

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, and an install date.

Unauthenticated users (for example, a department lead wants to see all of the equipment owned by their department) of the API should be able to view all the devices in inventory, view all of the departments in the healthcare facility, view all of the equipment models, and view all of the technicians qualified to perform maintenance on these medical devices. Authentication is not required for viewing resources.

Authenticated users can add, update, and delete devices and equipment models. In this case, a technician will be an authenticated user since they are the ones in the field installing a new device when it enters the facility.

An admin (for example the manager of all the technicians) can add, update, and delete departments and technicians.

Functional Requirements

As an unauthenticated user, I can...

- Review a list of all devices
- Review a list of all departments
- Review a list of all models
- Review a list of all technicians
- Get a list of devices owned by a certain department
- Get a device by its ID

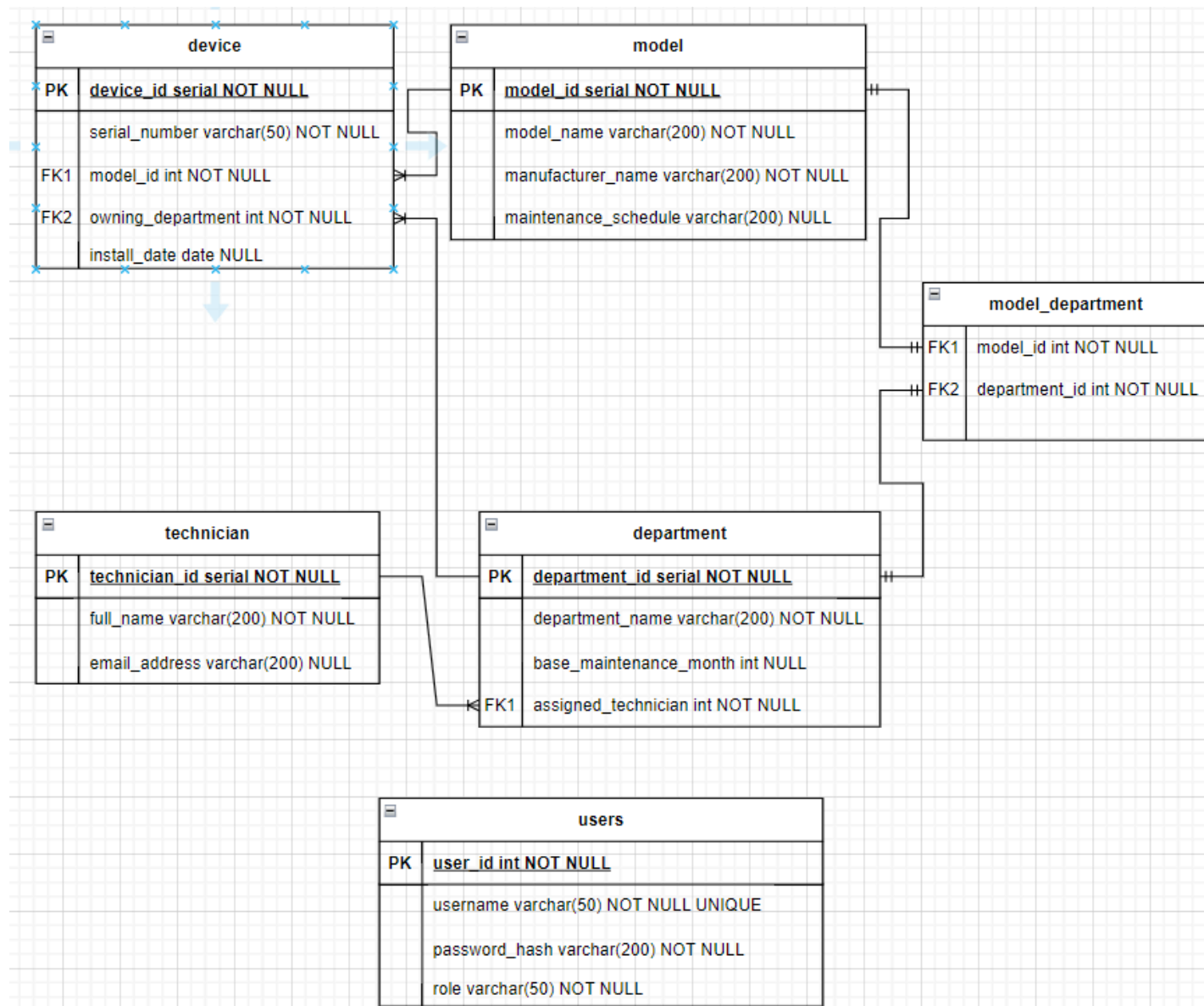
As an authenticated user, I can...

- Add a device.
- Update a device.
- Delete a device.
- Add a model.
- Update a model.
- Delete a model.

As an **ADMIN**, I can...

- Add a department.
- Update a department.
- Delete a department.
- Add a technician.
- Update a technician.
- Delete a technician.

ERD



API Endpoints

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, 404	None
/departments/{id}/devices	GET	None	Get all devices for a department	201	400, 422	None
/devices/{id}	GET	None	Get a device by ID	200	404, 409	None
/devices	POST	None	Add a device	201	400, 422	USER
/devices/{id}	PUT	None	Update a device	200	404, 409	USER
/devices/{id}	DELETE	None	Delete a device	204	404	USER
/models	POST	None	Add a model	201	400, 422	USER
/models/{id}	PUT	None	Update a model	200	404, 409	USER
/models/{id}	DELETE	None	Delete a model	204	404	USER
/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