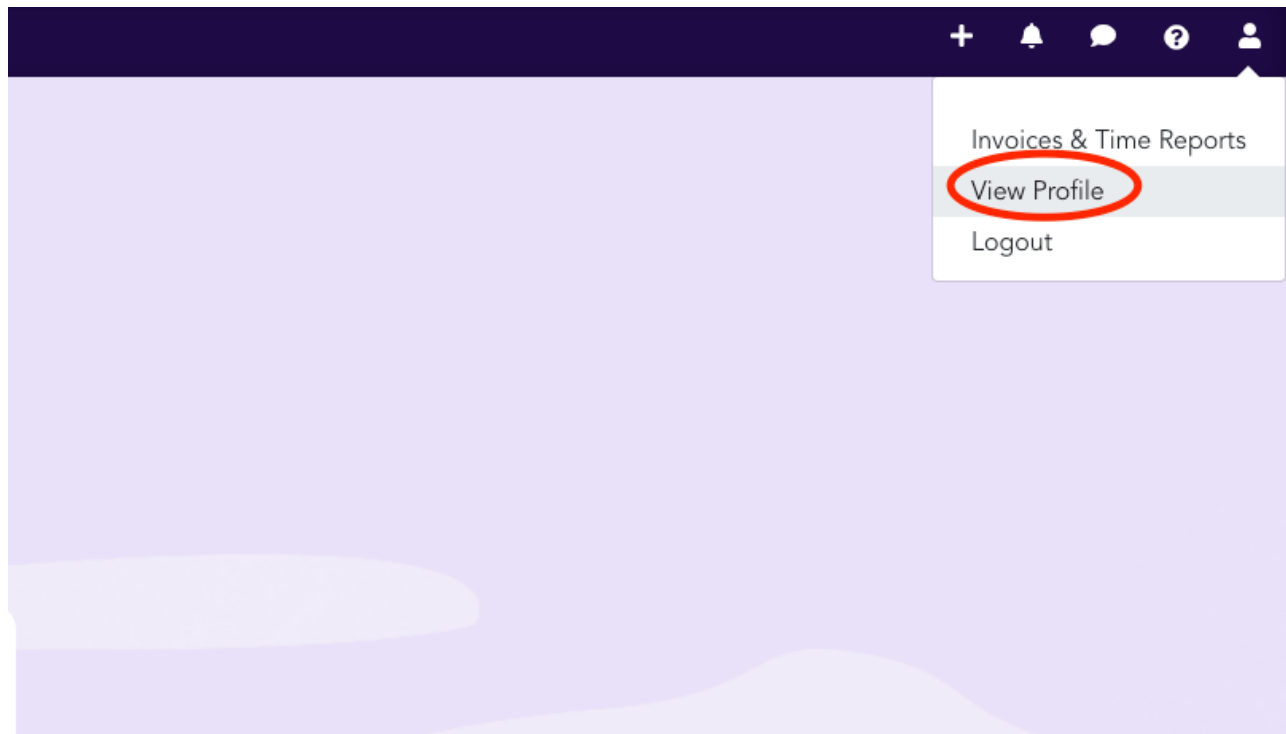
4. Then, click the "Connect" button on the GitHub row in the "Connected Services" panel (refer screenshot below):
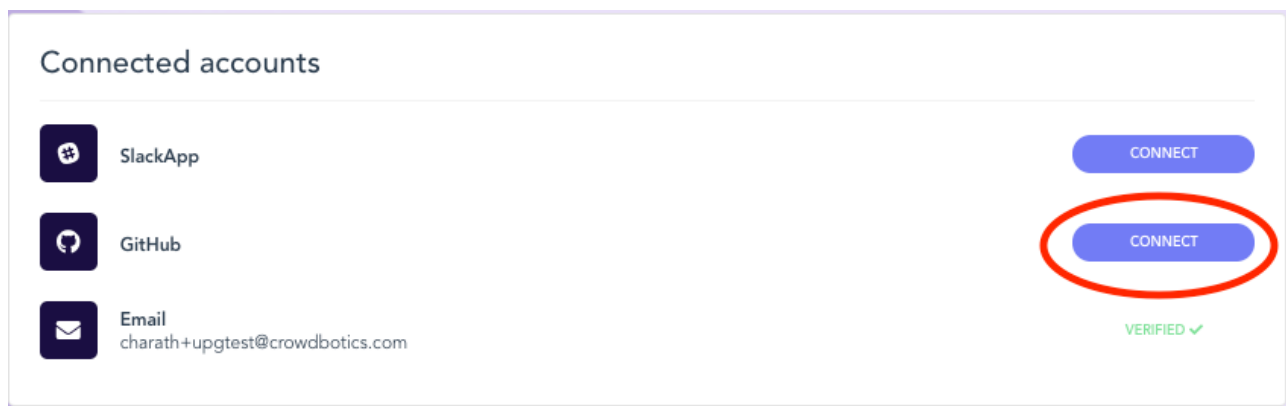

