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TECHNICAL
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FIT (IS), 4 course

Discipline: Backend for high load environment

Final project proposal

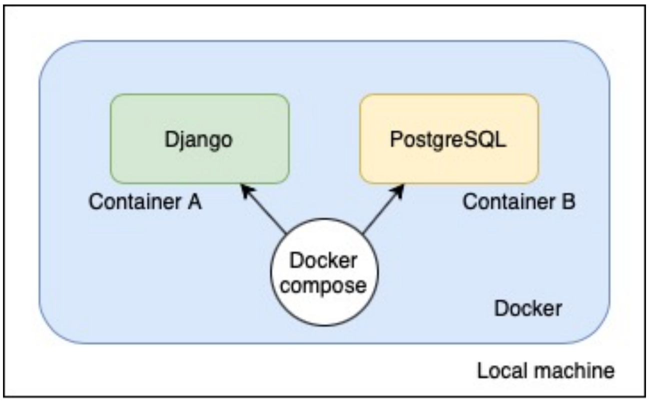
Project: Online courses platform *(like Udemy or Coursera)*

Short description: The project is a platform on which you can study various courses. It is understood that there will be teachers who can create and update their courses, as well as students who can register for certain courses, take lessons, leave comments and feedback.

Project architecture and purpose of each system:

1. Docker. With it, we can break the entire system into microservices and run each of them separately in their containers, as well as monitor their work
2. Docker compose. Required to run multiple containers with a single command
3. Django. Web framework for creating websites. In our case, we use it to create a backend service in the form of a REST API. For this we will use the following libraries:
   djangorestframework
   djangorestframework-simplejwt (for login function)
4. Postgres. A relational database. Popular choice for building high-load services.

Thus, we can depict the architecture in the form of a diagram as follows:



Planned application features:

<u>For all users:</u>

1. Registration and login
2. View and update own profile
3. View courses:
    a. View all available courses
    b. View courses by category
    c. View courses you are teaching
    d. View courses you are studying
4. View teachers list
    a. View courses of a teacher
5. View course reviews and news

<u>For the users, who are not student or teacher of a course:</u>

6. Registration for the course

<u>For the course teacher:</u>

7. Add, delete, update lessons in the course
8. Add, delete, update news in the course
9. Add, delete, update tasks in the lessons
10. View course students

<u>For the course student:</u>

11. Leave a review about the course

<u>For the course teacher and students:</u>

12. Write comments on lessons
13. Add lessons to favorites
14. View course lessons, assignments, comments