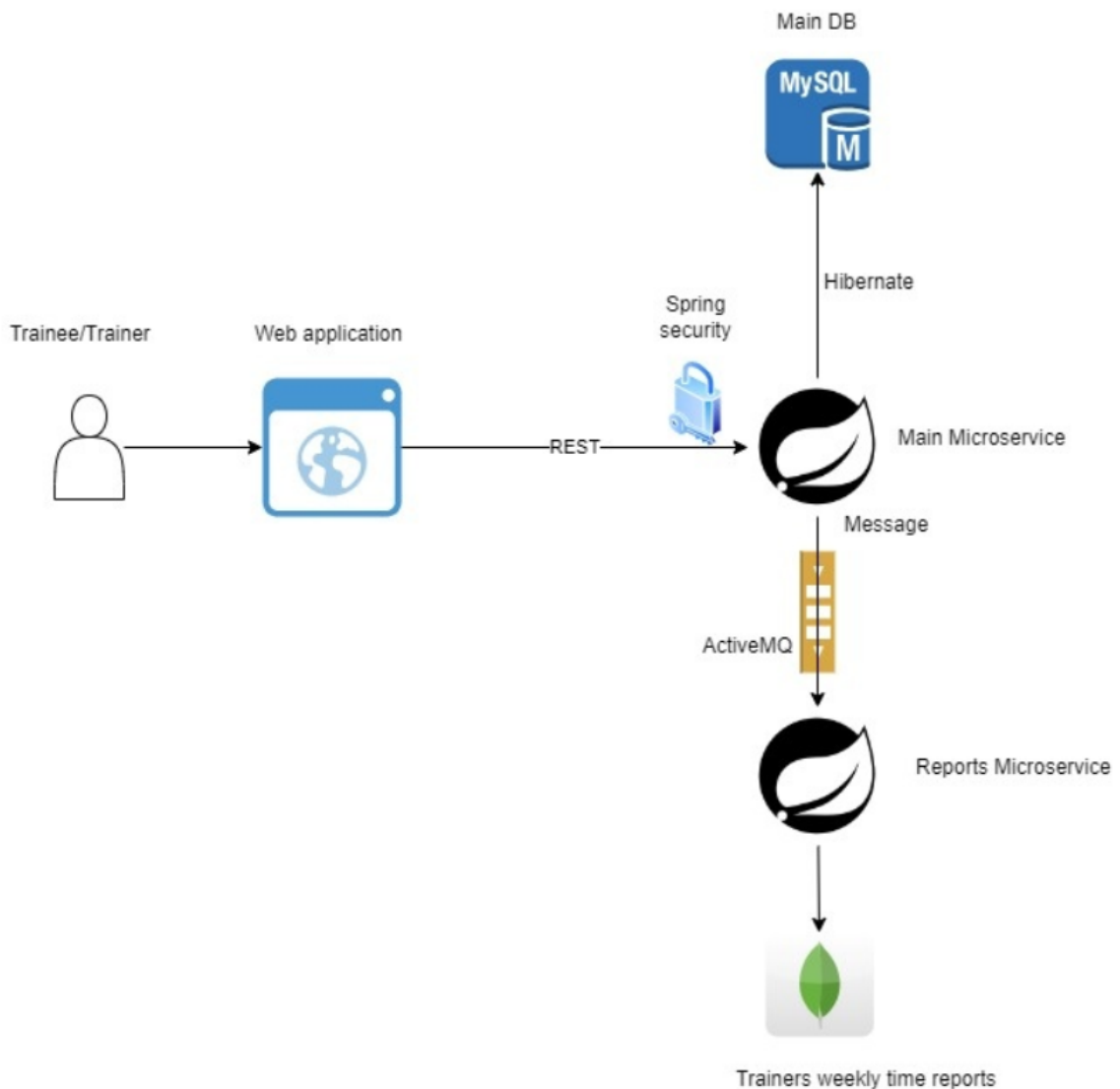


General description

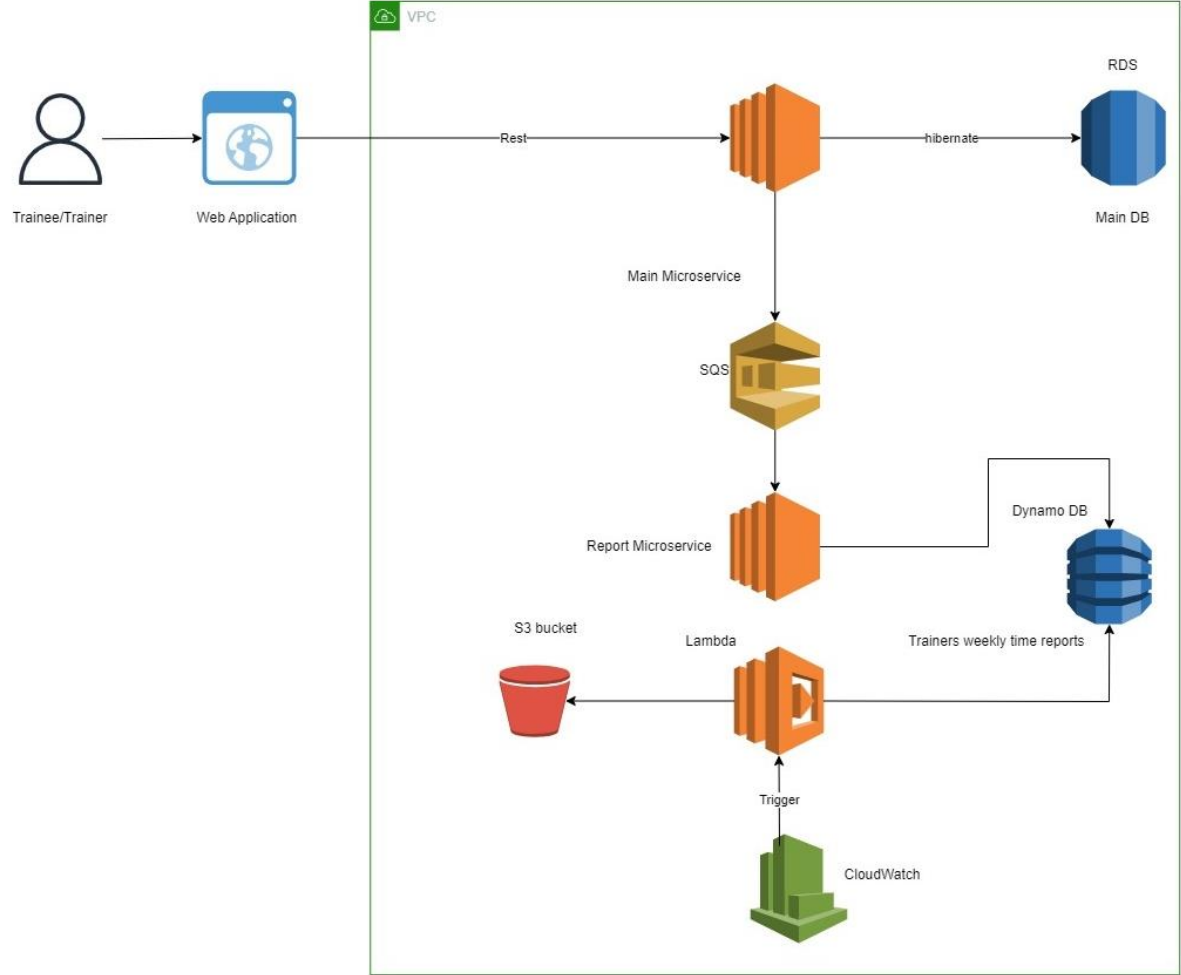
- The main objective of this task is to develop a gym application.
- The application should enable gym trainees and trainers to register their profile, giving trainees the option to select one or more trainers.
- Users should be able to log their activities and view them both as trainers and as trainees.
- The application should also provide the functionality to modify profile information and activate or deactivate profiles.
- To access the application (except Registration page), login credentials will be required for both trainers and trainees.
- For each trainer calculated info their trainings duration on weekly base.

