

pom.xml

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.example</groupId>
  <artifactId>restaurant-service</artifactId>
  <version>1.0.0</version>
  <packaging>jar</packaging>

  <properties>
    <java.version>17</java.version>
    <spring.boot.version>3.2.5</spring.boot.version>
  </properties>

  <dependencies>
    <!-- Spring Boot Starter Web -->
    <dependency>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-starter-web</artifactId>
    </dependency>

    <!-- Spring Boot Starter JPA -->
    <dependency>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-starter-data-jpa</artifactId>
    </dependency>

    <!-- H2 Database -->
    <dependency>
      <groupId>com.h2database</groupId>
      <artifactId>h2</artifactId>
      <scope>runtime</scope>
    </dependency>

    <!-- Lombok (Optional for Getters/Setters) -->
    <dependency>
      <groupId>org.projectlombok</groupId>
      <artifactId>lombok</artifactId>
      <optional>true</optional>
    </dependency>


    <!-- Spring Boot Test -->
    <dependency>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-starter-test</artifactId>
      <scope>test</scope>
    </dependency>
  </dependencies>
</project>
```

```

        </dependency>
    </dependencies>

    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>
    </build>
</project>

```

2  Main Application

```


package com.example.restaurantService;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication
public class RestaurantServiceApplication {

    public static void main(String[] args) {
        SpringApplication.run(RestaurantServiceApplication.class, args);
    }
}

```

3  Entities

Restaurant.java

```

package com.example.restaurantService.entity;

import jakarta.persistence.*;

@Entity
@Table(name = "restaurants")
public class Restaurant {

    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    private Long id;

    private String name;
    private String location;
    private String contactNumber;

    public Restaurant() {}

    public Restaurant(String name, String location, String contactNumber) {
        this.name = name;
        this.location = location;
        this.contactNumber = contactNumber;
    }
}

```

```

    public Long getId() { return id; }
    public void setId(Long id) { this.id = id; }
    public String getName() { return name; }
    public void setName(String name) { this.name = name; }
    public String getLocation() { return location; }
    public void setLocation(String location) { this.location = location; }
    public String getContactNumber() { return contactNumber; }
    public void setContactNumber(String contactNumber) { this.contactNumber =
contactNumber; }
}

```

MenuItem.java

java

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```
package com.example.restaurant.service.entity;
```

```
import jakarta.persistence.*;
```

```
@Entity
```

```
@Table(name = "menu_items")
```

```
public class MenuItem {
```

```
    @Id
```

```
    @GeneratedValue(strategy = GenerationType.IDENTITY)
```

```
    private Long id;
```

```
    private Long restaurantId;
```

```
    private String name;
```

```
    private String description;
```

```
    private Double price;
```

```
    public MenuItem() {}
```

```
    public MenuItem(Long restaurantId, String name, String description, Double
price) {
```

```
        this.restaurantId = restaurantId;
```

```
        this.name = name;
```

```
        this.description = description;
```

```
        this.price = price;
```

```
    }
```

```
    public Long getId() { return id; }
```

```
    public void setId(Long id) { this.id = id; }
```

```
    public Long getRestaurantId() { return restaurantId; }
```

```
    public void setRestaurantId(Long restaurantId) { this.restaurantId =
restaurantId; }
```

```
    public String getName() { return name; }
```

```
    public void setName(String name) { this.name = name; }
```

```
    public String getDescription() { return description; }
```

```

    public void setDescription(String description) { this.description =
description; }
    public Double getPrice() { return price; }
    public void setPrice(Double price) { this.price = price; }
}

```

#### 4 Repositories

RestaurantRepository.java

```
package com.example.restaurant.service.repository;
```

```
import com.example.restaurant.service.entity.Restaurant;
import org.springframework.data.jpa.repository.JpaRepository;
```

```
public interface RestaurantRepository extends JpaRepository<Restaurant, Long> {}
MenuItemRepository.java

```

java

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```
package com.example.restaurant.service.repository;
```

