



Our customers are all over the world

**MOBILE.
WEB.
BIG DATA.**

Our commitment is to your
success.

JAVA Training



WELCOME ABOARD!





WHO ARE WE?

ZYNK is a Romanian software development company specialized in building multi-platform, scalable, and innovative software products.

What makes us different?

- Small enough to be AGILE, big enough to build complex projects
- Successful track record of 100% delivering of offshore projects
- More than 100 projects delivered
- Experts all web, mobile, and platform development
- Designing, building and maintaining complex, large scale, low latency, real-time or transactional systems (e.g. messaging platforms, LBS platforms, gaming platforms, highly transactional services)

Our vision

- Provide affordable high quality services
- Bring expertise in web, mobile and large scale distributed systems
- Provide end-to-end solutions.
- Quality vs. quantity
- Happy customers



Project Management Session

Project Management Session:
17:00 - 19:00



Android & iOS Session

iOS Session 15:00 - 17:00
Android Session 15:00 - 17:00



Android & iOS Session

iOS Session 16:00 - 18:00
Android Session 16:00 - 18:00



Candidates Announcement

Selected candidates will be contacted in order to proceed to the next stage

25/03 Friday

28/03 Monday

29/03 Tuesday

30/03
Wednesday

31/03 Thursday

01/04 Friday

07/04
Thursday

15/04 Friday

Opening Session

Meet and Greet Session: 14:00 - 15:30



Game & Java Session

Game Session - 15:00 - 17:00
Java Session - 17:00 - 19:00



Game & Java Session

Java Session 15:00 - 17:00
Game Session 17:00 - 19:00



Feedback Session

Feedback Session 10:00 - 12:00



TRAINING Presentation

- Duration: 28th March - 1st April
- **Assignments deadline: 7th April**
- Training sessions on the following technologies:
 - Java
 - Android
 - iOS
 - Game development:
- Each technology will have allocated two sessions of 2h
- The structure for the sessions will be:
 - Introduction into the basics of the technology
 - Demonstration of theoretical concepts implemented in an application
- In order to better comprehend the assignments, we advise students to participate in both sessions for the interested technology



TRAINING PRESENTATION

TRAINING

Internship Opportunity

- Our company offers internship position on the following technologies:
 - Java
 - Android
 - iOS
 - Game development
- The internship is paid and has a duration of 3 months
- The internships includes an introduction to technology standards, best practices and processes, mentorship from our technology leaders, working on real projects based on stakeholders' requirements, opportunity to participate in technology guilds, certifications and tutorial courses
- Extra curricular activities include: teambuilding, team outings



TRAINING PRESENTATION

TRAINING

Homework Review and Candidates Selection

- **Deadline for submission of assignments is the 7th of April (included)**
- Each students shall receive a link to the ZYNK public repository from where he/she can fork the project
- The homework should be completed, published to a public repository and shared the repository link with the designated OSUBB volunteer
- On the 7th of April a feedback session will be held with all participants and provide feedback on the reviewed assignments
- Selected candidates will be contacted by the company representative and discuss the next step in the recruitment process

WEB & PLATFORM DEVELOPMENT



- Functional, scalable and secure, the solutions we provide can fit any industry, and they deliver high-quality web apps for companies of all sizes and business models.
- Experience in building large web applications and responsive web
- Architectural principles: micro services, asynchronous messaging, REST, event driven architecture, complex event processing



WHAT ARE WE DOING?