Component diagram

1) On premise version



II) Cloud version

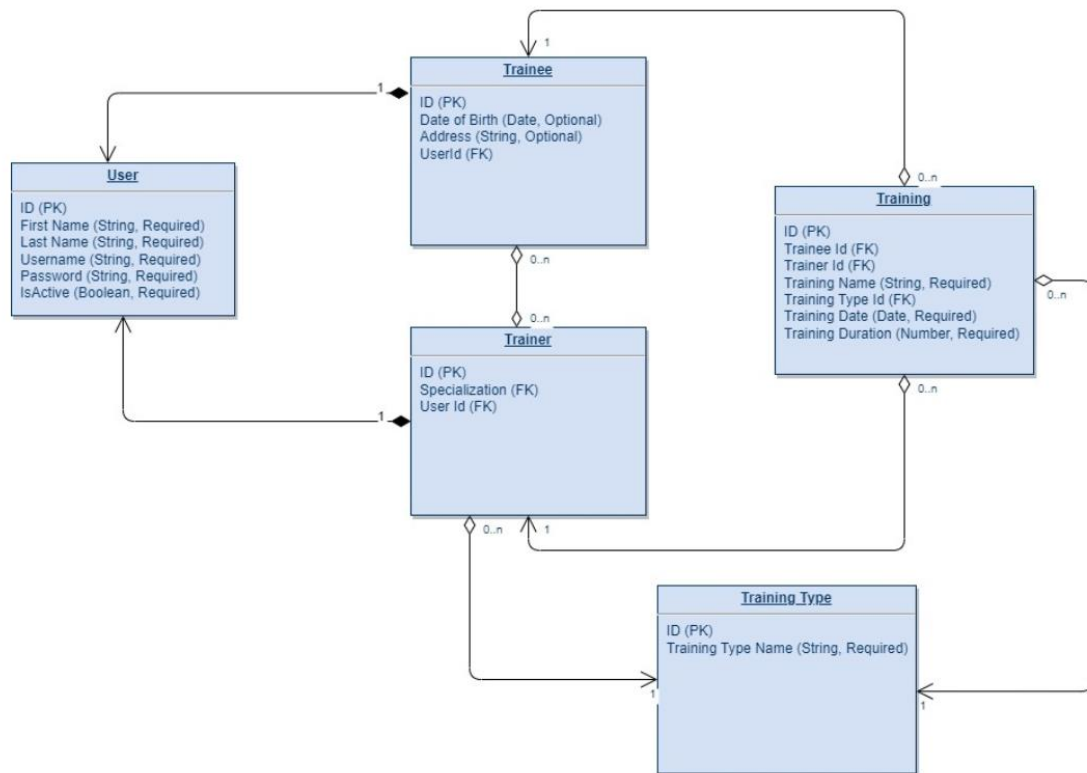


DB Schema

I) RDNMS

1. User
 - a. ID (PK)
 - b. First Name (String, Required)
 - c. Last Name (String, Required)
 - d. Username (String, Required)
 - e. Password (String, Required)
 - f. Is Active (Boolean, Required)
2. Trainee
 - a. ID (PK)
 - b. User Id (FK, Required)
 - c. Date of Birth (Date, Nullable)
 - d. Address (String, Nullable)
3. Trainer
 - a. ID (PK)
 - b. User Id (FK, Required)
 - c. Specialization Id (Training type Id) (FK, Required)
4. Trainee2Trainer
 - a. ID (PK)
 - b. Trainee Id (FK, Required)
 - c. Trainer Id (FK, Required)
5. Training
 - a. ID (PK)
 - b. Trainee Id (FK, Required)
 - c. Trainer Id (FK, Required)
 - d. Training Name (String, Required)
 - e. Training Type Id (FK, Required)
 - f. Training Date (Date, Required)
 - g. Training Duration (Number, Required)
6. Training Type
 - i. ID (PK)
 - ii. Training Type Name (String, Required, from List: fitness, yoga, Zumba, stretching, resistance)

II) Table Diagram



III) MongoDB

1. Trainings Summary Duration

- i. Trainer Username (ID)
- ii. Trainer First Name
- iii. Trainer Last Name
- iv. Trainee Status (Active, Inactive)
- v. Years List
 1. Months List
 - a. Trainings summary duration

Lambda logic description

Scope:

An idea is to implement **AWS Lambda** function that triggered on weekly base by **CloudWatch** trigger.

