

Spring Fundamentals Exam

Gira

Exam for the ["Spring Fundamentals" course @ SoftUni](#).

1. Database Requirements

The **Database** of the **Gira** application needs to support **3 entities**:

User

- Has an **Id** – **UUID-string or Long**
- Has a **Username (unique)**
 - Username length must be between 3 and 20 characters (inclusive 3 and 20).
- Has a **Password**
 - Password length must be between 3 and 20 characters (inclusive 3 and 20).
- Has an **Email (unique)**
 - Must contains '@'.
 - Cannot be null.

Task

- Has an **Id** – **UUID-string or Long**
- Has a **Name (unique)**
 - Name length must be between 3 and 20 characters (inclusive 3 and 20).
- Has a **Description**
 - Description min length must be minimum 5(inclusive) characters
- Has a **Progress (unique)**
 - Option between (**OPEN, IN_PROGRESS, COMPLETED, OTHER**)
- Has a **Due Date**
 - **A date**, that cannot be in the past
- Has a **Classification**
 - Classification cannot be null.
- Has a **User**
 - Cannot be null.

Classification

- Has an **Id** – **UUID-string or Long**
- Has a **ClassificationName (unique)**

- option between (BUG, FEATURE, SUPPORT, OTHER)
- Has a **Description**

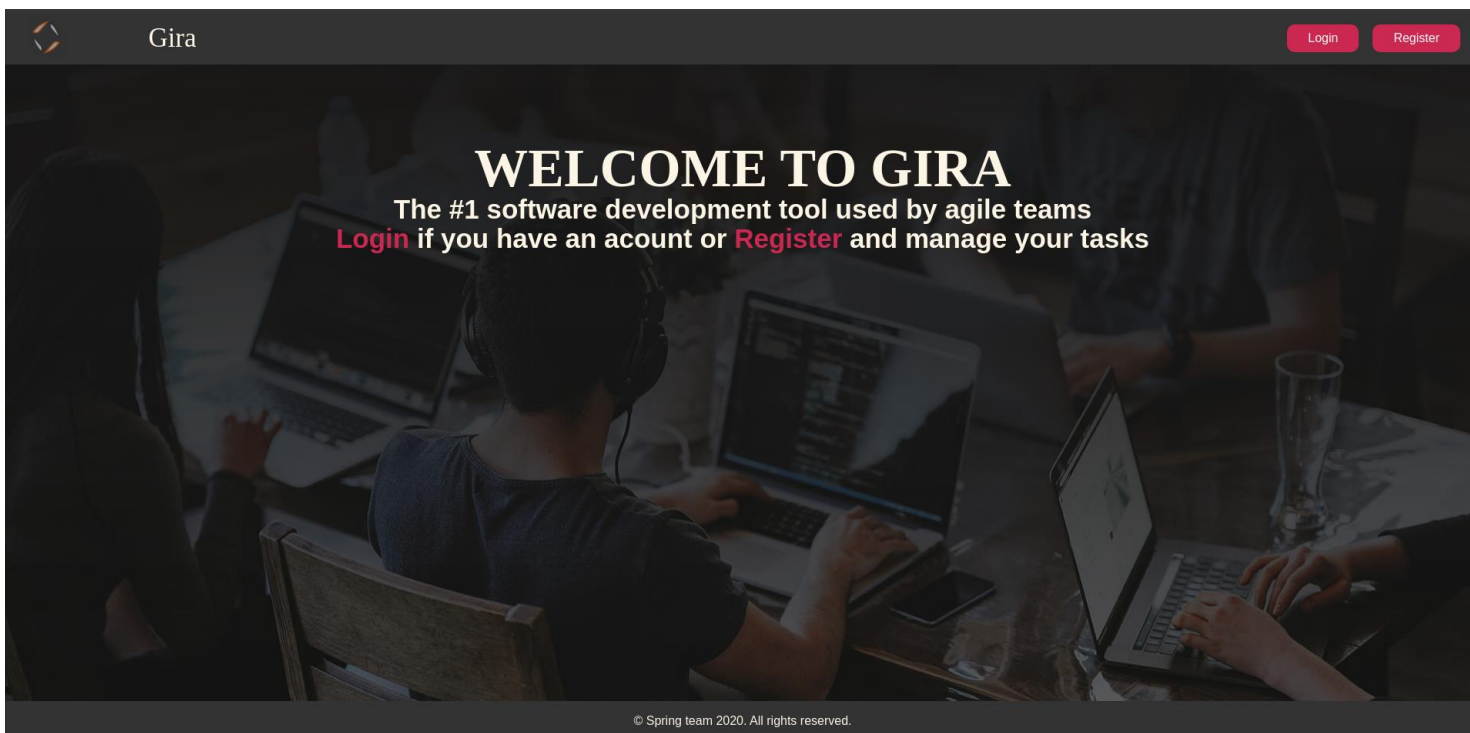
Implement the entities with the **correct datatypes** and implement **repositories** for them.

