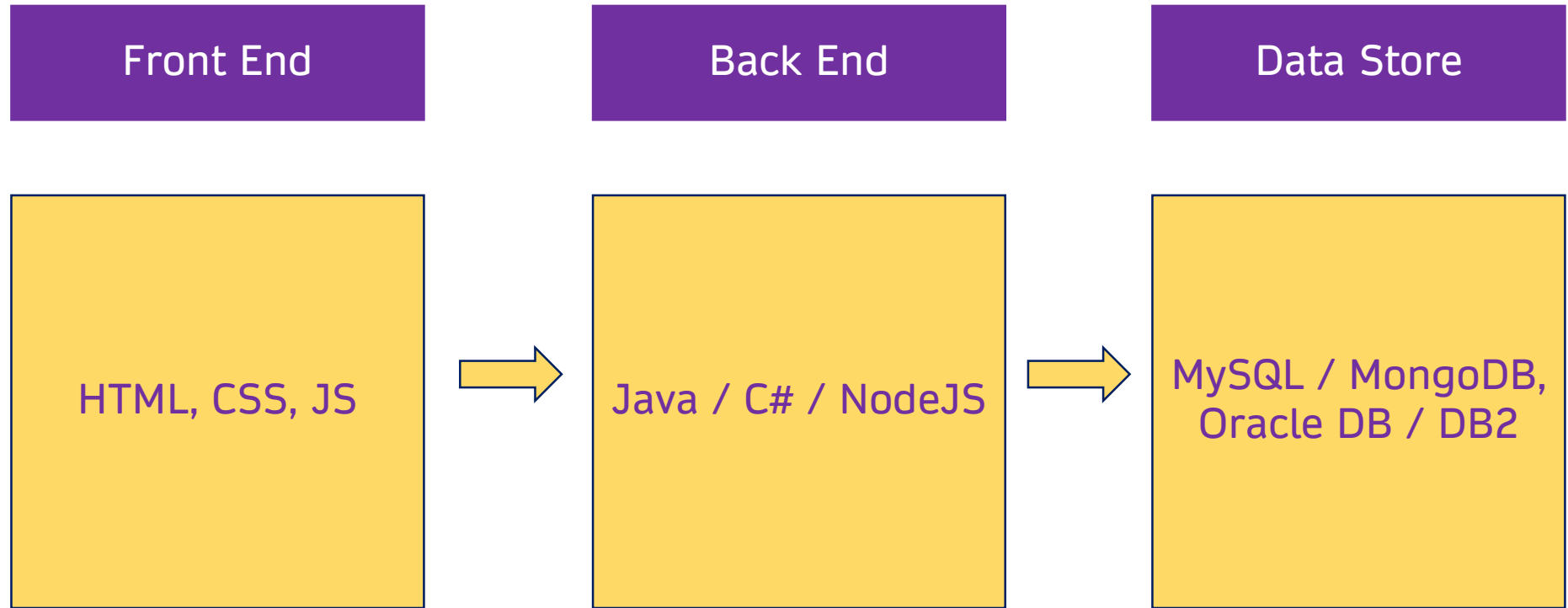


JWT Spring Security Angular





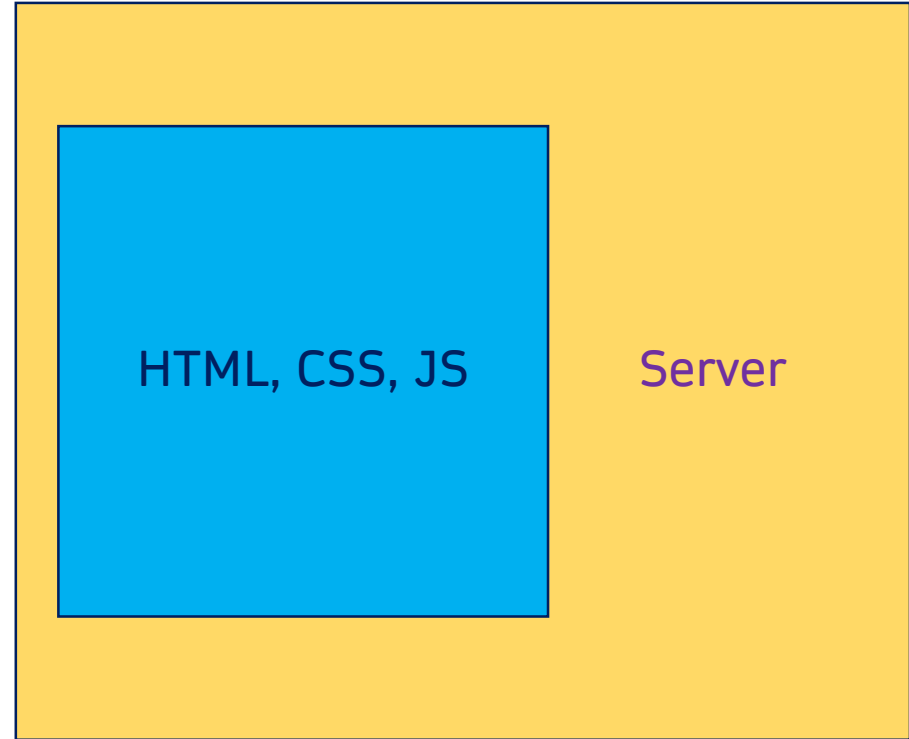
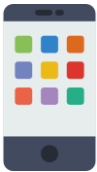
Web Application Overview