The **AWS Lambda** function should implement the follow logic:

1. Connect to Dynamo DB - Trainings Duration Summary table.
2. Extract data from the table.
3. Generate report in csv format with follow structure:
 - a. Trainer First Name.
 - b. Trainer Last Name.
 - c. Current month trainings duration summary time.
4. Upload the result file to the **S3** bucket.

Notes:

1. Report should contain both active and inactive trainers.
2. Report name should be as a template "Trainers_Trainings_summary_YYYY_MM".
3. Inactive trainer with training duration summary equals to 0 should not be included into the report.

Dynamo DB table Trainings duration summary structure

1. Trainer Username (ID)
2. Trainer First Name
3. Trainer Last Name
4. Trainee Status (Active, Inactive)
5. Years list
 - a. Months List
 - i. Trainings duration summary

REST API Endpoints

1. Trainee Registration

a) Request

- First Name (required)
- Last Name (required)
- Date of Birth (optional)
- Address (optional)

b) Response

- Username
- Password

2. Trainer Registration

a) Request

- First Name (required)
- Last Name (required)
- Specialization (required)

b) Response

- Username
- Password

3. Login

a) Request

- Username (required)
- Password (required)

b) Response

- 200 OK

4. Change Login

a) Request

- Username (required)
- Old Password (required)
- New Password (required)

b) Response

- 200 OK

5. Get Trainee Profile

a) Request

- Username (required)

b) Response

- First Name
- Last Name
- Date of Birth
- Address
- Is Active
- Trainers List
 1. Trainer Username
 2. Trainer First Name
 3. Trainer Last Name
 4. Trainer Specialization

6. Update Trainee Profile


a) Request

- Username (required)
- First Name (required)
- Last Name (required)
- Date of Birth (required)

- Address (required)
 - Is Active (required)
 - b) Response
 - Username
 - First Name
 - Last Name
 - Date of Birth
 - Address
 - Is Active
 - Trainers List
 - 1. Trainer Username
 - 2. Trainer First Name
 - 3. Trainer Last Name
 - 4. Trainer Specialization
7. Delete Trainee Profile
- a) Request
 - Username (required)
 - b) Response
 - 200 OK
8. Get Trainer Profile
- a) Request
 - Username (required)
 - b) Response
 - First Name
 - Last Name
 - Specialization
 - Is Active
 - Trainees List
 - 1. Trainee Username
 - 2. Trainee First Name
 - 3. Trainee Last Name
9. Update Trainer Profile
- a) Request
 - Username (required)
 - First Name (required)
 - Last Name (required)
 - Specialization (read only)
 - Is Active (required)
 - b) Response
 - Username
 - First Name
 - Last Name
 - Specialization
 - Is Active
 - Trainees List
 - 1. Trainee Username
 - 2. Trainee First Name
 - 3. Trainee Last Name
10. Get not assigned on trainee active trainers.
- a) Request
 - Username (required)

