1. Project:

hierarchy management system in the organization made in the microservice architecture

2. Stack:

- Java 14
- SpringBoot 2.3 (MVC/DATA JPA)
- MySQL 5.7
- Redis
- Redisson
- Docker
- Swarm

3. Instalation:

- be sure you have already installed docker on your machine.
- open terminal in project root directory. Run command: *docker stack deploy -c docker-compose.yml <stack name>*

4. Usage:

Open some tool like Postman in order to play with services REST api.

1) Add new employee:
   In order to add new employee, send POST reuquest on address localhost:8080/employees, you can choose one of four roles: WORKER,MANAGER, DIRECTOR, CEO.
   request body example:

```
{
    "name": "Tom",
    "surname": "Jary",
    "age": 22,
    "addresses": {
        "domowy": {
            "city": "Warsawa",
            "street": "Mieczkaniowa 22",
            "zipCode": "23-234"
        }
    },
    "role": "MANAGER",
    "pesel": "324342342343"
}
```

If employee with given PESEL already exists, in response you get message: 'Employee with this PESEL: 324342342343 already exists'
You can display employee details providing his id: *localhost:8080/employees/1*

2) Set superior
   There is a hierarchy where you can set a supervisor for employee.
   In order to do that send POST request on *localhost:8080/employees/<employee id>/superior.* In the body you must provide id of the superior:

```
{
    "superior": 1
}
```

If superior with you have chosen has role MANAGER and it already have 5
subordinates, you get and error message 'This manager already have 5
subordinates'

3) Display superior
   You can check who the employee's supervisor is. In order to do that send
   GET request *localhost:8080/employees/<employee id>/superior*

4) Display subordinates
   To check who the subordinates are sent GET request:
   localhost:8080/employees/<superior id>/subordinates

5) Employee update
   Each employee can be update. To body structure that was used in order to
   create employee, you need to add his id and change value of fields with
   you want to change. Then send PUT request
   localhost:8080/employees/<employee id>

6) Display error list
   All bussines error are stored by ErrorService. You can display them all by
   visiting address:*localhost:8081/list*