CYBAGE
Delivering Value. Scientifically.

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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 Feb 2021	Dadaram Jadhav			Initial draft.

Cybage e-learning

Project Statement:
Develop web based application for Cybage e-learning

Abstract of the System:
Main goal is to develop web based system for Cybage e-learning. Portal offers various video courses (course will consists of 4-5 videos). User can enroll to portal through registration. User enrolls for courses and finishes it. After finishing course generate completion certificate.

System Roles:
- Admin
- User

Admin Role:
- Manage application backend
- Login details provided by developer
- Login into system
- Create/update/delete/display course category
- Create/update/delete/display courses
- Unlock accounts if locked due to 3 invalid login attempts by user
- Reports:- enrollment reports, courses reports, category wise report
- Setting(change password, forget password)
- Can see logs of users activity

User Role:
- Register
- Login

- Create profile
- Search courses
- Enroll courses
- Finish course
- Send feedback to courses(only enrolled courses)
- Generate completion certificate(pdf format)
- Send completion certificate(pdf format) to email
- Comments, likes courses
- Activate account using otp(otp sent through email)
- Login with otp(otp sent through email)
- Setting(change password, forget password)
- Account lock after 3 invalid login
- Send email request to admin to unlock account
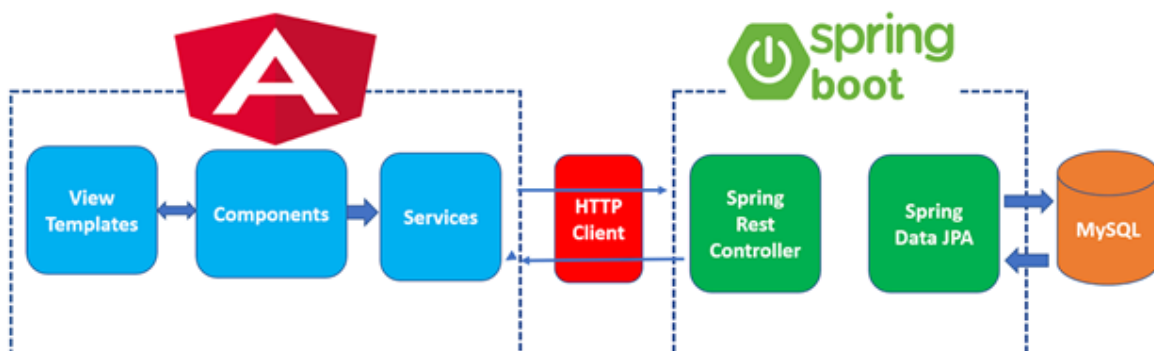- Remember me

Bonus points:
- You will be eligible for bonus point If implemented following features
  - Report builder for admin(providing different options to build reports)
  - Angular Material UI for UI design
  - Course cart(multiple course can enrolled at one time)
  - Quiz of 10-15 questions after every course

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