- b) Response
 - Trainer Username
 - Trainer First Name
 - Trainer Last Name
 - Trainer Specialization
- 11. Update Trainee's Trainer List
 - a) Request
 - Trainee Username
 - Trainers List (required)
 - 1. Trainer Username (required)
 - b) Response
 - Trainers List
 - 1. Trainer Username
 - 2. Trainer First Name
 - 3. Trainer Last Name
 - 4. Trainer Specialization
- 12. Get Trainee Trainings List
 - a) Request
 - Username (required)
 - Period From (optional)
 - Period To (optional)
 - Trainer Name (optional)
 - Training Type (optional)
 - b) Response
 - Training Name
 - Training Date
 - Training Type
 - Training Duration
 - Trainer Name
- 13. Get Trainer Trainings List
 - a) Request
 - Username (required)
 - Period From (optional)
 - Period To (optional)
 - Trainee Name (optional)
 - b) Response
 - Training Name
 - Training Date
 - Training Type
 - Training Duration
 - Trainee Name
- 14. Add Training
 - a) Request
 - Trainee username (required)
 - Trainer username (required)
 - Training Name (required)
 - Training Date (required)
 - Training Type (required)
 - Training Duration (required)
 - b) Response
 - 200 OK

Screens

1. Home Page
 - a) Logo
 - b) Header
 - Home Page
 - Registration form for trainee
 - Registration form for trainer
 - Login
 - c) Static text
 - d) Footer
 - About us
 - Contact us
 - Terms of use
2. Trainee registration screen
 - a) Header
 - b) Registration form for trainee
 - First Name (input field required)
 - Last Name (input field required)
 - Date of Birth (input field optional)
 - Address (input field optional)
 - Send button
 - Username (text label hidden till response)
 - Password (text label hidden till response)
 - c) Footer
3. Trainer registration screen
 - a) Header
 - b) Registration form for trainee
 - First Name (input field required)
 - Last Name (input field required)
 - Specialization (combo box required)
 - Send button
 - Username (text label hidden till response)
 - Password (text label hidden till response)
 - c) Footer
4. Login Form
 - a) Header
 - b) Login Form
 - Username
 - Password
 - CAPTCHA 
 - c) Footer
5. Trainee profile screen
 - a) Header
 - b) Trainee details (read only)
 - First Name
 - Last Name
 - Username
 - Date of Birth
 - Address
 - Is Active

- Trainers List
 1. Trainer's First Name
 2. Trainer's Last Name
 3. Trainer's Specialization
 - View Trainings button
 - Update Trainee profile button
 - Delete Trainee profile button
 - Change Password button
- c) Footer
- 6. Trainer profile screen
 - a) Header
 - b) Trainer details (read only)
 - First Name
 - Last Name
 - Username
 - Specialization
 - Is Active
 - Trainees List
 1. Trainee's First Name
 2. Trainee's Last Name
 - View Trainings button
 - Update Trainer profile button
 - Change Password button
 - c) Footer
- 7. Change password
 - a) Header
 - b) Change Password Form
 - Username (input field required)
 - Old Password (input field required)
 - New Password (input field required)
 - New Password Confirmation (input field required)
 - c) Footer
- 8. Update Trainee Profile
 - a) Header
 - b) Update Profile Form
 - First Name (input field)
 - Last Name (input field)
 - Date of Birth (input field)
 - Address (input field)
 - Is Active (radio button)
 - Trainers List multiple choose list of active trainers not assigned on trainee.
 1. Trainer's First Name
 2. Trainer's Last Name
 3. Trainer's Specialization
 - Send button.
 - c) Footer
- 9. Update Trainer Profile
 - a) Header
 - b) Update Profile Form
 - First Name (input field)
 - Last Name (input field)

- Is Active (radio button)
- Send button.

c) Footer

10. Trainings Log for trainee

a) Header

b) Trainings form

- Search by trainer name (input field, optional)
- Search by specialization (combo box, optional)
- Search by date from/to (calendar, optional)
- Trainings list
 1. Training date
 2. Training name
 3. Training type
 4. Trainer's name
 5. Training duration
- Search button

c) Footer

11. Trainings Log for trainer

a) Header

b) Trainings form

- Search by trainee name (input field, optional)
- Search by date from/to (calendar, optional)
- Trainings list
 1. Training date
 2. Training name
 3. Training type
 4. Trainee's name
 5. Training duration
- Search button

c) Footer

12. Add Training for Trainee

a) Header

b) Add Training Form

- Training date (calendar)
- Training name (input field, required)
- Training type (combo box, required)
- Trainer's name (combo box, required)
- Training duration (input field, required)

c) Footer