2. Initialize classifications

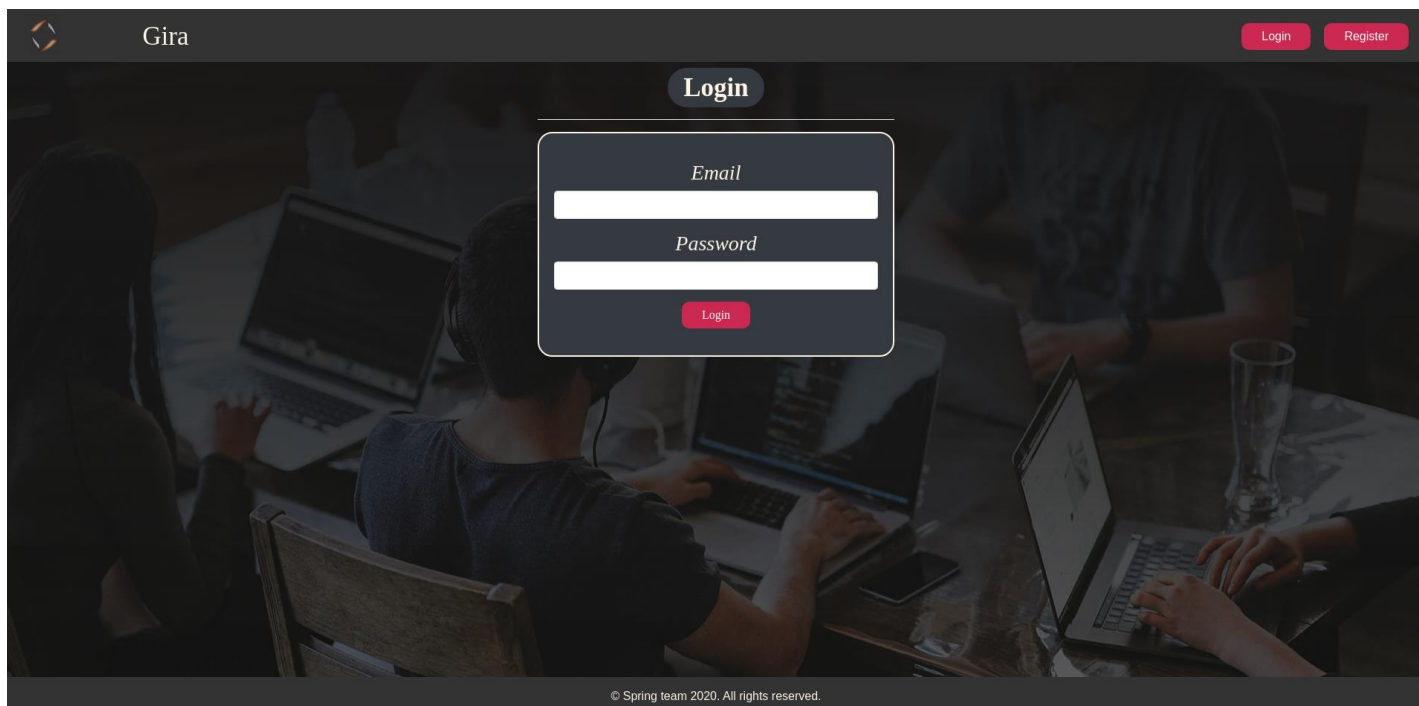
- Implement a method that checks (when the app is started) if the database does not have classifications and initialize them
 - You are free to do it in different ways.