Front End

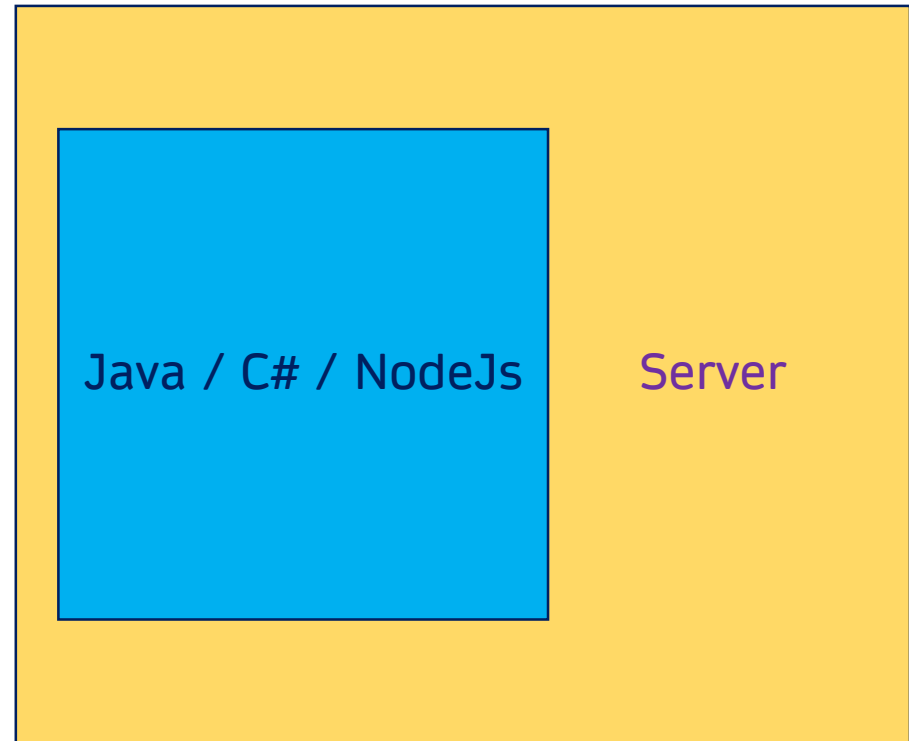
Front End





Back End

Back End





Data Store



Open Database Connectivity
(Driver)
(TCP / IP ~ SSL)



