
CS5004 Final Project

SKILL UP NOW

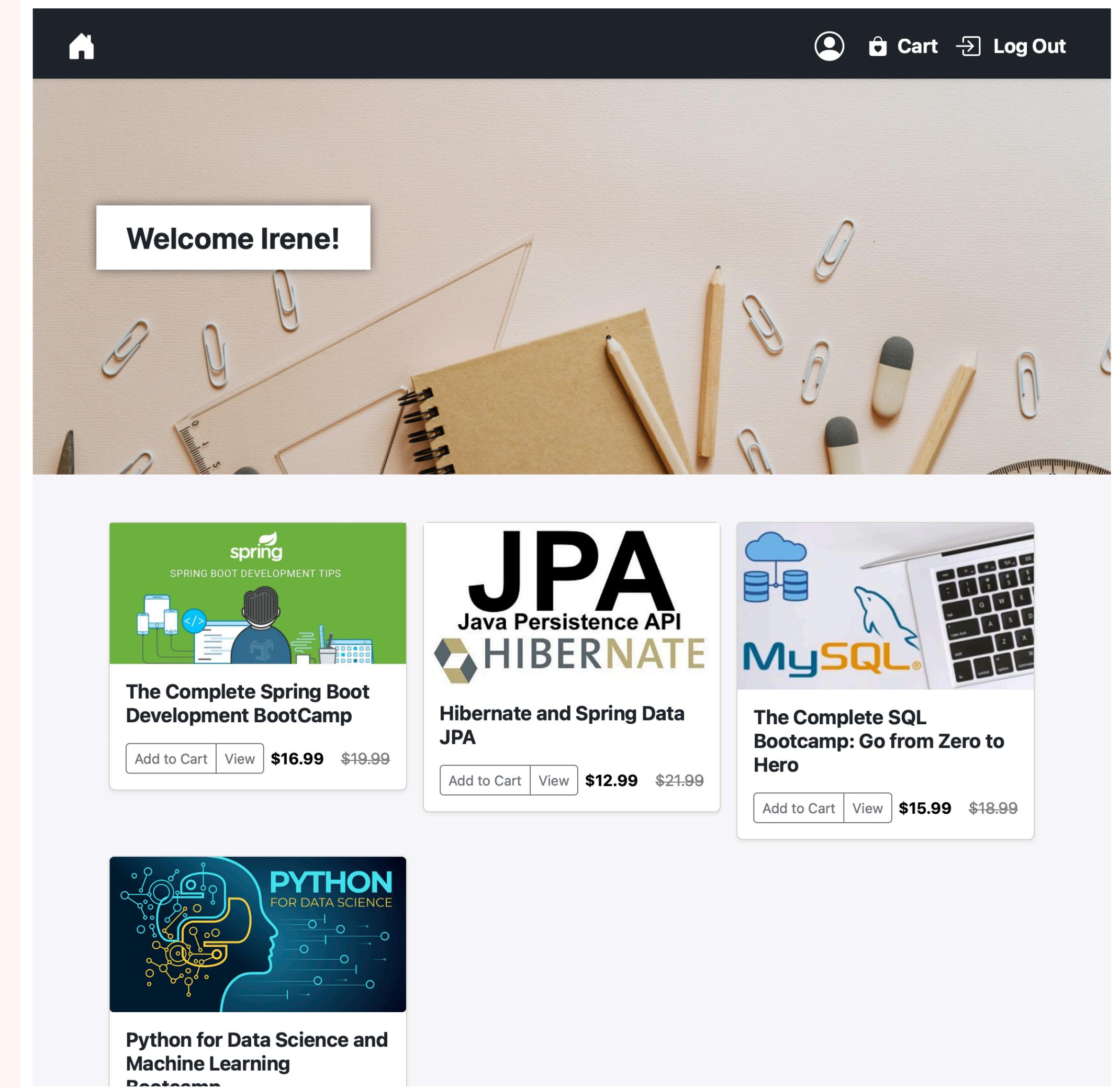
Hua Wang

GOALS & RATIONALE

- **Massive Open Online Course (MOOC)**

Marketplace

- **Helping individuals improve their programming skills for personal and professional growth.**



KEY ROLES

Customer

**Course Enrollment/
Progress Checking**

Organization

**Course Creation/
Management**

Administrator

Platform Management

KEY FEATURES

➤ Course Exploration

Show Course Catalog
View Course Content
Add Course to Cart

➤ Cart Management

Show Cart Content
Delete Course
Check out

➤ Personal Profile

View/Edit Portfolio
Edit Credential
View Order History

PROJECT SHOWCASE

A quick demo to SkillUpNow

FRAMEWORKS

- **Spring Boot: application development**
 - **JPA and Hibernate: database interaction**
 - **MySQL database: data storage**
 - **Maven: dependency management**
-

