1. Link to GitLab Repository

This section will provide the GitLab repository link and include the specific commit that is part of the submission.

Repository Information:

- **Repository Name**: D424 Software Engineering Capstone
- **GitLab Link**: https://gitlab.com/wgu-gitlab-environment/student-repos/ajwint.cs/d424-software-engineering-capstone
- **Version**: Include the latest commit hash to mark the version for submission.
    - Commit ID `c47704de`.

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2. User Guide for Maintenance (Setup and Running the Application)

This guide will be targeted toward developers or maintainers who need to clone, set up, and run the application for future development or bug fixes.

Prerequisites:

1. **Java**: Ensure that you have **JDK 11** or higher installed.
    - Oracle's JDK Website has JDK 11
2. **Maven**: This project uses **Maven** for dependency management.
    - Maven: Maven Installation Guide
3. **MySQL Database**: Ensure **MySQL** is installed and running. You can set up a database for the project.
4. **Docker (Optional)**: Docker can be used for an easier setup of the application, especially the database setup.
5. **IDE**: Use an IDE like **IntelliJ IDEA** for managing the project.

Steps to Set Up the Application:

1. **Clone the Repository**:

Open a terminal and run the following command:

```
git clone
https://gitlab.com/wgu-gitlab-environment/student-repos/ajwint.cs/d424
-software-engineering-capstone.git
```

    -

2. **Navigate to the Project Directory**:

After cloning, navigate to the project's root folder:
`cd d424-software-engineering-capstone`

3. **Set Up the Database**:

Create a new MySQL database:
`CREATE DATABASE capstone_db;`

Update the `application.properties` file (found in `src/main/resources`) with your MySQL credentials:
```
spring.datasource.url=jdbc:mysql://localhost:3306/capstone_db
spring.datasource.username=your-username
spring.datasource.password=your-password
```

4. **Run the Application**:

Use Maven to build and run the application:
```
mvn clean install
mvn spring-boot:run
```

5. **Access the Application**:

Once the application is running, you can access it in your browser at:
`http://localhost:8080/mainscreen`

Docker Setup (Optional):

If you prefer using Docker, the project includes a `Dockerfile`. You can use the following commands to build and run the Docker container:
```
docker build -t d424-capstone .
docker run -p 8080:8080 d424-capstone
```

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3. User Guide for Running the Application (End-User Guide)

This guide is targeted toward a non-technical user who needs to interact with the system to manage parts and products.

Accessing the Application:

Open your web browser and navigate to:
`http://localhost:8080/mainscreen`

Navigating the Application:

- **Main Screen**:
  - Here, you can view all the **parts** and **products** available in the inventory system.
  - Use the **search bar** to filter parts or products by name.
- **Add Part**:
  - Click on **Add Part** to add a new part (either an in-house or outsourced part).
  - Fill out the required fields (name, price, inventory, min, max) and click **Submit**.
- **Add Product**:
  - Click on **Add Product** to create a new product.
  - Ensure the inventory values for the parts are valid before submitting the product.
- **Update Part or Product**:
  - Select a part or product from the main screen and click **Update**.
  - Modify the details as needed and click **Submit** to save your changes.
  - For products, you can associate parts with the product during this process.
- **Delete Part or Product**:
  - Select a part or product from the list and click **Delete** to remove it from the inventory.
  - Ensure that no products are associated with the part before deleting it.
- **Purchase a Product**:
  - To purchase a product, select it and input the quantity you wish to buy.
  - The system will automatically reduce the inventory once the purchase is successful.

Reports:

- You can generate CSV reports for **parts** and **products** by navigating to the relevant section (ex:, Parts or Products) and clicking the **Generate Report** button.
- This will download a CSV file with the current state of the inventory.