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Design description documentation and Future Plan

Design Description:

We are using 3 tier architecture, mainly Frontend, Backend and Database. Based on the requirement, each service is split and self operated. We have 2 services: the login service, which represents the user and other user related features, and another is book service, where book objects and its associated copies are stored. All the backend will share the same MySQL database. Backends are both connected to the default port 3306 of MySQL to share and query the data. There are 2 schemas associated with 2 services: book and user. ‘book’ is the schema that stores books data value, and the user stores the user details. It is noticeable that we are using docker MySQL image to boost up the development process. From development to Deployment, all databases used in our application are all containers, with MySQL image setup and run in different environments, to help speed up the application development.

Future Plan:

As the app grows and we are moving toward the end of the development process. We are aiming to have all parts of the app, from the front to the back, all dockerized and shipped on to AWS Elastic Container Registry (ECR), where we can easily store and deploy our app with ease. ECR will replace DockerHub to store all the published and tested containers. We are considering 2 ways of shipping it onto the ECR: the first option is the manual upload. We test and build the image, and will push the image up manually with AWS Console. However, the more practical way is to use the CI development process to automatically push up the tested code with successful image build on to AWS using CircleCI Jobs. Either way are possible, and Khoi is currently looking at the options.

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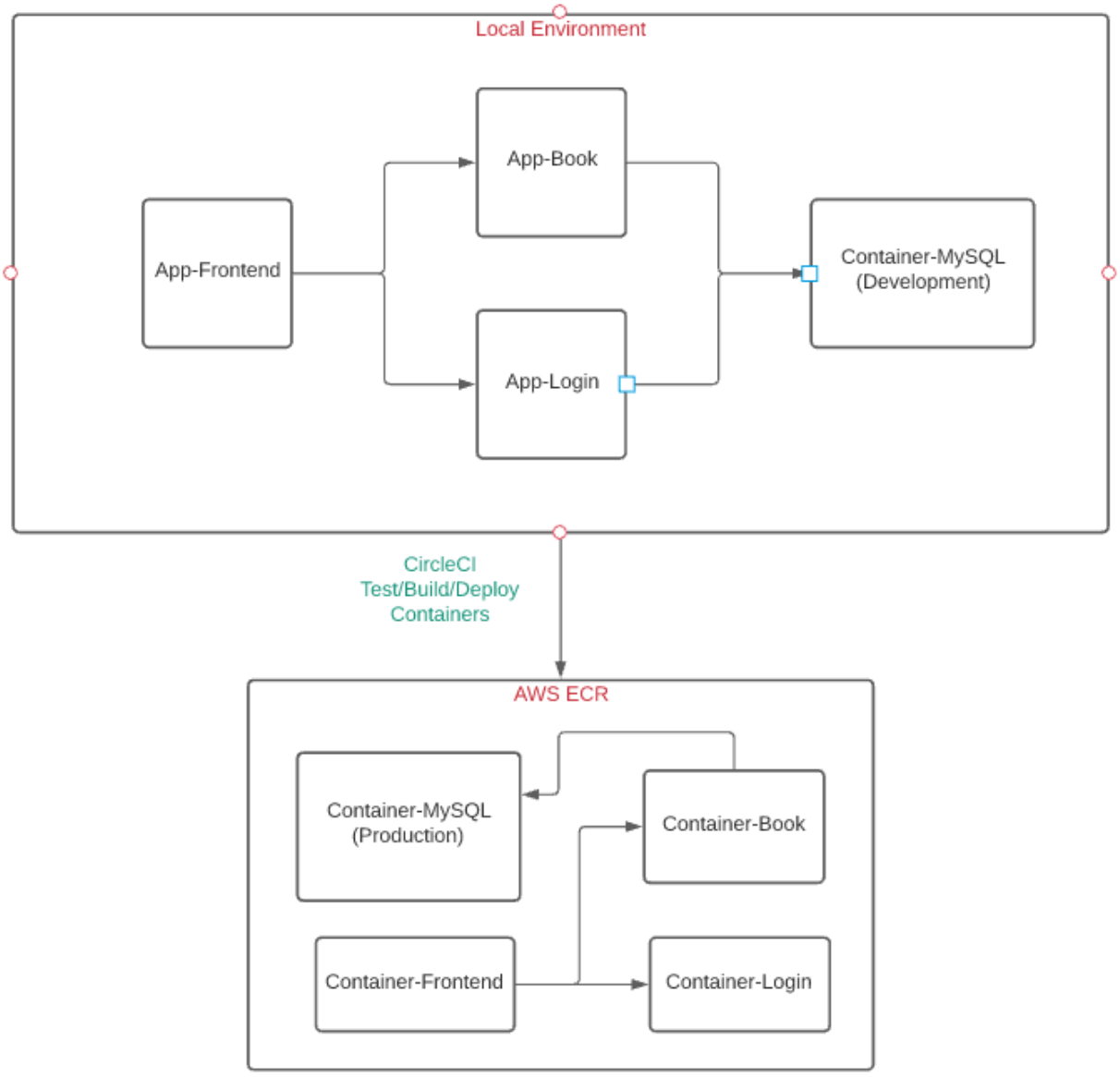
Our Current Architecture:



As for now, all team members will work on the local dev environment. Khoi is currently researching image deployment using CI machines. It will contribute toward the next Milestone and apply best practice from the industry. Here, another MySQL container is implemented inside AWS ECR, represent the actual production database and once the app is dockerize and shipped to AWS, it will use this particular database container for production usage