MVC ARCHITECTURE

> Model

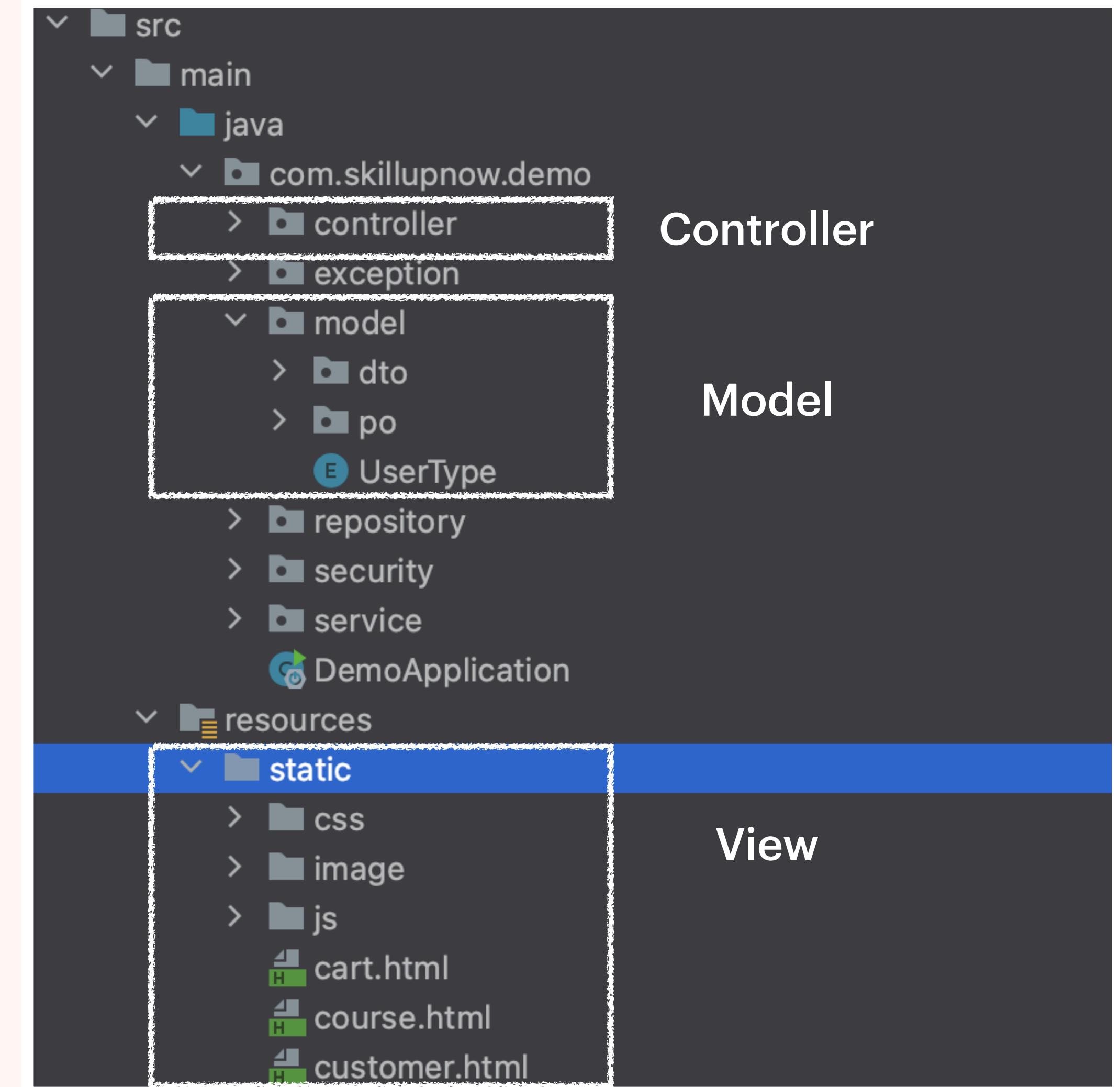
- **Persistent Object (PO)**
- **Data Transfer Object (DTO)**

> View

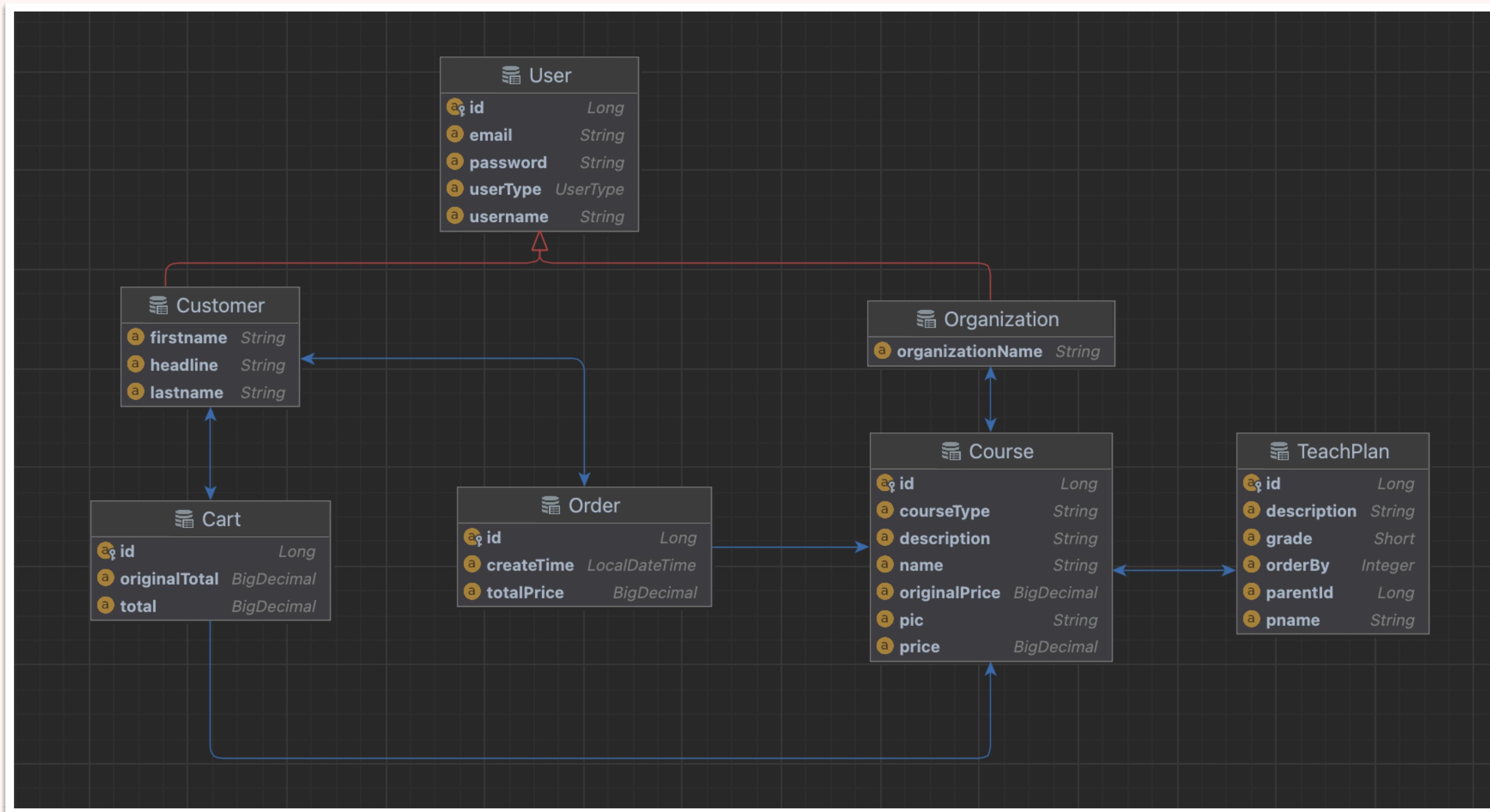
- **HTML pages that display data from the model**

> Controller

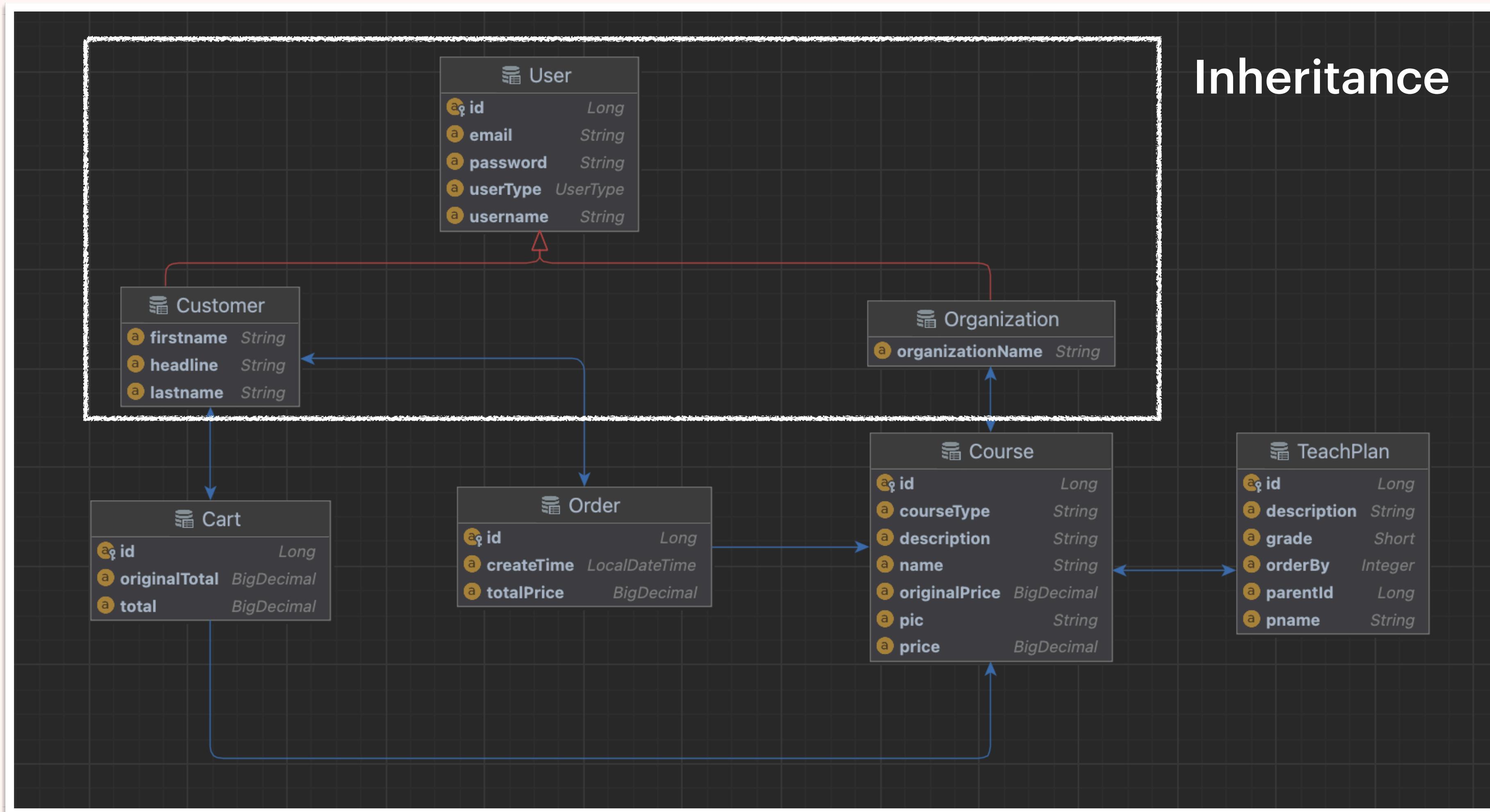
- **@RestController handles Http Request**



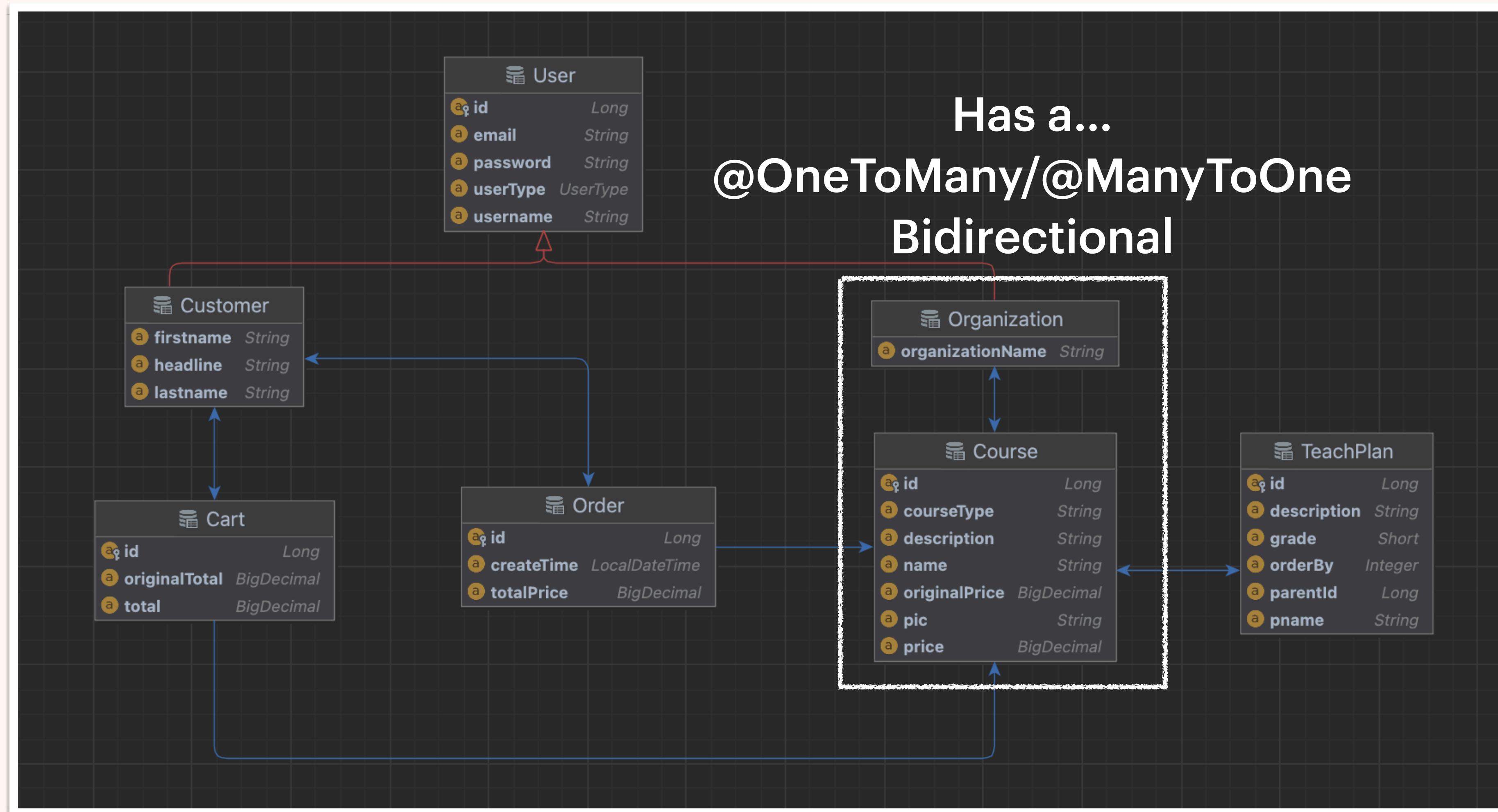
MODEL



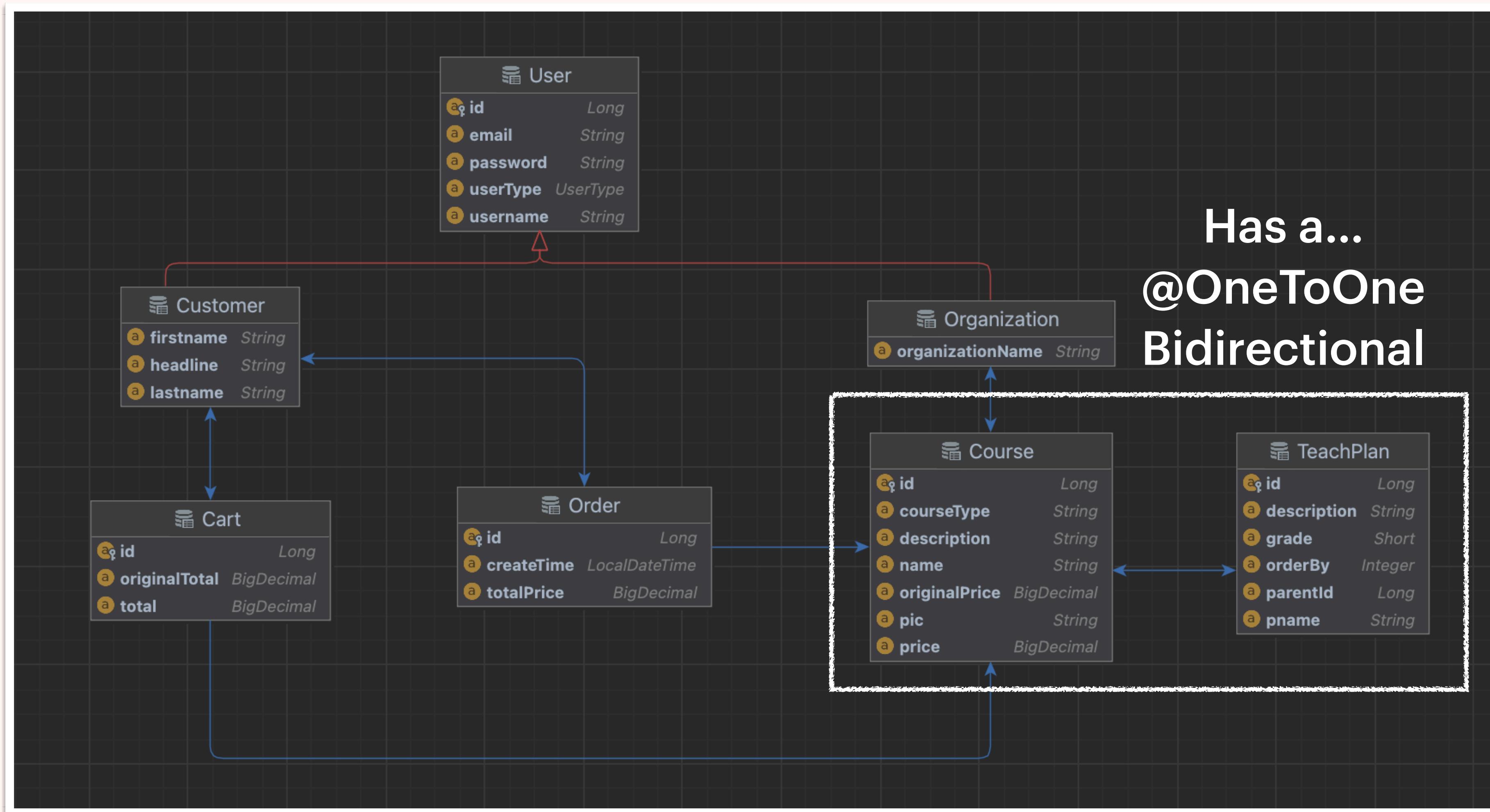
MODEL



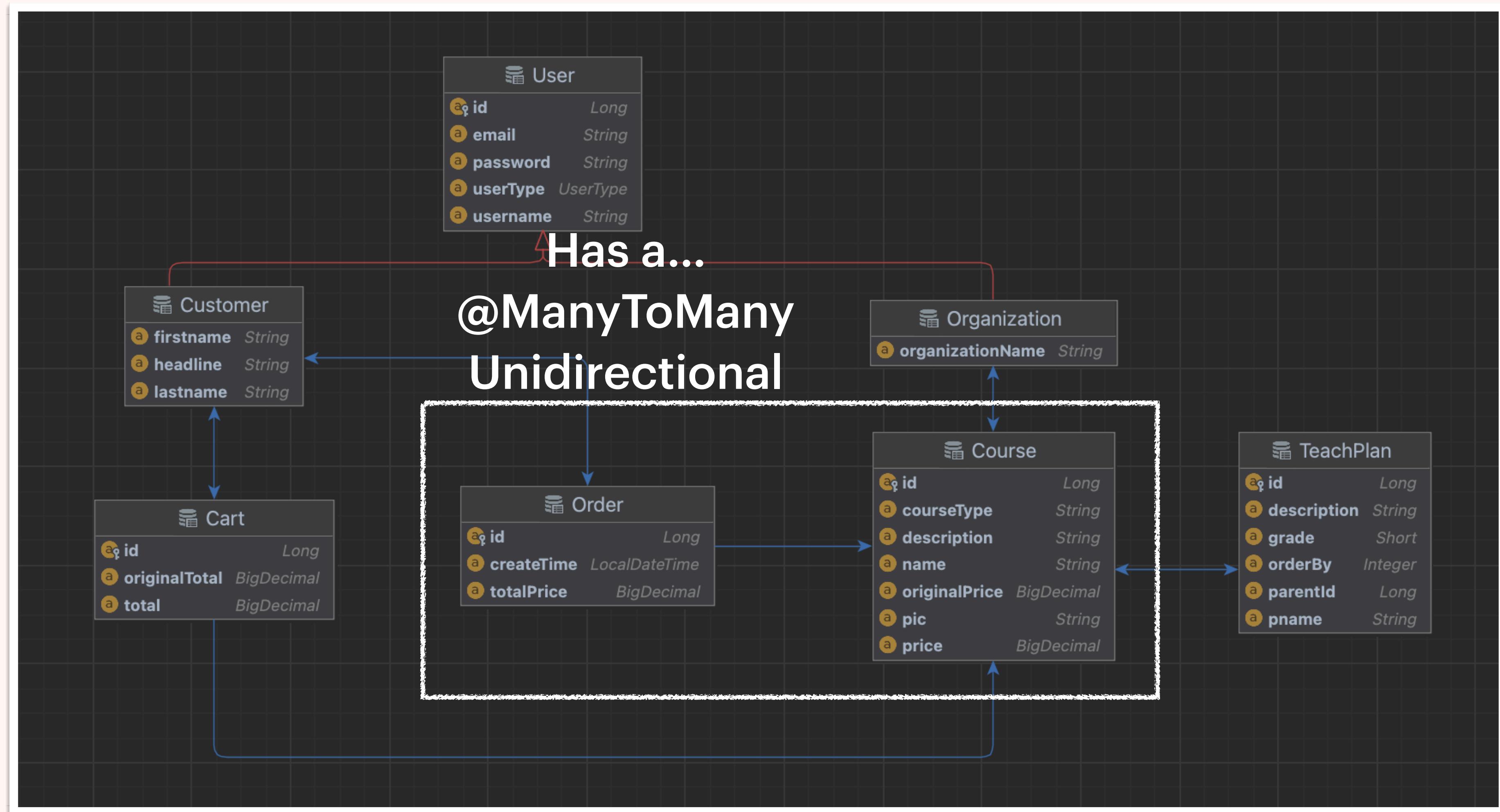
MODEL



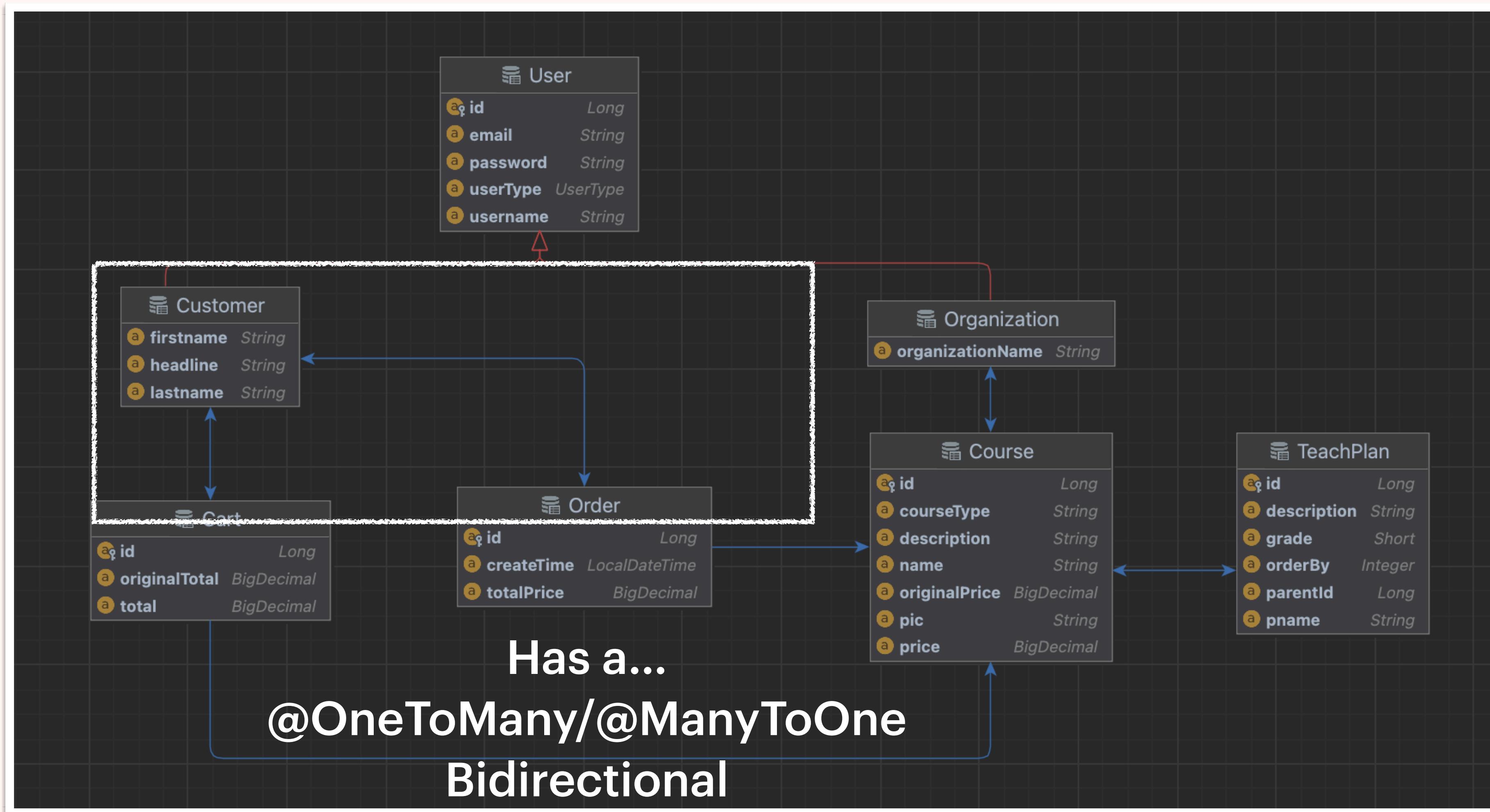
MODEL



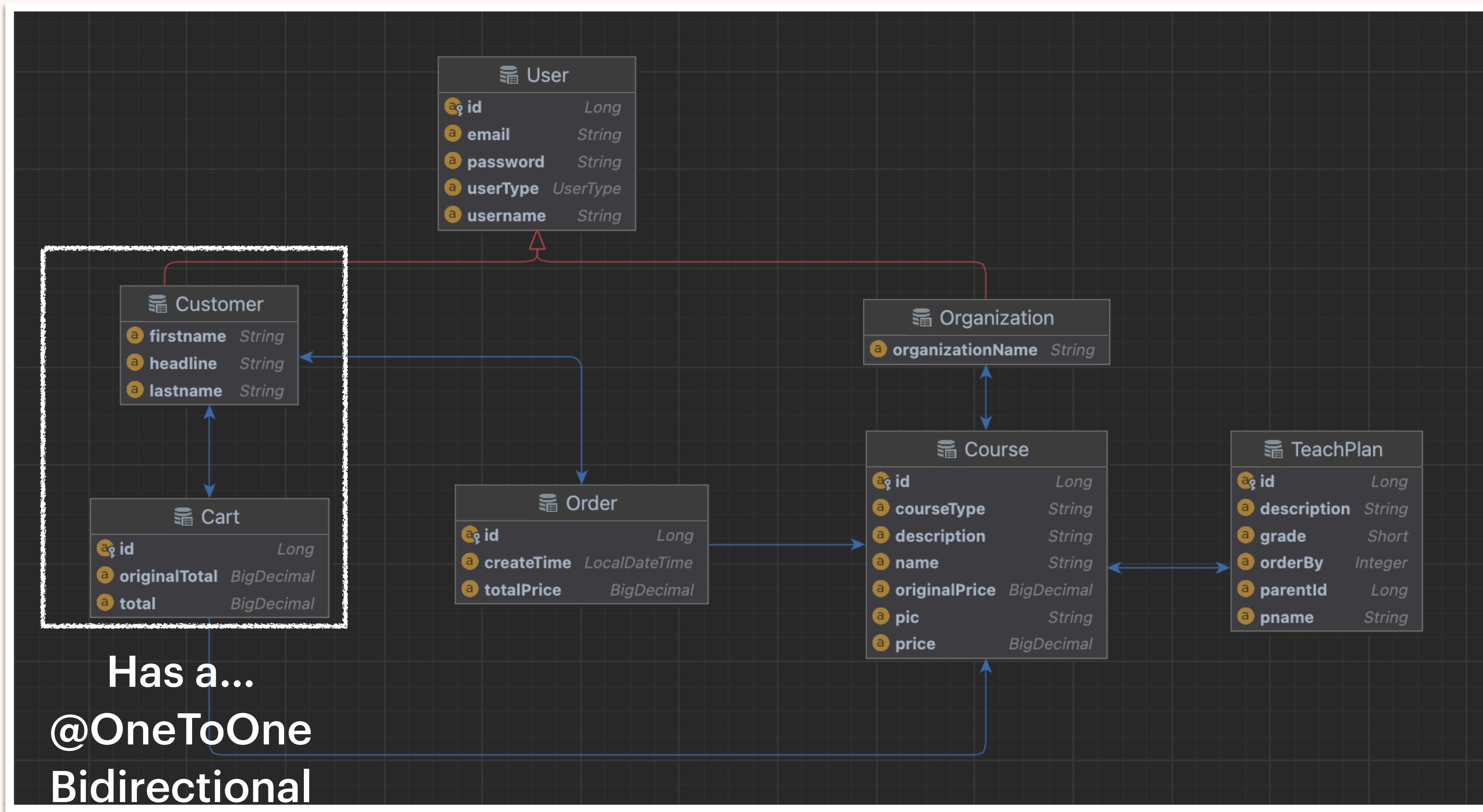
MODEL



MODEL



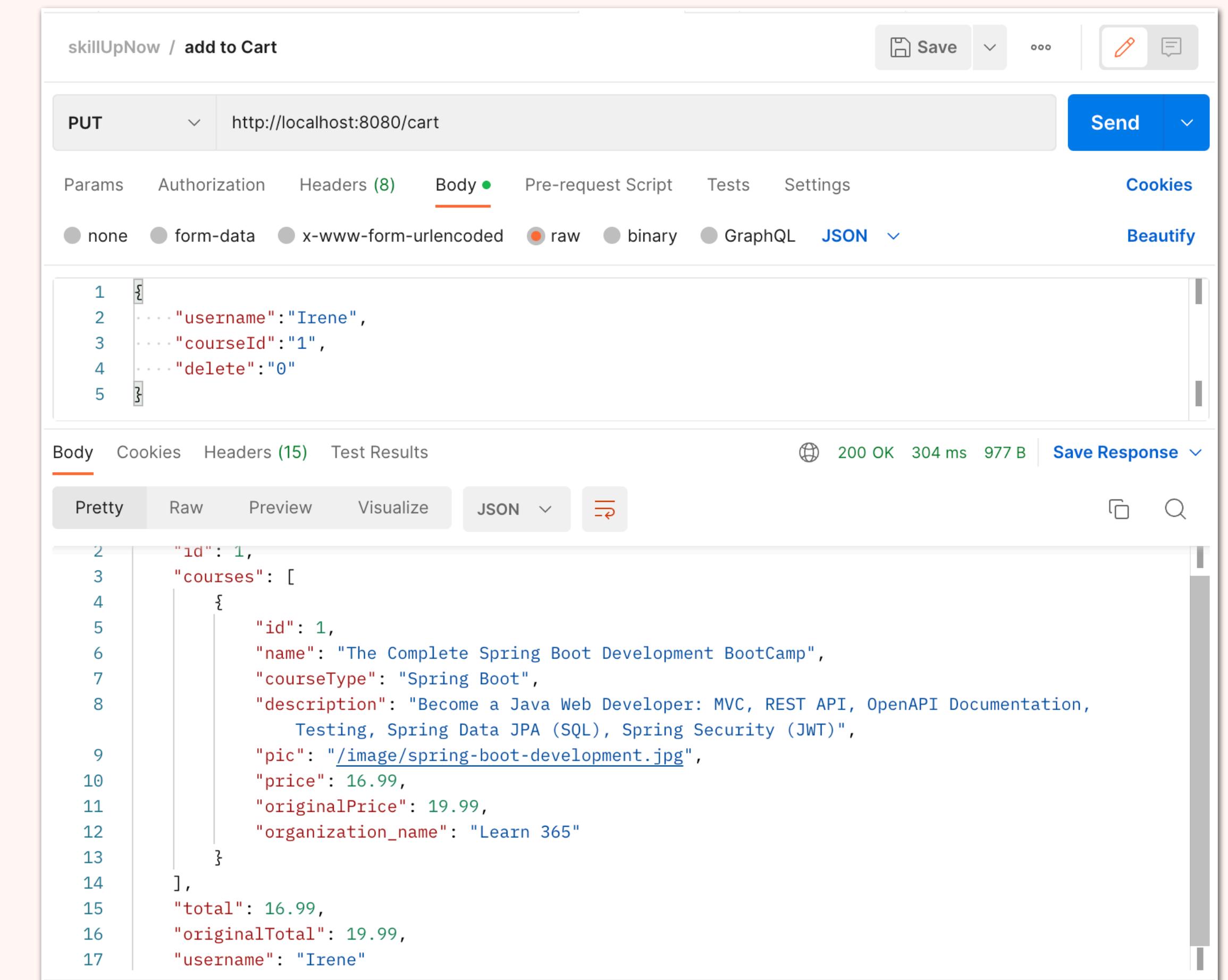
MODEL



CONTROLLER

➤ @RestController

- RESTful web service controller
- Contains methods mapped to specific HTTP request types & URL patterns
- Process incoming requests
- Dispatch tasks to corresponding services/ repositories
- Return the response in JSON format



The screenshot shows a Postman request configuration for a PUT method at `http://localhost:8080/cart`. The request body is set to `JSON` and contains the following JSON payload:

```
1 {  
2   ... "username": "Irene",  
3   ... "courseId": "1",  
4   ... "delete": "0"  
5 }
```

The response tab shows a successful `200 OK` status with a `total` of `16.99`, `originalTotal` of `19.99`, and the user `username` `Irene`.

```
2 {  
3   "id": 1,  
4   "courses": [  
5     {  
6       "id": 1,  
7       "name": "The Complete Spring Boot Development BootCamp",  
8       "courseType": "Spring Boot",  
9       "description": "Become a Java Web Developer: MVC, REST API, OpenAPI Documentation, Testing, Spring Data JPA (SQL), Spring Security (JWT)",  
10      "pic": "/image/spring-boot-development.jpg",  
11      "price": 16.99,  
12      "originalPrice": 19.99,  
13      "organization_name": "Learn 365"  
14    },  
15    "total": 16.99,  
16    "originalTotal": 19.99,  
17    "username": "Irene"
```

SUMMARY

➤ Goals and Rationale

- **Build an e-Commerce web application**

➤ Key Features

- **Course exploration/cart management/user profile management**

➤ Key Ideas of Object Oriented Design

- **MVC architecture, inheritance, encapsulation, composition, etc.**

➤ Challenges & lessons learned

- **Spring MVC, Spring Security, HTTP request & response, Database...**
 - **Make sure to test all edge cases before proceed to the next module!!!**
-

FUTURE EXTENSION

➤ Course Management

Create/Manage Course

Multimedia Content

➤ Community Support

Course Ratings/Reviews

Discussion & Message

Bibliography

- [1]krislin, “StudyNotes,” *GitHub*, Apr. 25, 2023. <https://github.com/krislinzhao/StudyNotes> (accessed Apr. 25, 2023).
- [2]H. Wang, “Skill Up Now Course Management System,” *GitHub*, Apr. 06, 2023. <https://github.com/hua2980/SkillUpNow> (accessed Apr. 25, 2023).
- [3]H. Wang, “eCommerce Application,” *GitHub*, Jan. 09, 2023. <https://github.com/hua2980/eCommerce-Application>
- [4]H. Wang, “Critter Chronologer Project Starter,” *GitHub*, Jan. 02, 2023. <https://github.com/hua2980/critter-chronologer>
-

**THANK YOU FOR YOUR
ATTENTION!**