BIG DATA

- Experience in building and designing large scale databases
- Experience with designing Big Data platforms
- Experience in web semantics and machine learning
- Data warehouse design and integration





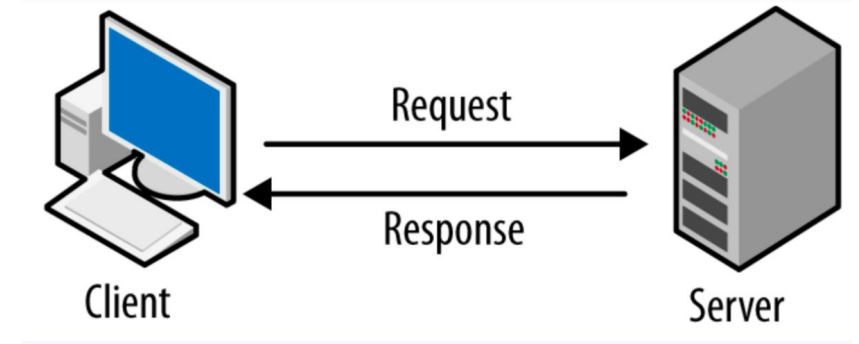
What is a backend application ?

Why/When do we need it.

Serverless and Serverfull applications



How can we communicate with a backend application.



What is HTTP?

/books

| | | |
|--------|-----------------|-------------------------------------|
| GET | /books | Lists all the books in the database |
| DELETE | /books/{bookId} | Deletes a book based on their id |
| POST | /books | Creates a Book |
| PUT | /books/{bookId} | Method to update a book |
| GET | /books/{bookId} | Retrieves a book based on their id |

