javaSpring

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클라이언트

G Google

localhost:8080/api/persons
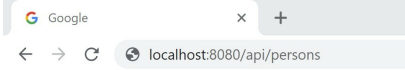
```
[
    {
        id: 1,
        name: "paul",
        age: 21,
        address: "The USA"
    },
```

API (controlloer)

Service

DTO

Entity

Spring server

Repositroy (SQL)

RDBMS (MySQL, H2)

com.example.person
- controller
  - PersonController

```java
@GetMapping(⬡⌄"/api/persons")
public List<Person> getPersons() {
    return personRepository.findAll();
}
```

models
- PersonRequestDto

```java
public class PersonRequestDto {
    private String name;
    private int age;
    private String address;

    public PersonRequestDto(String name, int age, String address) {
        this.name = name;
        this.age = age;
        this.address = address;
    }
}
```

```java
@Entity
public class Person extends Timestamped {

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

    @Column(nullable = false)
    private String name;

    @Column(nullable = false)
    private int age;

    @Column(nullable = false)
    private String address;
    public Person(PersonRequestDto requestDto) {
        this.name = requestDto.getName();
        this.age = requestDto.getAge();
        this.address = requestDto.getAddress();
    }
    public void update(PersonRequestDto requestDto) {
        this.name = requestDto.getName();
        this.age = requestDto.getAge();
        this.address = requestDto.getAddress();
    }
}
```

service
- PersonService

```java
@RequiredArgsConstructor
@Service
public class PersonService {
    private final PersonRepository personRepository;

    @Transactional
    public Long update(Long id, PersonRequestDto requestDto) {
        Person person1 = personRepository.findById(id).orElseThrow(
            () -> new IllegalArgumentException("해당 아이디가 존재하지 않습니다.")
        );
        person1.update(requestDto);
        return person1.getId();
    }
}
```

domain
- Person
- PersonRepository

PersonApplication

```java
public class PersonApplication {

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

    @Bean
    public CommandLineRunner demo(PersonRepository personRepository, PersonService personService) {
        return (args) -> {

            personRepository.save(new Person(name: "max", age: 20, address: "korea"));

            System.out.println("데이터 전체");
            List<Person> personList = personRepository.findAll();
            for (int i = 0; i < personList.size(); i++) {...}

            PersonRequestDto requestDto = new PersonRequestDto(name: "paul", age: 21, address: "The USA");
            personService.update(id: 1L, requestDto);
            personList = personRepository.findAll();
            for (int i = 0; i < personList.size(); i++) {...}
        };
    }
}
```

domain
- Person
- PersonRepository

```java
public interface PersonRepository extends JpaRepository<Person, Long> {
}
```

resources
- static
- templates
- application.properties

```
spring.h2.console.enabled=true
spring.datasource.url=jdbc:h2:mem:homework
spring.jpa.show-sql=true
```