Michael Louie	Project – Development – Catalog	07/24/20

This archive represents the Courser course registration system tool for my CS 6460 Summer 2020 development track project.

Overview of Contents

- gradle/wrapper – pre-defines specific Gradle version to utilize without having it installed.
- src – contains all back-end source code files for Courser REST controller,. Java, Spring Boot.
    - courser
        - controller – REST controller endpoint definitions
        - dao – data access objects for defining how to access database.
        - model – data objects and row mappers (for converting database queried objects to Java objects).
        - service – business logic
        - spring/configuration – various Spring Boot configuration via Java source code.
    - application.properties – Spring Boot application configuration, mainly for pointing to which SQLite database file to read/write.
- web – contains all front-end source code files for Courser user interface, npm building files, VueJS components, plugins, views, and entry points.
    - public – favico and index.html entry point for VueJS application
    - src – VueJS source code
        - component – VueJS components shared by views.
        - views – VueJS single-page application views.
        - CourserApp.vue – root VueJS application.
        - main.js – defines VueJS application imports, VueRouter, and entry point.
- .gitignore – defines which files should not be tracked for changes.
- LICENSE – license defining use and distribution.
- README.md – description of the repository, catalog of files, and usage/build instructions.
- Catalog.pdf – this file.
- build.gradle – defines individual plugins, configurations, dependencies, repository points, and build tasks for Gradle.
- courser.db – self-contained SQLite database file containing all the persisted simulated/test data for this tool.
- gradlew – Gradle building script for Linux-based systems.
- gradlew.bat – Gradle building script for Windows-based systems.
- settings.gradle – settings metadata to describe how Gradle should operate for this repository.
- courser-0.0.1.jar – final artifact executable representing all code work.

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Instructions

All Gradle commands should use the wrapper.

- Linux: `./gradlew <command>`
- Windows `.\gradlew.bat <command`

Local

Front-end

To compile and run front-end only:

1. Navigate to “courser/web” directory (`cd courser/web`).
2. Setup project (`npm install`).
3. Compile and run with hot-reloads (`npm run serve`).
4. Visit deployed development build at URL provided using preferred browser.
    a. Should be “- Local: http://localhost:<PORT>/” or “- Network: http://<YOUR-IP-ADDRESS>:<PORT>/”
5. To exit, CTRL-C or kill Node process.

Back-end

To build and run web server only:

1. Navigate to “courser/” (project root).
2. Build and run Spring Boot web server (`./gradlew bootRun`)
3. Visit web server RESTful API documentation at URL using preferred browser
    a. http://localhost/swagger-ui.html#
4. Execute REST calls by clicking and trying out various REST endpoints listed on the Swagger UI documentation.

This is required for local front-end to make REST calls to local web server.

Production

To build and package the UI and web server as a single deliverable:

1. Navigate to “courser/web” directory (`cd courser/web`).
2. Change all VueJS API calls to point to domain which Spring web server will be hosted on.
3. Compile and minify project for production (`npm run build`).
4. Copy all files and directories under “dist/” to Java static resources directory under “src/main/resources/static“. You may need to create the static directory.
5. Navigate to “courser/” (project root).
6. Build the jar (“./gradlew ”)
7. Copy the output jar located in “courser/build/libs/courser-0.0.1.jar” to the target environment where it will run.
8. Run the jar (“java -jar courser-0.0.1.jar”). The web server should now answer REST requests and return the UI.

Links

Production Environment and Personal Domain:

- Main site: http://www.michaellouie.net
- API: http://michaellouie.net/swagger-ui.html#/
- Direct IP Address: 35.193.129.13

Personal GitHub Repository: https://github.com/Michaelis105/courser/tree/develop