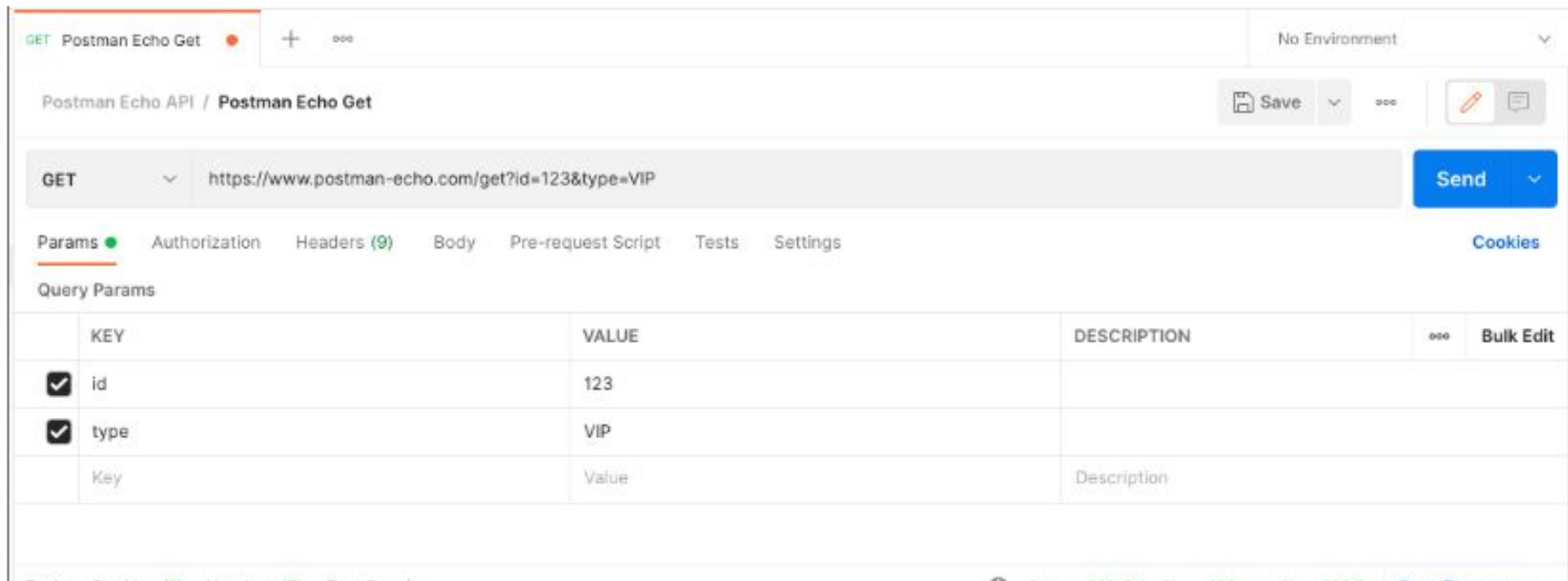


HTTP methods response

```
1 [
2   {
3     "id": 1,
4     "name": "Leanne Graham",
5     "username": "Bret",
6     "email": "Sincere@april.biz",
7     "address": {
8       "street": "Kulas Light",
9       "suite": "Apt. 556",
10      "city": "Gwenborough",
11      "zipcode": "92998-3874",
12      "geo": {
13        "lat": "-37.3159",
14        "lng": "81.1496"
15      }
16    },
17    "phone": "1-770-736-8031 x56442",
18    "website": "hildegard.org",
19    "company": {
20      "name": "Romaguera-Crona",
21      "catchPhrase": "Multi-layered client",
22      "bs": "harness e-commerce"
23    }
24  }
25 ]
```



HTTP methods request





How can we communicate with a backend application.

Mapping controller methods with @RequestMapping

```
@RequestMapping(value = "/users", method = RequestMethod.GET)
public Users getUsers() {
}

@RequestMapping(value = "/users", method = RequestMethod.POST)
public User createUser(User user) {
}

@RequestMapping(value = "/users/{id}", method = RequestMethod.GET)
public User getUser(@PathVariable("id") String id) {
}
```

