Launcher API Project

Overview

This project provides a REST API for managing launchers. It allows you to perform CRUD operations (Create, Read, Update, Delete) on launcher entities and also fetch launcher data from an external API.

Technologies Used

- Java 17
- Spring Boot 3.3.0
- Maven
- H2 Database (for testing purposes)
- Mockito (for unit testing)
- Spring Data JPA
- Spring Web

Setup and Running the Project

Prerequisites

- JDK 17
- Maven 3.8.1 or higher

Building the Project

Build the project using Maven:

```
mvn clean install
```

Running the Application

Navigate to the project directory:

```
mvn spring-boot:run
```

The application will start and be accessible at http://localhost:8080.

API Endpoints

Get All Launchers

1. URL: /api/launchers
2. Method: GET
3. Response: List of all launchers

Fetch and Save Launchers

1. URL: /api/launchers/fetch-and-save
2. Method: POST
3. Response: Initiates fetching and saving launchers from an external API

Get Launcher by ID

1. URL: /api/launchers/{id}
2. Method: GET
3. Response: Launcher with the specified ID

Create a Launcher

1. URL: /api/launchers
2. Method: POST
3. Request Body: JSON object with launcher details
4. Response: Created launcher

Update a Launcher

1. URL: /api/launchers/{id}
2. Method: PUT
3. Request Body: JSON object with updated launcher details
4. Response: Updated launcher

Delete a Launcher

1. URL: /api/launchers/{id}
2. Method: DELETE
3. Response: Deletes the launcher with the specified ID

Example curl Commands

Get All Launchers

```
curl -X GET http://localhost:8080/api/launchers
```

Fetch and Save Launchers

```
curl -X POST http://localhost:8080/api/launchers/fetch-and-save
```

Get a Specific Launcher

```
curl -X GET http://localhost:8080/api/launchers/SLV-3E1
```

Create a New Launcher

```
curl -X POST http://localhost:8080/api/launchers \
-H "Content-Type: application/json" \
-d '{
  "id": "GSLV-F10"
}'
```

Update an Existing Launcher

```
curl -X PUT http://localhost:8080/api/launchers/GSLV-F10 \
-H "Content-Type: application/json" \
-d '{
  "id": "GSLV-F10"
}'
```

Delete an Existing Launcher

```
curl -X DELETE http://localhost:8080/api/launchers/GSLV-F10
```

Running Tests

To run the unit tests, use the following command:

```
mvn test
```