

Attached are the two components of a web app with some very basic functionality. The frontend is an SPA built using TypeScript and React (all dependencies are listed in package.json) and the backend is an API built using Python and Flask (all dependencies are listed in requirements.txt). The backend uses a SQLite database.

Currently, the app provides the following user-facing functionality:

1. Users can signup.
2. Users can login.
3. Users can logout.
4. Users can view/edit their profile/account information.
5. Once a user logs in, a session token is stored in a cookie and if they visit the app again (without logging out), then their session information will be automatically retrieved and they will be forwarded directly to the user home page (instead of having to log in).

We would like you to do the following tasks using the attached app. We know that some of these are quite ambiguous. This is intentional. We want to see how you interpret them and what you do with them.

1. Virtually all of the functionality listed above is broken. Please fix the bugs. While doing this, keep track of what the problems were, what the roots causes were, and how you fixed them. Include these when you return the source code to us.
2. Currently, user records contain a first and last name, a favourite colour, a username, and a password. Add a new "City" field. All users should have to enter a value for this new field.
3. Implement forgotten password reset functionality. (Typically, this would require sending users an email with a password reset link. Our user records don't even have email addresses associated with them so we won't worry about that. Instead, just display a page which includes the reset link that would normally be included in the email.)
4. Familiarize yourself with this codebase. The next stage of our evaluation process, a technical interview, will be largely based on discussions about this app. (We will be particularly interested in your opinions regarding what would need to be fixed and/or added in order to make this code production ready.)

Once you've completed the above, please return your updated source code (and the list of bugs you fixed) to us for evaluation. If you have added any dependencies to the backend, make sure that the requirements.txt file has been updated.