form-data

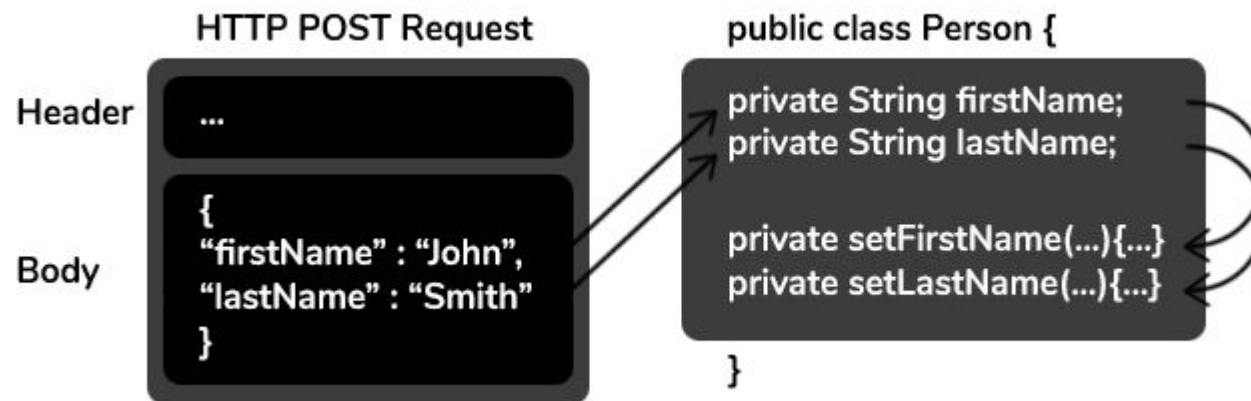
x-www-form-urlencoded

raw

Text ▼

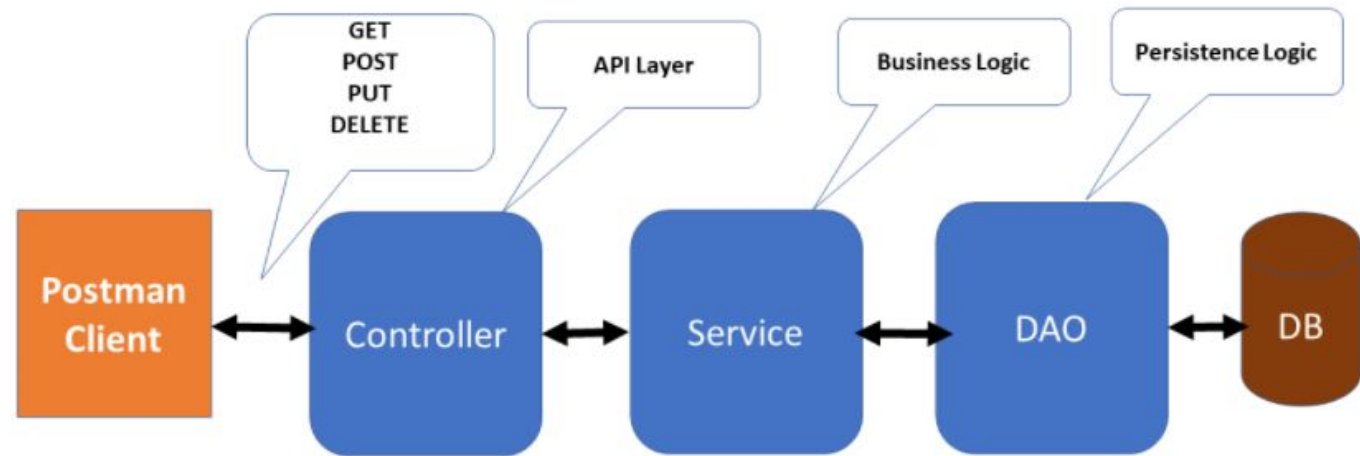
```
1 {
2   "id": 2,
3   "first": "Brian",
4   "last": "Smith"
5 }
```

How can we communicate with a backend application.