Oracle DB / MySQL
/ Microsoft SQL
Server

Server



The Cloud



Cloud

Server

Front
End

HTML,
CSS, JS

Server

Back
End

Java /
C# /
NodeJS

Server

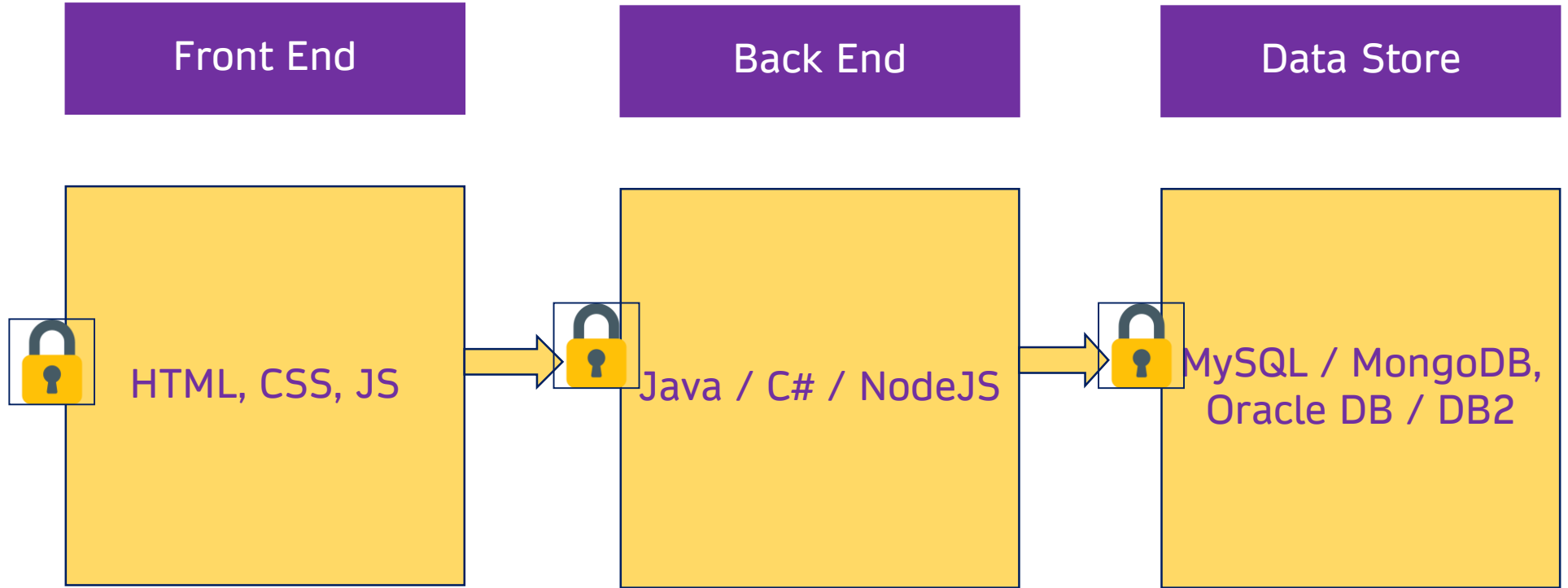
Data
Store

MySQL /
MongoD
B,
Oracle
DB /
DB2



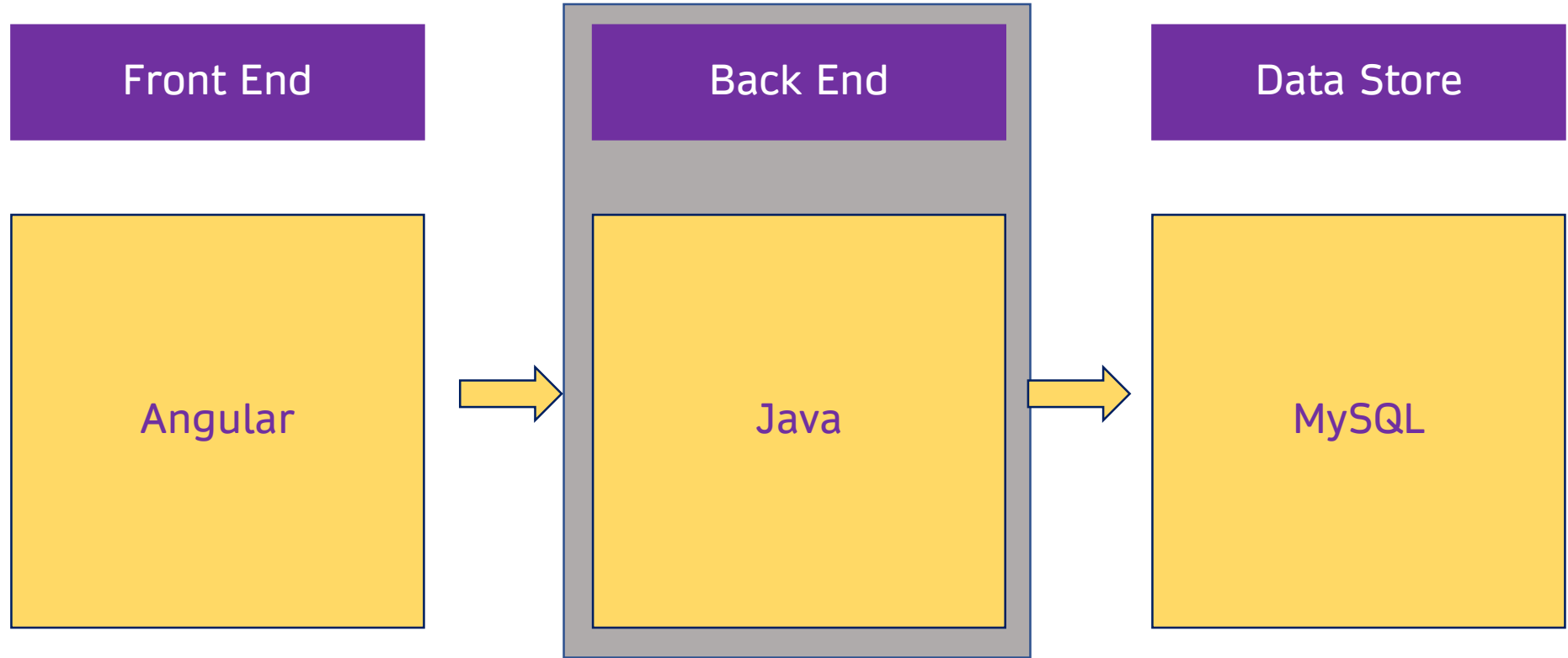


Application Security





Application Design





Environment Setup

Java (JDK)

IntelliJ IDE

NodeJs

Eclipse IDE

Angular CLI

VS Code

MySQL

Google Chrome



Web Application Security

Web Services

Web Apps

Websites

Security Threats

