

1. Data model

The task is to implement a system for the operation of the fitness center. System users can appear in the following roles:

- Administrator
- Coach
- Member of the fitness center

Each user is described with the following information:

- Username
- Password
- Name
- Last name
- Contact phone
- Email address
- Date of birth
- Role
- Active status (indicates whether this user currently has access to the system)

For each member of the fitness center, the following data is also attached:

- List of completed workouts
- List of workouts they signed up for (but haven't done yet)
- List of grades for completed workouts (he does not have to grade every training he has done)

Data is also attached to each coach:

- A list of the workout sessions he holds
- Average rating (the average rating that is calculated every time someone rates the workout that he gave)

In addition to users, it is necessary to store data on the following entities within the system:

Workout:

- Name
- Description
- Type of workout
- Duration

Fitness center:

- Name
- Address
- Telephone number of the switchboard
- E-mail

- Trainers who work at that fitness center
- List of gyms located in that fitness center
- Workout schedule along with prices for each term separately

Workout room:

- Capacity
- Room label
- Also attached to the hall
 - Schedule of workouts (which workout is held on which day and at what price
- the same workout can be held on the same days in different halls, link N:N), which also contains the number of registered members for that term.

2. Functionalities

Functionality available to all users:

- User registration (registration of a user who is not a member of the fitness center must be confirmed by the administrator in order to be activated)
- Login to the system (inactive users cannot login even when credentials are correct)
- An overview of the trainings that are offered
- Training search by criteria:
 - Name
 - Type
 - Description
 - Price
 - Time of the appointment

Multi-criteria search (combination of several previously mentioned criteria)

- Sorting appointments (by time or by price)

Functionalities that are only available to members of the fitness center:

- Selecting the desired training date from the search results
- Registration for the desired training date if there are vacancies
- An overview of all the trainings for which they have applied
- Cancellation of registration for training
- View profile
- Overview of all completed trainings
- An overview of the training they did, but did not rate
- The possibility of evaluating completed trainings
- An overview of the training sessions that they evaluated

Functionalities that are only available to trainers:

- Creation and modification of the training schedule for the fitness center where he works -
For each training appointment in the schedule, it is necessary to assign the date and time of the appointment and the price for that appointment.

Functions that are available only to the administrator:

- Adding, modifying and deleting a fitness center
- Adding, modifying and deleting gyms for the selected fitness center
- Approving requests for coach registration
- Registration of new coaches (automatically approved)
- Removal of the coach

3. Implementation

Implement the application as a client-server application.

The server part of the application should be implemented using the Java programming language and the Spring (SpringBoot) framework.

User interface design as well as styles (CSS) are left to the student and are mandatory. To facilitate the formation/layouta students can use some of the existing pagesframework-a (Bootstrap, MaterializeCSS...).