ОНЛАЙН-ОБРАЗОВАНИЕ

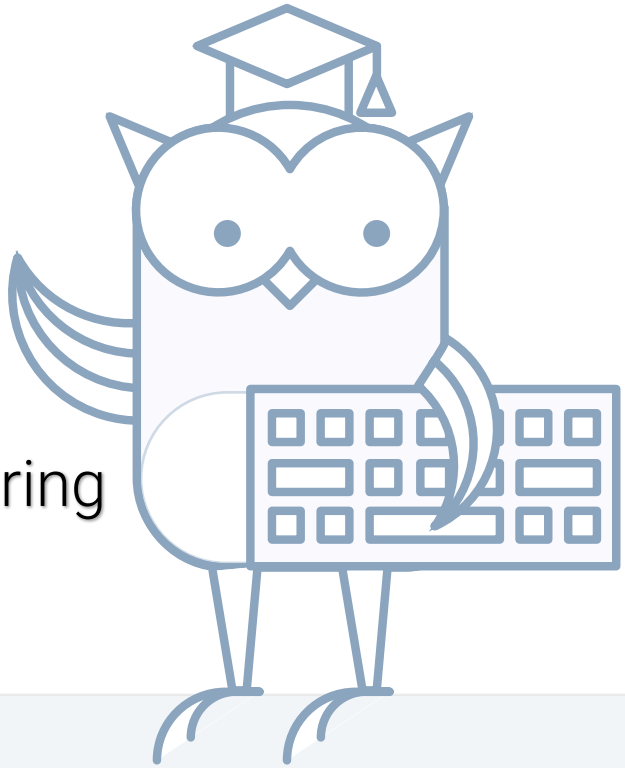
OTUS

Курс «Разработчик на Spring Framework»

Проектная работа:

«Human Resources rEactive Files»

https://github.com/vskurikhin/href-on-spring



Виктор Скурихин

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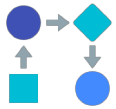