Cross-site scripting

SQL injection

Denial-of-service attack

Cross-site request forgery



Authentication & Authorization

Authentication

Verifies you are
who you say you
are

Method:

- Login form
- HTTP authentication
- Custom auth. method

Authorization

Decides if you have
permission to
access a resource

Method:

- Access control URLs
- Access control lists(ACLs)



Payload

Signature

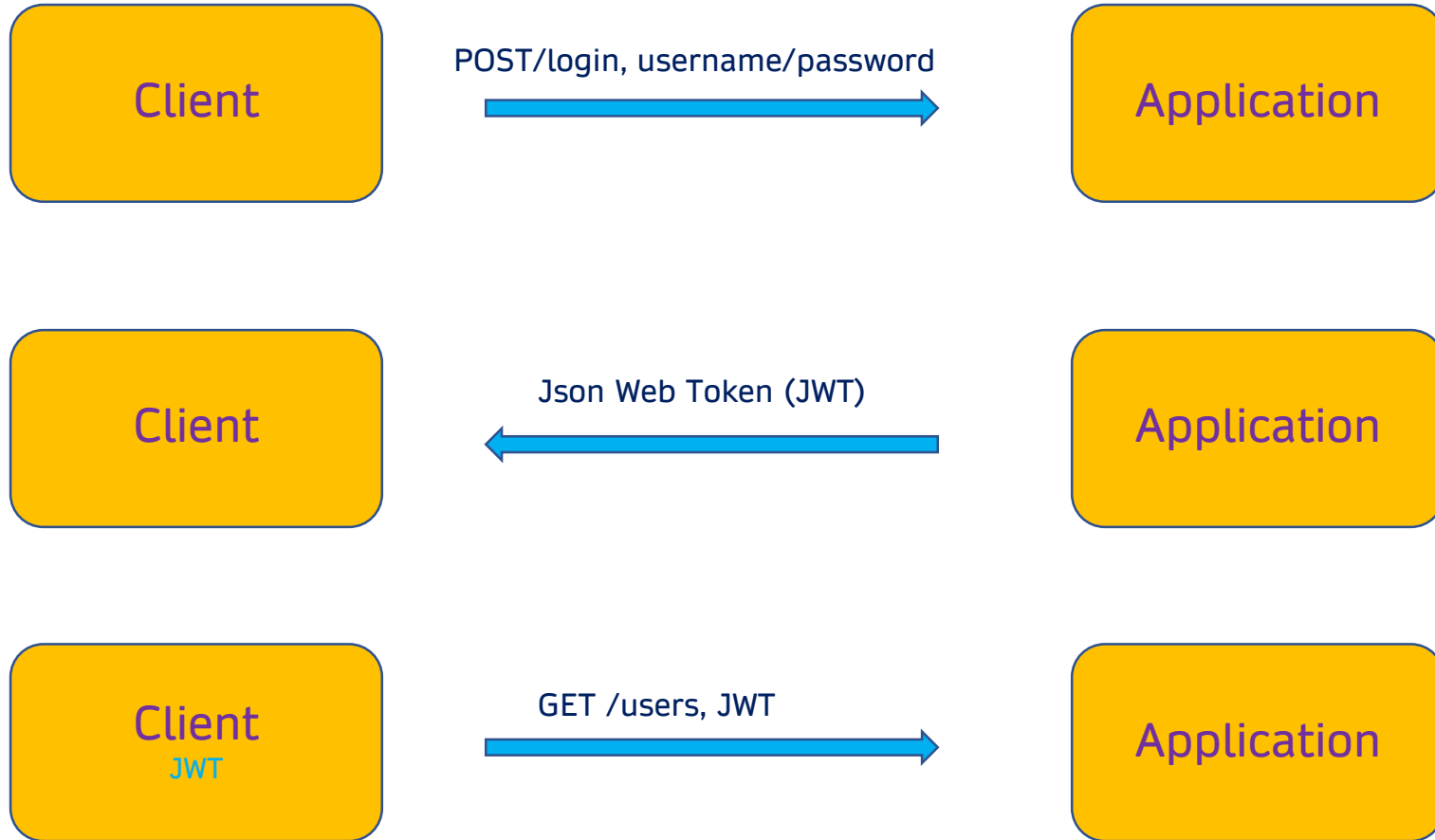
```
{
  "sub": "johnd24",
  "name": "John Doe",
  "iat": 1516239022
  "claims": "create, edit"
}
```

