

Problem Statement

Design and implement a Web Application to manage usage of assets on the lab network.

Background

Developers and testers need to use devices and virtual machines to deploy and test applications. Sometimes, multiple team members use the same assets, causing services and applications to misbehave for others, since one team member might alter configurations or applications for their testing. These devices and virtual machines are limited in number, so team members need to share asset usage efficiently.

Requirements

- Users should be able to add, delete, and modify assets - device or VMs.
 - Each asset should have a name and IP address (mandatory), and an optional description.
 - Restricting asset management to admin users is a plus, but not required.
- Users should be able to view current reservations of assets.
- Users should be able to reserve an asset for a particular duration.
 - Reserving an asset should require the user's name and the duration for which the asset will be used.

Additional functionality, such as showing the ping status of an asset, can be considered as an optional stretch goal.

Feel free to be creative with other functionalities you would add. If time permits, implement them or just describe them.

Deliverables

- REST API Endpoint Design and Implementation
- Frontend Wireframe and Implementation
- Dockerized frontend and backend applications would be a plus

Please provide your submission as a GitHub repository or a zip file, including instructions to run the application.

We would like to see your creativity and fullstack experience. We are eager to see a demo of your application and discuss your technical solution in a follow-up call, scheduled 72 hours after you receive this assignment. It is okay if some parts of the application are incomplete due to time constraints.