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Java Major Project

Document History

Ver. No	Release Date	Created By / Modified By and Date	Reviewed By and Date	Approved By and Date	Remarks and Changes Made
0.1	*22nd March 2021*	Asfiya Khan			Initial draft.

Online Tutor Management System

What is it… a website where people can register as Tutor and help Student upgrade their skills.

We need to build a system where people can get online tutor for his required technology and can subscribe to his training where tutor should take action to allow or disallow the student. So let's have a brief overview about the system, where it consists of three roles:

1. Admin
2. Tutor
3. Student

Role Description:

Admin:

1. Admin have to do all backend application management task.
2. Have to approve the registration request of student and tutor, once approve by Admin then only student/tutor can login.
3. He can see all the training content uploaded by the tutors.
4. He can delete tutor or student if finds any false information.
5. He can see report of how many students are under single tutor.
6. He can see report of upload and download status in the system.
7. He can see report of feedback for the tutor day/month/year wise.

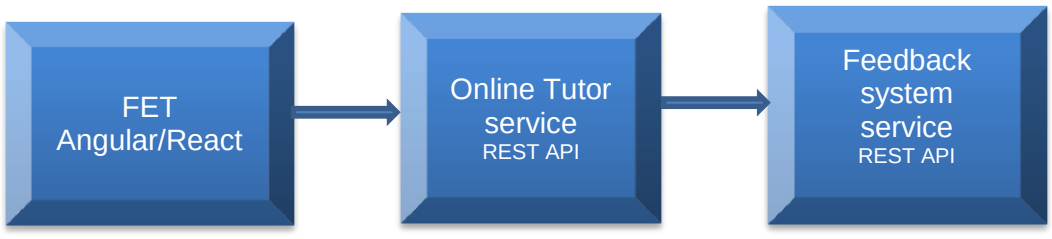
Tutor:

1. Tutor once logged in can upload training material i.e. audio/video/pdf/document for his training.
2. Tutor needs to accept request of Student who are willing to join his training.
3. Tutor can add/update/delete his material.
4. Tutor can see feedback given for his material.
5. He can see report of students who enroll and download his material.

Student:

1. Student once logged in can see all the tutors in the system.
2. Student can even search based on technology name or tutor name.
3. Student has to send request to the tutor if they are interested in the training material.
4. Once request is approved they can download audio/video/pdf/document provided by the tutor.
5. Student need to give feedback to the tutor.
6. They also have to rate his training material.

The project architecture expected is you have to integrate the feedback system with this project and it will be two services where Online tutor service will internally give call to the feedback service which is consumed in angular/react.



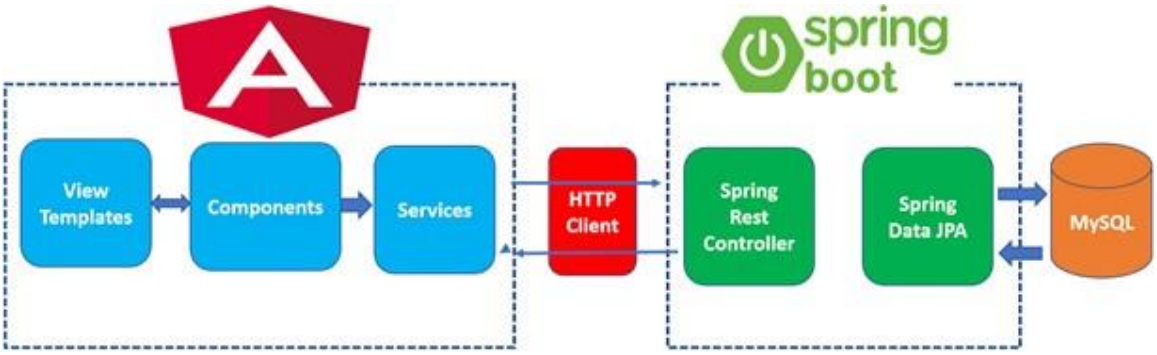
Bonus points:

- Earn bonus points by implementing following features.
  - Report builder(providing different options to build reports)
  - Angular Material UI for UI design
  - Captcha to avoid brute force attack
  - Implementing SSL/TLS security

Technologies to be used:

- Spring Architecture
- Spring Rest for Web Services
- Spring Data JPA
- MySQL
- HTML5
- CSS3/SASS/ Bootstrap/RWD
- Angular
- Static code validator – Linter/Hinter
- Editors – VSCode, Eclipse, STS, etc.
- Code coverage reports – SonarQube
- Git repository (commit after every important milestone)
- Other DevOps tools to be implemented.

System architecture:



Note

- **Make assumptions whenever required in project**
- **Ensure following topics are implemented in project**
  - Classes, object
  - Encapsulation
  - Inheritance
  - Abstraction
  - Polymorphism
  - Static variables/methods
  - Lambda expression
  - Stream API
  - Exception handling (status code, custom message)
  - Exception handling in front end
  - Spring security(token based authentication)
  - Architecture: micro services
  - Design pattern: factory, builder design patterns
  - Back end layer: controller, service, repository
  - Front end application: presentation layer