Online Fitness

Creating a simple application for online fitness, which provides users with the ability to search for fitness programs, keep an activity journal, and receive exercise recommendations. The system consists of several parts described below:

Fitness Online Application

This is the central application of the system used for providing and searching for online fitness programs. The application allows users to browse and participate in various fitness programs. Each program has a name, description, category (e.g., cardio, strength, flexibility, HIIT), basic common attributes (price, difficulty level, duration), location (e.g., online, gym, park), images, instructor information, and contact details. Specific attributes are added for each category (e.g., for cardio - type of activity, for strength - type of equipment or body weight). All possible categories and attributes are defined in the administrative application. Filtering and searching by these criteria should be enabled. Displaying all programs simultaneously is not allowed; instead, some form of pagination (classic pagination or virtual scroll) must be supported. Programs are displayed as cards, with mandatory display of name, image, and price. Clicking on a card opens details on a new page where all information is displayed. Users can ask questions, and all conversation for a specific program is shown to all users as comments.

Users without an account can search for programs, view details, but cannot ask questions or participate. An account is created on the registration form where the user enters name, surname, city, username, password, avatar (optional), and email. After filling out the form, a confirmation link and account activation are sent to the email, leading the user to the registration endpoint. Optionally provide a Captcha service to confirm that it's a real user, not a bot, e.g., https://javalite.io/captcha. When the account is successfully created and activated, the user accesses the main page, where all functionalities are available through a menu. If the account is created but not activated, the user receives an activation form when logging into the system (enters the correct username and password), and then the link is regenerated and sent to the email again. Logged-in users can change their data (except for the username) on a separate page. Additionally, they can view their previous participations in programs, purchases, etc.

Participation is done by users choosing a payment method (card, PayPal, in-person), and the program is recorded as participated. Detailed processing of the payment method is not required, only basic usage (e.g., entering the card number). Participation implies going to the location if the fitness program is live, or displaying a YouTube video for online fitness programs.

Each user can create a new fitness program available for search by other users. Additionally, the user can view their programs (active and completed) and delete any of their programs.

Users with an account can send messages to advisors to select programs using a form located somewhere in the application. When contacting, user information and message content are saved. Also, users can communicate with each other via messages.

On the application's homepage, an RSS feed with the latest news and information from the fitness world is displayed by consuming the RSS feed https://feeds.feedburner.com/AceFitFacts. Additionally, the application consumes an API (https://api-ninjas.com/api/exercises) to provide daily suggestions of 10 exercises with instructions to registered users. Exercises are displayed with a name, instructions, and level.

A registered user can keep a journal of their activities, track exercise results and progress. The user can enter information about the type of exercises, duration, intensity, and results. The application allows users to graphically display progress, including weight loss, over a certain period. The user can download their activity journal as a PDF document.

Users are offered a subscription option for a specific category. Subscribed users receive new programs created for that category once a day via email.

The application must have a uniform appearance across all pages and must be responsive. Angular and SpringBoot are used for development, and the choice of the database is optional. Ready-made libraries such as Bootstrap or Material are allowed to be used. All functionalities of the SpringBoot application are available via RESTful services.

Administrative Application

Access to the administrative application requires an account that is opened directly in the database (name, surname, username, password). The login form is located on the homepage. If the login is successful, a page with a menu containing options is displayed:

Categories: allows managing (CRUD) data about categories and specific categories of fitness programs.

Users: allows managing (CRUD) data about users of the fitness online application.

Statistics: allows viewing logs of the fitness backend application.

The implementation of the administrative application must use JSP M2. Using ready-made libraries for designing the user interface is allowed.

Advisor Application

Access to the consultation application requires an account that must be opened by the administrator through the administrative part of the application. This account is not the same as the account for the administrative or fitness online application. If the login is successful, a page is displayed where the advisor can view all received messages. All unread messages are displayed in a table, and opening one changes its status to read. Messages are replied to by sending an email. Besides text, it is necessary to allow the advisor to send a document with additional descriptions or an image. The advisor can search all messages by content.

The consultation application should be implemented using JSP.