CI/CD

Нас много он один

Многоступенчатая реакция

Бесконечная бесконечность

Кормчий и Jenkins

Особенности и не только

Аналогия и разница

Один к одному, раз

Многое к одному, два

Баги и другие насекомые

TODO

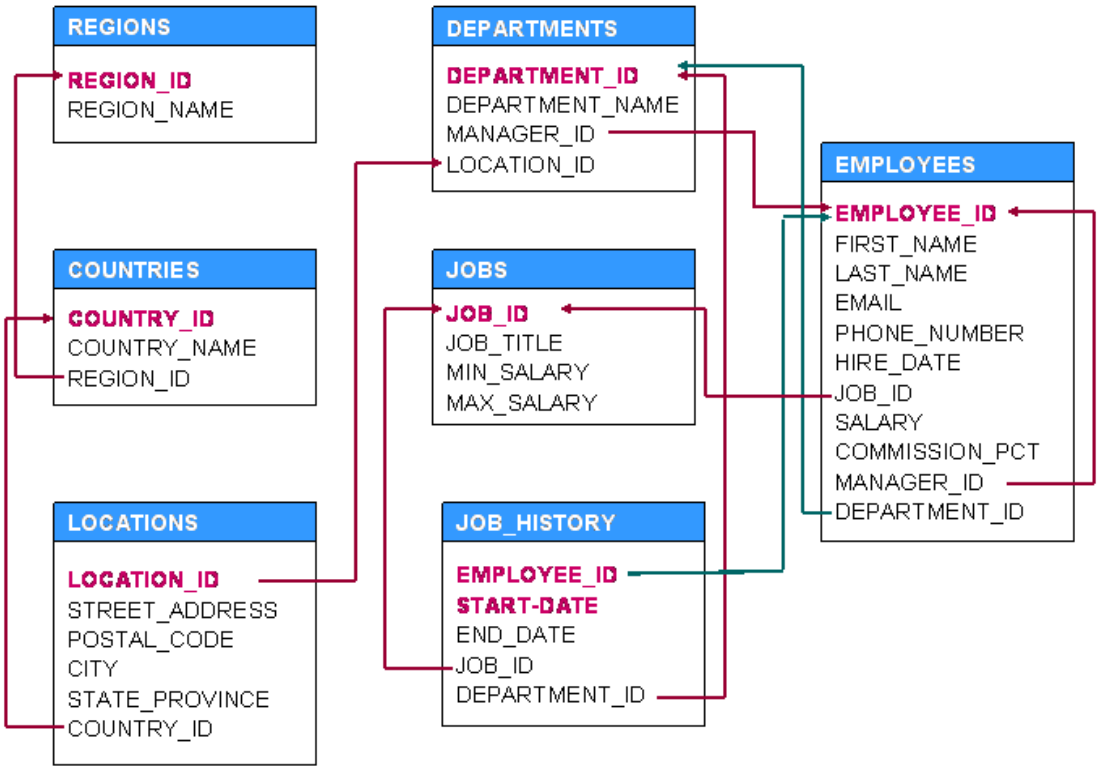
Ох уж эта безопасность

Технически должен

Вечный двигатель или ТУДУ

Легенда

Легаси



Ракета многоступенчатая

Первое приближение

```
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-webflux</artifactId>
</dependency>
<dependency>
    <groupId>io.projectreactor</groupId>
    <artifactId>reactor-core</artifactId>
    <version>3.2.6.RELEASE</version>
</dependency>
<dependency>
    <groupId>io.projectreactor.addons</groupId>
    <artifactId>reactor-extra</artifactId>
    <version>3.2.2.RELEASE</version>
</dependency>
<!-- R2DBC -->
<dependency>
    <groupId>org.springframework.data</groupId>
    <artifactId>spring-data-r2dbc</artifactId>
    <version>1.0.0.M1</version>
</dependency>
<dependency>
    <groupId>io.r2dbc</groupId>
    <artifactId>r2dbc-spi</artifactId>
    <version>1.0.0.M7</version>
</dependency>
<dependency>
    <groupId>io.r2dbc</groupId>
    <artifactId>r2dbc-postgresql</artifactId>
    <version>1.0.0.M7</version>
</dependency>
```

Первое приближение

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```java
package su.svn.href.dao;

import org.springframework.data.r2dbc.repository.query.Query;
import org.springframework.data.repository.reactive.ReactiveCrudRepository;
import reactor.core.publisher.Flux;
import su.svn.href.models.Region;

public interface RegionDao extends ReactiveCrudRepository<Region, Long>
{
    @Query("SELECT * FROM regions WHERE region_name = $1")
    Flux<Region> findByRegionName(String regionName);
}
```

Один к одному, раз

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```
public static String SELECT =
    "SELECT location_id, street_address, postal_code, city, state_province,"
        + " l.country_id, country_name, c.region_id, region_name"
        + " FROM locations l"
        + " JOIN countries c ON c.country_id = l.country_id"
        + " JOIN regions r ON r.region_id = c.region_id";
```

```
public Flux<LocationDto> findAll(
    int offset, int limit, String sortBy, boolean descending)
{
    String direction = descending ? " DESC" : " ASC";
    String orderBy = sortBy != null ? " ORDER BY " + sortBy : "";

    return databaseClient.execute()
        .sql(SELECT + orderBy + direction + " OFFSET $1 LIMIT $2")
        .bind("$1", offset)
        .bind("$2", limit)
        .fetch()
        .all()
        .map(LocationDto::collectFromMap);
}
```

Многое к одному, два

начало...

```
public static String SELECT =
"SELECT d.department_id, department_name, d.manager_id,"
+ " m.first_name, m.last_name, m.email, m.phone_number,"
+ " d.location_id, l.street_address, l.postal_code,"
+ " l.city, l.state_province, l.country_id"
+ " FROM departments d"
+ " LEFT JOIN employees m ON m.employee_id = d.manager_id"
+ " LEFT JOIN locations l ON l.location_id = d.location_id";
```

```
private Mono<DepartmentDto> departmentDtoMono(DepartmentDto departmentDto)
{
    return employeeDao
        .findByDepartmentId(departmentDto.getId())
        .collectList()
        .map(e -> {
            departmentDto.setEmployees(e);
            return departmentDto;
        });
}
```

Многое к одному, два

продолжение

```
@Override
public Mono<List<DepartmentDto>> findAll(
    int offset, int limit, String sortBy, boolean descending)
{
    String direction = descending ? " DESC" : " ASC";
    String orderBy = sortBy != null ? " ORDER BY " + sortBy : "";

    Comparator<DepartmentDto> comparator =
        Comparator.comparingLong(DepartmentDto::getId);

    return databaseClient.execute()
        .sql(SELECT + orderBy + direction + " OFFSET $1 LIMIT $2")
        .bind("$1", offset)
        .bind("$2", limit)
        .fetch()
        .all()
        .map(DepartmentDto::collectFromMap)
        .flatMap(this::departmentDtoMono)
        .collectSortedList(comparator);
}
```

