

# Cymbal Eats: Menu Service

A Technical Overview

# What is the Menu Service?

- A backend microservice for the **Cymbal Eats** application.
- **Primary Role:** Manages all restaurant menu items.
- Provides a complete REST API for creating, reading, updating, and deleting (CRUD) menu data.

# Technology Stack

- **Language:** Java
- **Framework:** Quarkus (for high performance and native builds)
- **Database:** PostgreSQL
- **API Layer:** JAX-RS (for creating REST endpoints)
- **Data Access:** Hibernate ORM with Panache (simplifies database operations)
- **Build Tool:** Maven

# Core Architecture

- **MenuResource.java** (Controller): Defines and implements all the REST API endpoints. This is the entry point for all external requests.
- **MenuRepository.java** (Repository): Handles the direct communication with the database.
- **Menu.java** (JPA Entity): The data model that represents a menu item in the database.
- **application.properties** : Configuration file for database connections, logging, and other settings.

# Key API Endpoints

The API is available under the `/menu` path.

- `GET /menu` : Get all menu items.
- `GET /menu/{id}` : Get a single item by its ID.
- `GET /menu/{status}` : Get items filtered by status (e.g., `ready`, `failed`).
- `POST /menu` : Create a new menu item.
- `PUT /menu/{id}` : Update an existing item.
- `DELETE /menu/{id}` : Remove an item.

# How to Build & Run

- **Run in Dev Mode:**

```
./mvnw quarkus:dev
```

- **Run Tests:**

```
./mvnw test
```

- **Build for JVM:**

```
./mvnw package -DskipTests
```

- **Build a Native Executable:**

```
./mvnw package -Pnative -DskipTests
```