Follow the OAuth prompts and your GitHub account should have been connected.

5. Accept the invitation to the GitHub repository in your email and you should now have access to the GitHub repository for the app. All your normal GitHub workflows are fully functional - just `git clone` the repository and do your work as usual.

Testing your work

 We encourage you to write tests to test your code. In addition, please make sure that your application deploys to our cloud environment. To deploy, you can click the "Deploy" button on the application dashboard:
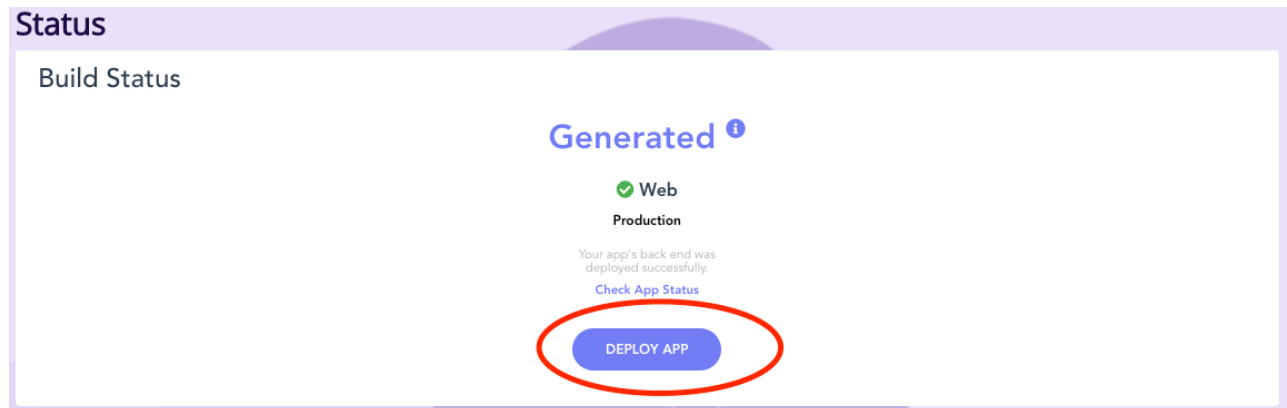
This deploys your app to our Cloud provider and will give you a public URL from which you can access the app.

Django Admin Console

If you would like to login to the Django admin console, click on Settings and then click the "Create" button in the Admin Panel Credentials pane. This will generate a one-time admin panel password, which you should copy to your clipboard and use when you login to the admin panel. The username is `crowdbotics`.

API Docs

API docs for the API you've built are also auto-generated and available under https://app_url/api-docs. Obviously, this requires your application to be deployed and running.

Submitting your assignment

When you're done with your assignment, please send a link to your application (the application URL is fine - https://app.crowdbotics.com/dashboard/app/{app_id}/) to `engineering@crowdbotics.com` and cc `tara@crowdbotics.com`.

Questions?

If you have questions, please email us at engineering@crowdbotics.com. Please add `Scenario Test: Django` to the subject line so it's easy for us to sort through.