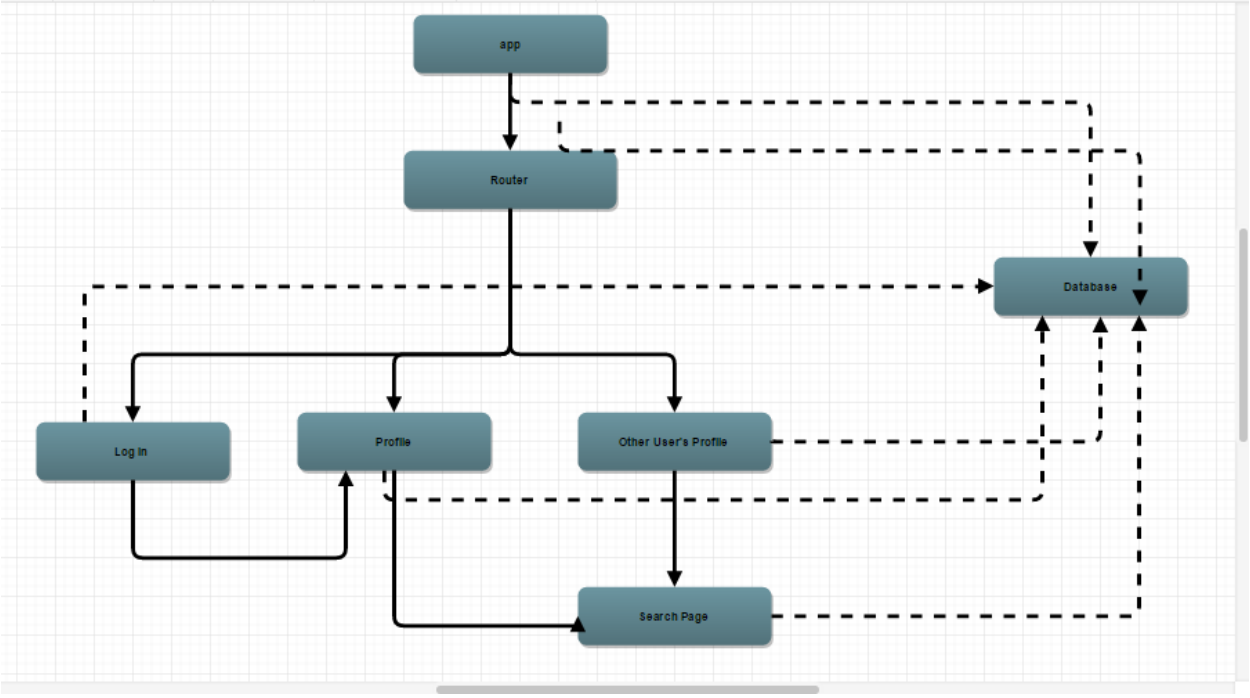
A.

i)



ii) The architecture behind our web app starts with ‘app.js’. App.js handles the various requests of our application by funneling them into either the “router” portion or “database” of our app. The Router, handles the interests of users by guiding them through the various screens of the app. The router points originally to the login screen. This screen authenticates the user, either locally or using Facebook Authentication. Once completed, the system takes advantage of cookies to keep users logged in. The next screen in the app is the profile page. This page, displays the various submitted recipes of the current users, as well as other personalized info (e.g. profile pic, etc.). On this page, the user can search recipes, which will lead them to the search page. The search page also has a trending section where users can discover other users and see their recipes.

The other major section is the database. Our database implements our API calls. Through the API calls defined in database.js the system can access all the relevant info required for the application. This includes access to the various recipes, the user base and the cookies.

The communication between the router and the database portions of our app allows to function.

B. To ensure security in our web app, we implemented the BCRYPT hash algorithm to encrypt user information. This includes passwords, cookie data and all other sensitive information that

could be exposed outside of the server. The encryption protects against code injections into our database, so that information can not be interpreted if pulled from our database. HTML escape was also used to prevent against XSS attacks.

C. We minimized the amount of HTTP requests to optimize server usage. We included as little information as possible in the cookie, to speed up transfer times. Also, we removed cookies from the database as they became invalid(logout, etc.) to ensure queries were running fast. We originally searched all page content by text on page. To speed up user searches, we added specific search capabilities. We also implemented the use of regex to help stream-line user queries.