Medical Equipment Inventory Project

Description

This project aims to create a medical equipment inventory management system with varying levels of user access and functionality. This project will facilitate a user-friendly inventory management system that supports both personal and public organization of web content, with special administrative controls to maintain the integrity and usability of the platform.

The application aims to keep an evolving inventory of medical devices within a healthcare facility and track the preventative maintenance being performed on each device to keep the healthcare facility compliant with various regulatory bodies. A single piece of equipment in inventory is labeled as a 'device'. Devices have a serial number, a model ID linking said device to a specific equipment model, an owning department which links said device to a department within the healthcare facility, an install date, and a url to a device image.

All users (for example, a department lead wants to see all of the equipment owned by their department) should be taken right to the home view where they are able to view all of the departments in the healthcare facility. They can click on each department and view a list of the devices owned by each department (department view). They can click on a device in the department view and view a detailed page of each specific medical device (device view). They can also type in a device ID in a search bar on the homepage to bring up a device view. Authentication is not required for viewing resources.

Authenticated users can do all of the above plus click on buttons in the device view to add, update, and delete devices. From the add/update device form, they can click on buttons to add/update a model if the model does not already exist in the system. In this case, a technician will be an authenticated user since they are the ones in the field maintaining the devices.

An admin (for example the manager of all the technicians) can click on the 'admin tools' button on the homepage to add, update, and delete departments.

For registration and login, as an anonymous user, I can register a new account.
As an anonymous user, I can login using an existing username and password. As an authenticated user, I can click "Logout" to logout of the application.

Functional Requirements

As an unauthenticated user, I can…
- Review a list of all departments
- Get a list of devices owned by a certain department
- Get a device by its ID

As an authenticated user, I can…
- Add a device.
- Update a device.
- Delete a device.
- Add a model.
- Update a model.

As an **ADMIN**, I can…
- Add a department.
- Update a department.
- Delete a department.

Endpoint	Method	Query Parameters	Description	Success	Error	Authentication
/devices	GET	None	Get all devices	200	400	None
/departments	GET	None	Get all departments	200	400	None
/models	GET	None	Get all models	200	400	None
/technicians	GET	None	Get all technicians	200	400	None
/departments/{id}/devices	GET	None	Get all devices for a department	200	400, 422	None
/devices/{id}	GET	None	Get a device by ID	200	404, 409	None
/devices	POST	None	Add a device	201	400, 401, 422	Authenticated
/devices/{id}	PUT	None	Update a device	200	401, 404, 409	Authenticated
/devices/{id}	DELETE	None	Delete a device	204	401, 404	Authenticated
/models	POST	None	Add a model	201	400, 401, 422	Authenticated
/models/{id}	PUT	None	Update a model	200	401, 404, 409	Authenticated
/models/{id}	DELETE	None	Delete a model	204	401, 404	Authenticated
/departments	POST	None	Add a department	201	400, 422	ADMIN
/departments/{id}	PUT	None	Update a department	200	404, 409	ADMIN
/departments/{id}	DELETE	None	Delete a department	204	404	ADMIN
/technicians	POST	None	Add a technician	201	400, 422	ADMIN
/technicians/{id}	PUT	None	Update a technician	200	404, 409	ADMIN
/technicians/{id}	DELETE	None	Delete a technician	204	404	ADMIN