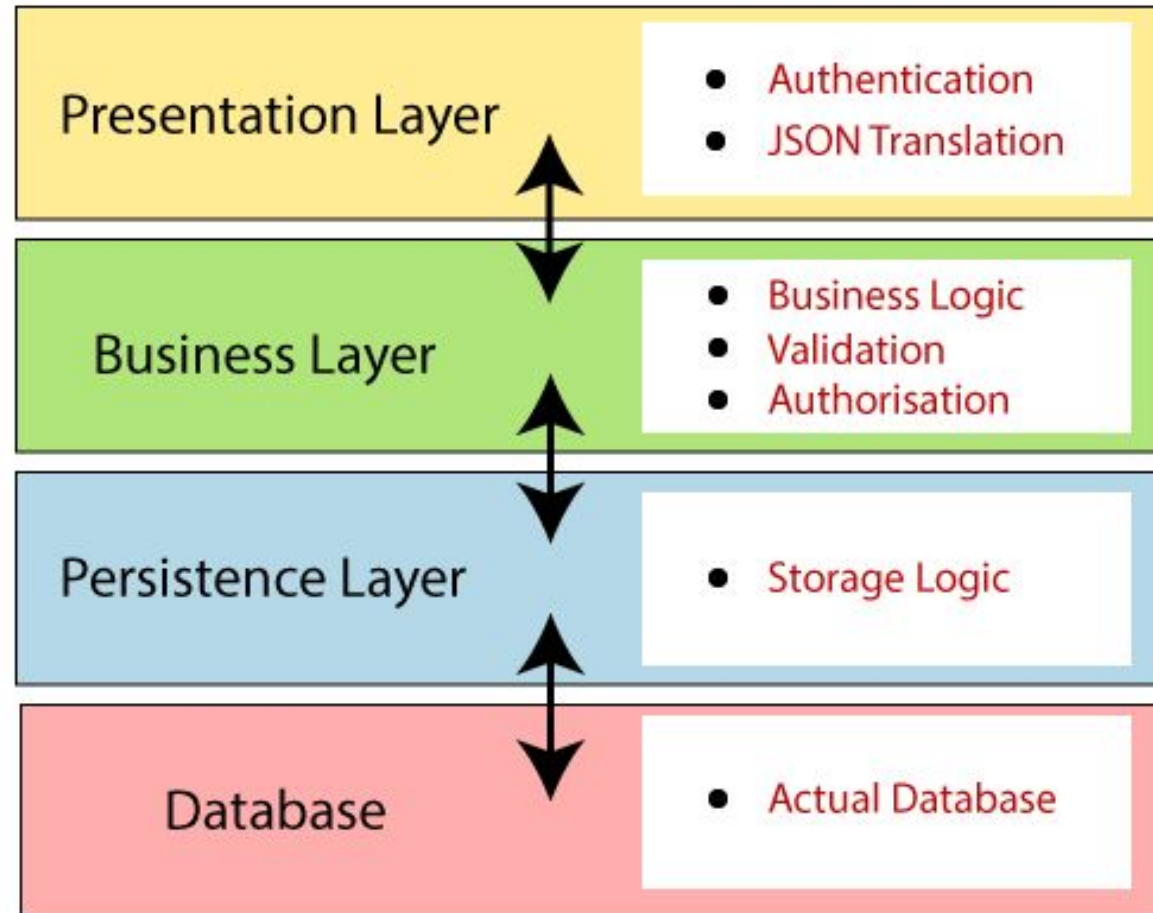
Structure of a server

Spring Boot Project Architecture



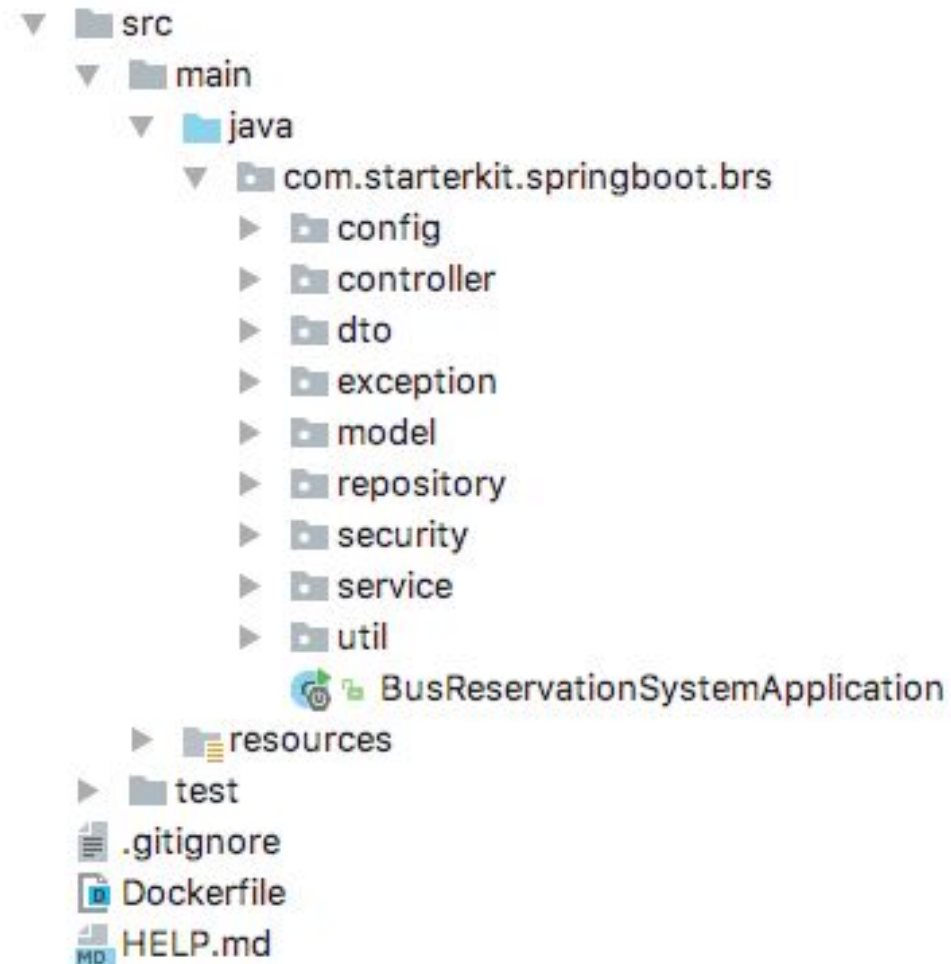
By Ramesh Fadatara (Java Guides)