256-bit-secret

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4gRG9lIiwiaWF0IjoxNTE2MjM5MDQyfQ.SflKxwRJSMeKKF2QT4fwpMeJf36POk6yJV_adQssw5c

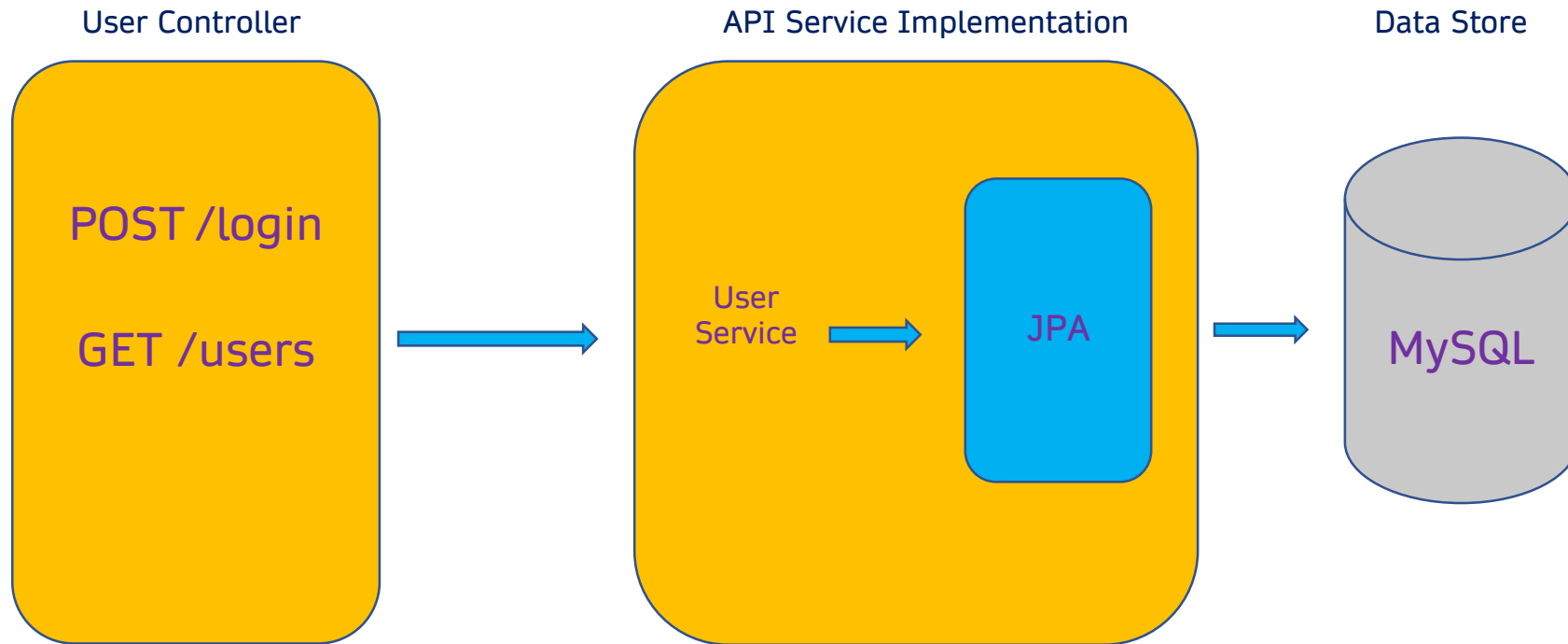


Security with Json Web Token (JWT)





