

RBAC Vision

Investment Grade

Erika McCluskey, Hayden Jin

This short document outlines the RBAC vision for our project. RBAC stands for role-based access control and essentially restricts system access. This means only authenticated and authorized users can access specific data. The Investment Grade application has users where each user has an account therefore RBAC is something that we needed to handle.

The rationale behind requiring user login and saving user data to a database rather than to the local device is that our priority is offering easily-accessible educational services. This means that regardless of the device the user chooses to use, they will be able to login and access their data. Allowing users to login to access their data means that any progress they have made will not be lost due to device malfunction or any other reason. In addition, since users build portfolios and investing is a long-term thing, it would not make sense to have users need to rebuild their portfolios from scratch and lose their gains in case they need to change their device.

Given the complexities behind user authentication, we decided to use Amazon Web Services (AWS) Cognito to help us. Cognito is in charge of storing user information such as usernames, passwords, and emails. Handing this over to a reputable third-party helps us ensure the safety of our users' most sensitive data: their password. The encryption is handled by Cognito which makes implementing user authentication much simpler. In addition, using Cognito made it super easy for us to implement email verification which was important to us to reduce bots and/or fake users.

Our application only has one 'level' of users which means we did not need to implement roles into the app as everyone has access to the same features. The only 'admins' of the application are us, the developers, and we make our changes through the code and/or the database. That being said, user authentication was enough to ensure users only access the data they should be accessing.