Layer's functional role

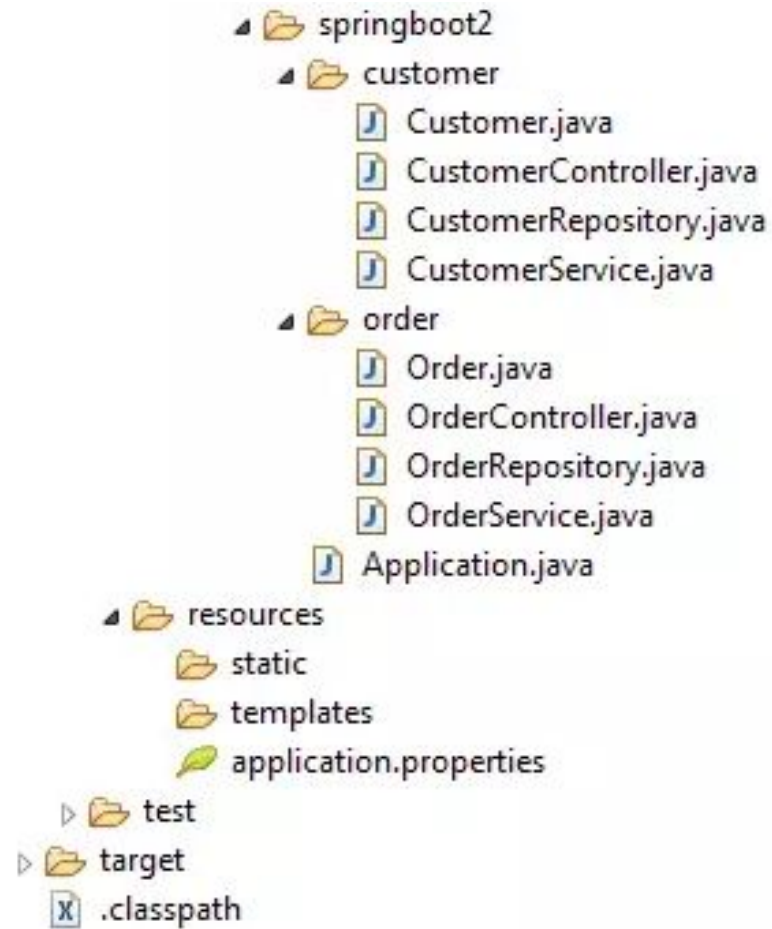




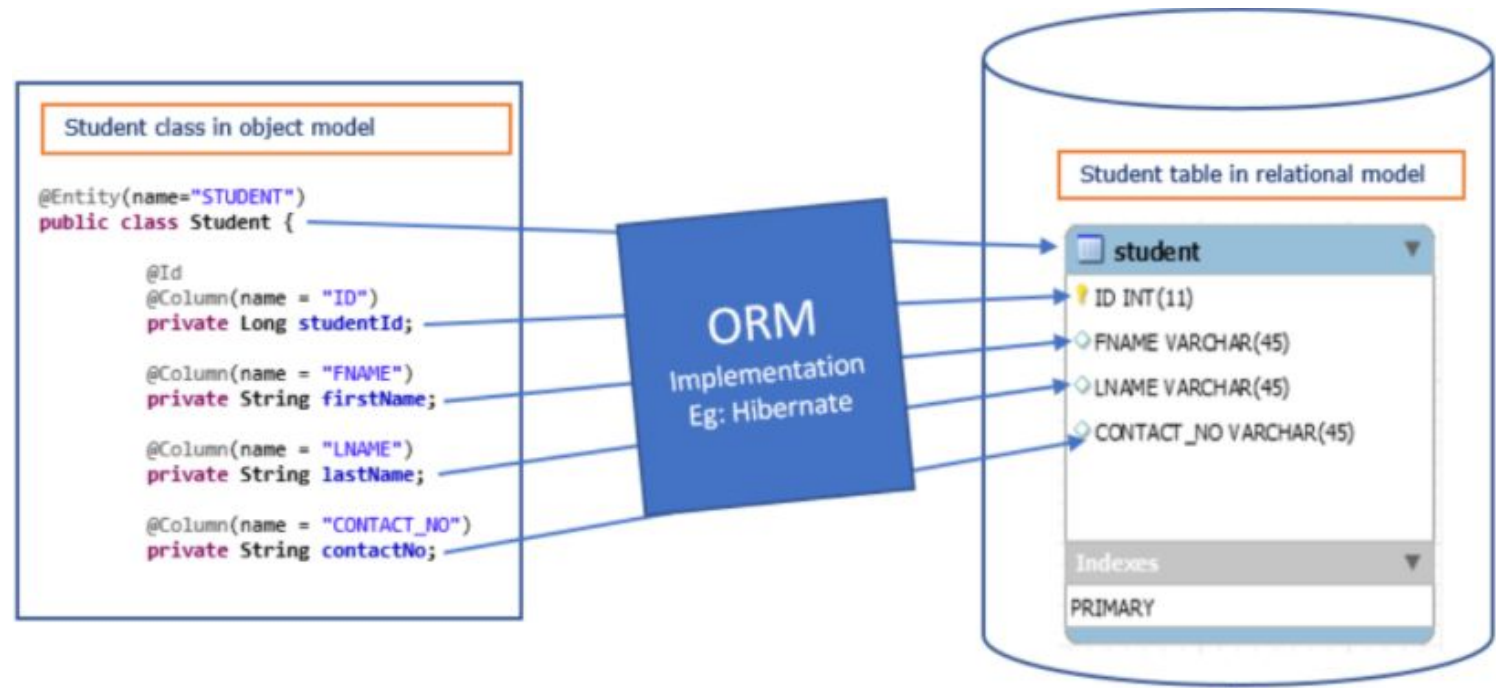
Packet structure of a server



Packet structure of a server



Object relational mapping Hibernate





Automatic orm. application.properties file

```
#FOR H2
spring.datasource.url=jdbc:h2:mem:futureup
spring.datasource.driverClassName=org.h2.Driver
spring.datasource.username=sa
spring.datasource.password=password
spring.jpa.database-platform=org.hibernate.dialect.H2Dialect
spring.jpa.defer-datasource-initialization=true
spring.h2.console.enabled=true

#FOR POSTGRESSQL
spring.datasource.url=jdbc:postgresql://localhost:5432/futureup
spring.datasource.username=postgres
spring.datasource.password=root
spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.PostgreSQLDialect
spring.jpa.database-platform=org.hibernate.dialect.PostgreSQL9Dialect
spring.jpa.properties.hibernate.temp.use_jdbc_metadata_defaults=false
spring.jpa.hibernate.ddl-auto=update
spring.main.allow-bean-definition-overriding=true
spring.jackson.default-property-inclusion=non_null
```



Thank you, next session Thursday, 31 March at 15:00

Biografie:

<https://spring.io/quickstart>

<https://www.sourcecodeexamples.net/2021/08/spring-boot-project-with-controller.html>

<https://howtodoinjava.com/spring5/webmvc/controller-getmapping-postmapping/>

Hello world tutorial:

<https://www.youtube.com/watch?v=CX-xBVIElkw>

Github with project:

<https://github.com/zynkware/training-futureup-java>