JPA Repository





Exception Handling

Exception

an error event that can happen during the execution of a program and disrupts its normal flow



Exception Handling

```
public User getUser(String username) {  
    try {  
        → User user = userRepository.getUser(username);  
    } catch (UserNotFoundException exception) {  
        // handle exception here  
        exception.printStackTrace();  
    }  
    return user;  
}
```




Brute Force Attack

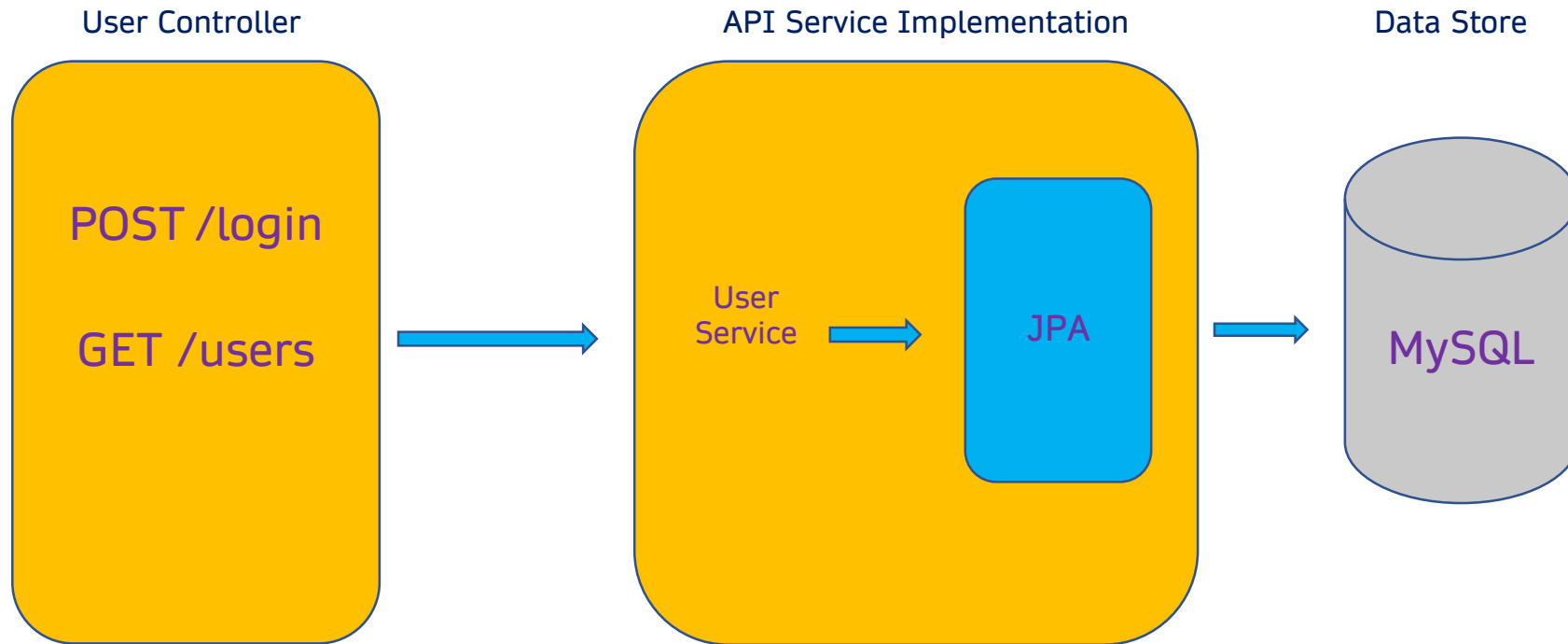
Brute Force Attack

an attacker submitting
many passwords or passphrases with the hope
of eventually guessing correctly

https://en.wikipedia.org/wiki/Brute-force_attack



JPA Repository





Front End Design