Баги и другие насекомые

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```
@Override
public Flux<DepartmentDto> findAll(
    int offset, int limit, String sortBy, boolean descending)
{
    String direction = descending ? " DESC" : " ASC";
    String orderBy = sortBy != null ? " ORDER BY " + sortBy : "";

    return databaseClient.execute()
        .sql(SELECT + orderBy + direction + " OFFSET $1 LIMIT $2")
        .bind("$1", offset)
        .bind("$2", limit)
        .fetch()
        .all()
        .map(DepartmentDto::collectFromMap)
        .flatMap(departmentDto -> employeeDao
            .findByDepartmentId(departmentDto.getId())
            .collectList().map(employees -> {
                departmentDto.setEmployees(employees);
                return departmentDto;
            }));
}
```

Баги и другие насекомые

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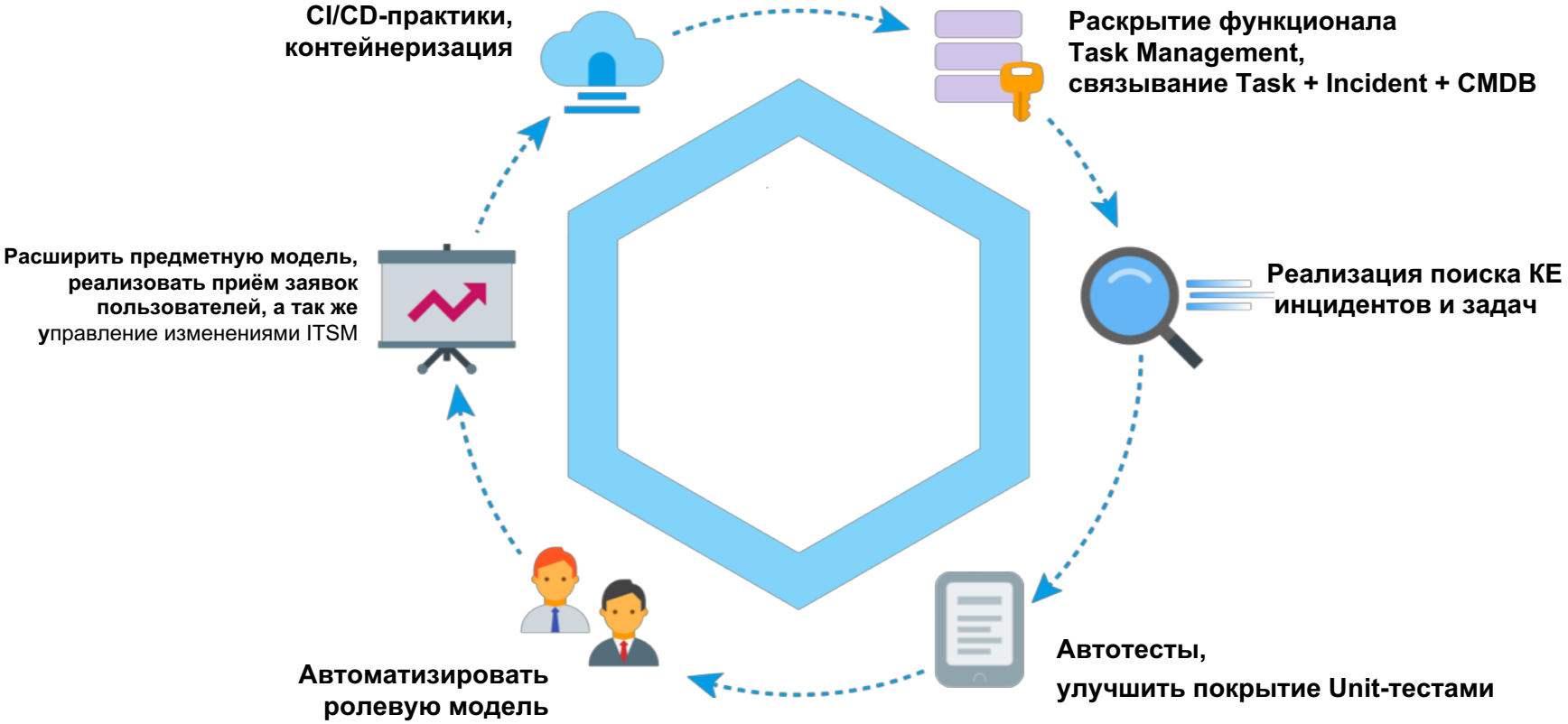
```
public static String SELECT =
+ " e.commission_pct, e.manager_id, e.department_id,"
+ " m.employee_id AS manager_id, m.first_name AS manager_first_name, "
+ " m.last_name AS manager_last_name,"
+ " m.email AS manager_email, m.phone_number AS manager_phone_number,"
+ " d.department_id, d.department_name, d.manager_id AS dept_manager_id, "
+ " d.location_id"
+ " FROM employees e"
+ " LEFT JOIN employees m ON m.employee_id = e.manager_id"
+ " LEFT JOIN departments d ON d.department_id = e.department_id";
```

TODO

Что дальше?


CI/CD-практики,
контейнеризация
Раскрытие функционала
Task Management,
связывание Task + Incident + CMDB
Расширить предметную модель,
реализовать приём заявок
пользователей, а так же
управление изменениями ITSM
Реализация поиска КЕ
инцидентов и задач
Автотесты,
улучшить покрытие Unit-тестами
Автоматизировать
ролевую модель

Вопросы?

Спасибо
за внимание!