```
import com.example.restaurant.service.entity.MenuItem;
import org.springframework.data.jpa.repository.JpaRepository;
import java.util.List;
```

```
public interface MenuItemRepository extends JpaRepository<MenuItem, Long> {
    List<MenuItem> findByRestaurantId(Long restaurantId);
}

```

#### 5 Services

RestaurantService.java

```
package com.example.restaurant.service.service;
```

```
import com.example.restaurant.service.entity.Restaurant;
import com.example.restaurant.service.repository.RestaurantRepository;
import org.springframework.stereotype.Service;
```

```
import java.util.List;
```

```
@Service
```

```
public class RestaurantService {
```

```
    private final RestaurantRepository repository;
```

```
    public RestaurantService(RestaurantRepository repository) {
        this.repository = repository;
    }

```

```
    public Restaurant addRestaurant(Restaurant restaurant) {
        return repository.save(restaurant);
    }
}

```

```

    public List<Restaurant> getAllRestaurants() {
        return repository.findAll();
    }

    public Restaurant getRestaurantById(Long id) {
        return repository.findById(id)
            .orElseThrow(() -> new RuntimeException("Restaurant not found"));
    }
}
MenuItemService.java

```

```

package com.example.restaurant.service;

import com.example.restaurant.service.entity.MenuItem;
import com.example.restaurant.service.repository.MenuItemRepository;
import org.springframework.stereotype.Service;

import java.util.List;

@Service
public class MenuItemService {

    private final MenuItemRepository repository;

    public MenuItemService(MenuItemRepository repository) {
        this.repository = repository;
    }

    public MenuItem addMenuItem(MenuItem item) {
        return repository.save(item);
    }

    public List<MenuItem> getMenuItemsByRestaurant(Long restaurantId) {
        return repository.findByRestaurantId(restaurantId);
    }
}

```

❏ Controllers

```

RestaurantController.java
package com.example.restaurant.service.controller;

import com.example.restaurant.service.entity.Restaurant;
import com.example.restaurant.service.service.RestaurantService;
import org.springframework.web.bind.annotation.*;

import java.util.List;

@RestController
@RequestMapping("/restaurants")
public class RestaurantController {

```

```

private final RestaurantService service;

public RestaurantController(RestaurantService service) {
    this.service = service;
}

@PostMapping
public Restaurant addRestaurant(@RequestBody Restaurant restaurant) {
    return service.addRestaurant(restaurant);
}

@GetMapping
public List<Restaurant> getAllRestaurants() {
    return service.getAllRestaurants();
}

@GetMapping("/{id}")
public Restaurant getRestaurantById(@PathVariable Long id) {
    return service.getRestaurantById(id);
}
}
MenuItemController.java
java
Copy
Edit
package com.example.restaurant.service.controller;

import com.example.restaurant.service.entity.MenuItem;
import com.example.restaurant.service.service.MenuItemService;
import org.springframework.web.bind.annotation.*;

import java.util.List;

@RestController
@RequestMapping("/restaurants/{restaurantId}/menu-items")
public class MenuItemController {

    private final MenuItemService service;

    public MenuItemController(MenuItemService service) {
        this.service = service;
    }

    @PostMapping
    public MenuItem addMenuItem(@PathVariable Long restaurantId, @RequestBody
MenuItem item) {
        item.setRestaurantId(restaurantId);
        return service.addMenuItem(item);
    }
}

```

```
@GetMapping
public List<MenuItem> getMenuItemsByRestaurant(@PathVariable Long restaurantId)
{
    return service.getMenuItemsByRestaurant(restaurantId);
}
```

☐ application.properties

```
spring.datasource.url=jdbc:h2:mem:restaurantdb
spring.datasource.driverClassName=org.h2.Driver
spring.datasource.username=sa
spring.datasource.password=
spring.jpa.hibernate.ddl-auto=update
spring.h2.console.enabled=true
spring.h2.console.path=/h2-console
```

☒ This is a fully runnable Restaurant Service microservice.

If you run it, you'll have APIs like: