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https://github.com/acenelio/workshop-springboot2-jpa
https://github.com/acenelio/workshop-springboot3-jpa
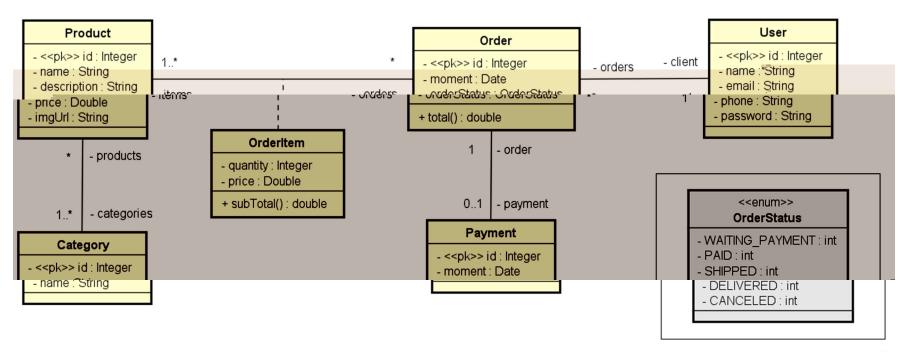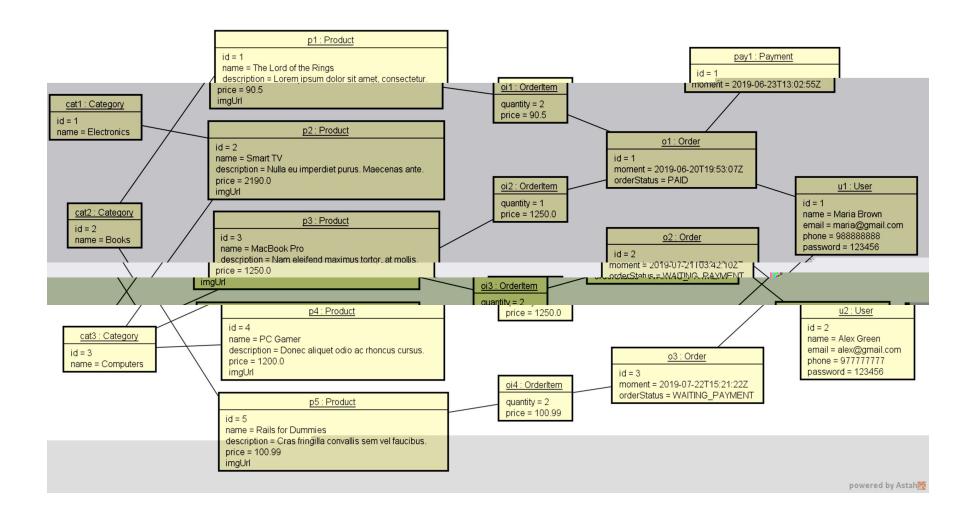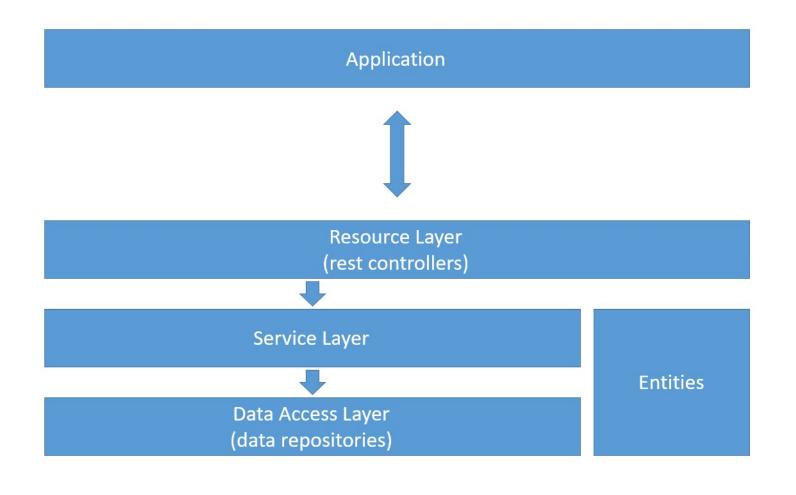
Product
- <<pk>> id : Integer
- name : String
- description : String
- price : Double
- imgUrl : String

Order
- <<pk>> id : Integer
- moment : Date
- orderStatus : OrderStatus
+ total() : double

User
- <<pk>> id : Integer
- name : String
- email : String
- phone : String
- password : String

OrderItem
- quantity : Integer
- price : Double
+ subTotal() : double

Category
- <<pk>> id : Integer
- name : String

Payment
- <<pk>> id : Integer
- moment : Date

<<enum>>
OrderStatus
- WAITING_PAYMENT : int
- PAID : int
- SHIPPED : int
- DELIVERED : int
- CANCELED : int

1..*   *   - orders   - client

- items   - orders

*   - products

1   - order

1..*   - categories

0..1   - payment

p1 : Product

id = 1
name = The Lord of the Rings
description = Lorem ipsum dolor sit amet, consectetur.
price = 90.5
imgUrl

p2 : Product

id = 2
name = Smart TV
description = Nulla eu imperdiet purus. Maecenas ante.
price = 2190.0
imgUrl

p3 : Product

id = 3
name = MacBook Pro
description = Nam eleifend maximus tortor, at mollis.
price = 1250.0
imgUrl

p4 : Product

id = 4
name = PC Gamer
description = Donec aliquet odio ac rhoncus cursus.
price = 1200.0
imgUrl

p5 : Product

id = 5
name = Rails for Dummies
description = Cras fringilla convallis sem vel faucibus.
price = 100.99
imgUrl

cat1 : Category

id = 1
name = Electronics

cat2 : Category

id = 2
name = Books

cat3 : Category

id = 3
name = Computers

oi1 : OrderItem

quantity = 2
price = 90.5

oi2 : OrderItem

quantity = 1
price = 1250.0

oi3 : OrderItem

quantity = 2
price = 1250.0

oi4 : OrderItem

quantity = 2
price = 100.99

pay1 : Payment

id = 1
moment = 2019-06-23T13:02:55Z

o1 : Order

id = 1
moment = 2019-06-20T19:53:07Z
orderStatus = PAID

o2 : Order

id = 2
moment = 2019-07-21T03:42:10Z
orderStatus = WAITING_PAYMENT

o3 : Order

id = 3
moment = 2019-07-22T15:21:22Z
orderStatus = WAITING_PAYMENT

u1 : User

id = 1
name = Maria Brown
email = maria@gmail.com
phone = 988888888
password = 123456

u2 : User

id = 2
name = Alex Green
email = alex@gmail.com
phone = 977777777
password = 123456

Checklist:

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Basic entity checklist:

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Checklist:

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Dependencies:

```xml
<dependency>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-starter-data-jpa</artifactId>
</dependency>

<dependency>
      <groupId>com.h2database</groupId>
      <artifactId>h2</artifactId>
      <scope>runtime</scope>
</dependency>
```

application.properties:

```properties
spring.profiles.active=test

spring.jpa.open-in-view=true
```

application-test.properties:

```
# DATASOURCE
spring.datasource.driverClassName=org.h2.Driver
spring.datasource.url=jdbc:h2:mem:testdb
spring.datasource.username=sa
spring.datasource.password=

# H2 CLIENT
spring.h2.console.enabled=true
spring.h2.console.path=/h2-console

# JPA, SQL
spring.jpa.database-platform=org.hibernate.dialect.H2Dialect
spring.jpa.defer-datasource-initialization=true
spring.jpa.show-sql=true
spring.jpa.properties.hibernate.format_sql=true
```

Checklist:

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Objects:

```
User u1 = new User(null, "Maria Brown", "maria@gmail.com", "988888888", "123456");
User u2 = new User(null, "Alex Green", "alex@gmail.com", "977777777", "123456");
```

Basic new entity checklist:

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Objects:

```
Order o1 = new Order(null, Instant.parse("2019-06-20T19:53:07Z"), u1);
Order o2 = new Order(null, Instant.parse("2019-07-21T03:42:10Z"), u2);
Order o3 = new Order(null, Instant.parse("2019-07-22T15:21:22Z"), u1);
```

Objects:

```
Category cat1 = new Category(null, "Electronics");
Category cat2 = new Category(null, "Books");
Category cat3 = new Category(null, "Computers");
```

Objects:

```
Product p1 = new Product(null, "The Lord of the Rings", "Lorem ipsum dolor sit amet, consectetur.", 90.5, "");
Product p2 = new Product(null, "Smart TV", "Nulla eu imperdiet purus. Maecenas ante.", 2190.0, "");
Product p3 = new Product(null, "Macbook Pro", "Nam eleifend maximus tortor, at mollis.", 1250.0, "");
Product p4 = new Product(null, "PC Gamer", "Donec aliquet odio ac rhoncus cursus.", 1200.0, "");
Product p5 = new Product(null, "Rails for Dummies", "Cras fringilla convallis sem vel faucibus.", 100.99, "");
```

Checklist:

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Objects:

```
OrderItem oi1 = new OrderItem(o1, p1, 2, p1.getPrice());
OrderItem oi2 = new OrderItem(o1, p3, 1, p3.getPrice());
OrderItem oi3 = new OrderItem(o2, p3, 2, p3.getPrice());
OrderItem oi4 = new OrderItem(o3, p5, 2, p5.getPrice());
```

Checklist:

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Test:
```
{
    "name": "Bob Brown",
    "email": "bob@gmail.com",
    "phone": "977557755",
    "password": "123456"
}
```

Checklist:

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Checklist:

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Test:
```
{
    "name": "Bob Brown",
    "email": "bob@gmail.com",
    "phone": "977557755"
}
```

Checklist:

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Checklist:

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Checklist:

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Checklist:

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Checklist:

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Checklist:

- `create database springboot_course`

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```xml
<dependency>
    <groupId>org.postgresql</groupId>
    <artifactId>postgresql</artifactId>
    <scope>runtime</scope>
</dependency>
```

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```
spring.datasource.url=jdbc:postgresql://localhost:5432/springboot_course
spring.datasource.username=postgres
spring.datasource.password=1234567

spring.jpa.properties.hibernate.jdbc.lob.non_contextual_creation=true
spring.jpa.hibernate.ddl-auto=update
spring.jpa.show-sql=true
spring.jpa.properties.hibernate.format_sql=true

jwt.secret=MYJWTSECRET
jwt.expiration=3600000
```

- spring.profiles.active=dev

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Checklist:
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user

password

server

port

database

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Google: Heroku CLI

Terminal

```
heroku login

winpty heroku.cmd login
```

-
  ```
  heroku git:remote -a myapp
  git remote -v
  ```

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```
spring.datasource.url=${DATABASE_URL}

spring.jpa.hibernate.ddl-auto=none
spring.jpa.show-sql=false
spring.jpa.properties.hibernate.format_sql=false

jwt.secret=${JWT_SECRET}
jwt.expiration=${JWT_EXPIRATION}
```

- spring.profiles.active=prod

-

```
java.runtime.version=17
```

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  ```
  git add .
  git commit -m "Deploy app to Heroku"
  git push heroku main
  ```