3. Page Requirements

Index Page (logged out user)



Login Page (logged out user)



The login page features a dark background with a blurred image of people working on laptops. At the top left is the 'Gira' logo. At the top right are 'Login' and 'Register' buttons. The main heading 'Login' is centered above a white-bordered box containing the login form. The form has two input fields labeled 'Email' and 'Password', and a 'Login' button below them. A copyright notice '© Spring team 2020. All rights reserved.' is at the bottom.

Gira

Login Register

Login

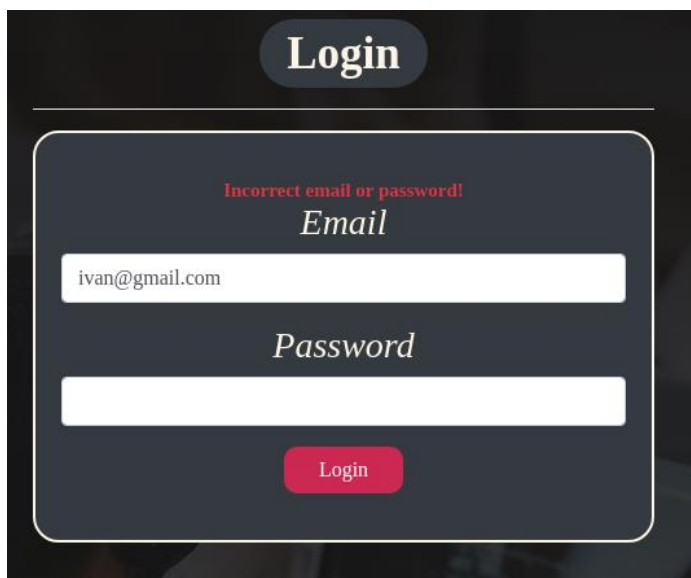
Email

Password

Login

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Login Page validations



This screenshot shows the login page with a validation error. The 'Email' field contains 'ivan@gmail.com'. A red message 'Incorrect email or password!' is displayed above the fields. The 'Password' field is empty. The 'Login' button is at the bottom.

Login

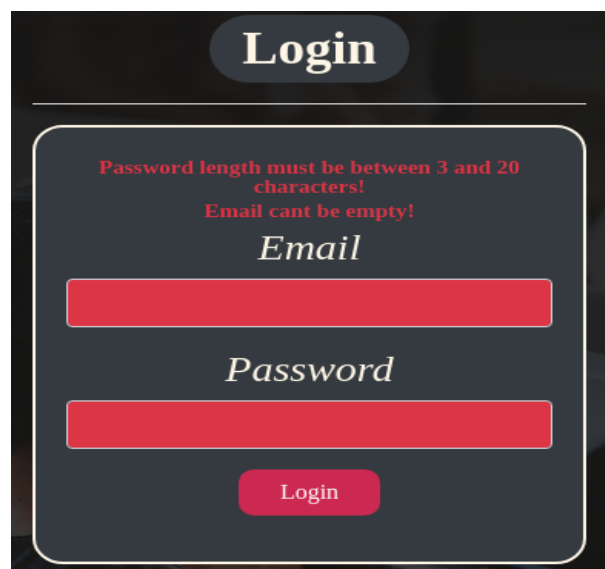
Incorrect email or password!

Email

ivan@gmail.com

Password

Login



This screenshot shows the login page with a validation error. The 'Password' field is highlighted in red. A red message 'Password length must be between 3 and 20 characters!' is displayed above the fields. The 'Email' field is empty. The 'Login' button is at the bottom.

Login

Password length must be between 3 and 20 characters!

Email

Password

Login

Register Page (logged out user)

Gira

Login Register

Register

Username

Email

Password

Confirm Password

Register

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Register Page validations

Register

Username

Username must be between 3 and 20 characters!

Email

Email cannot be empty!

Password

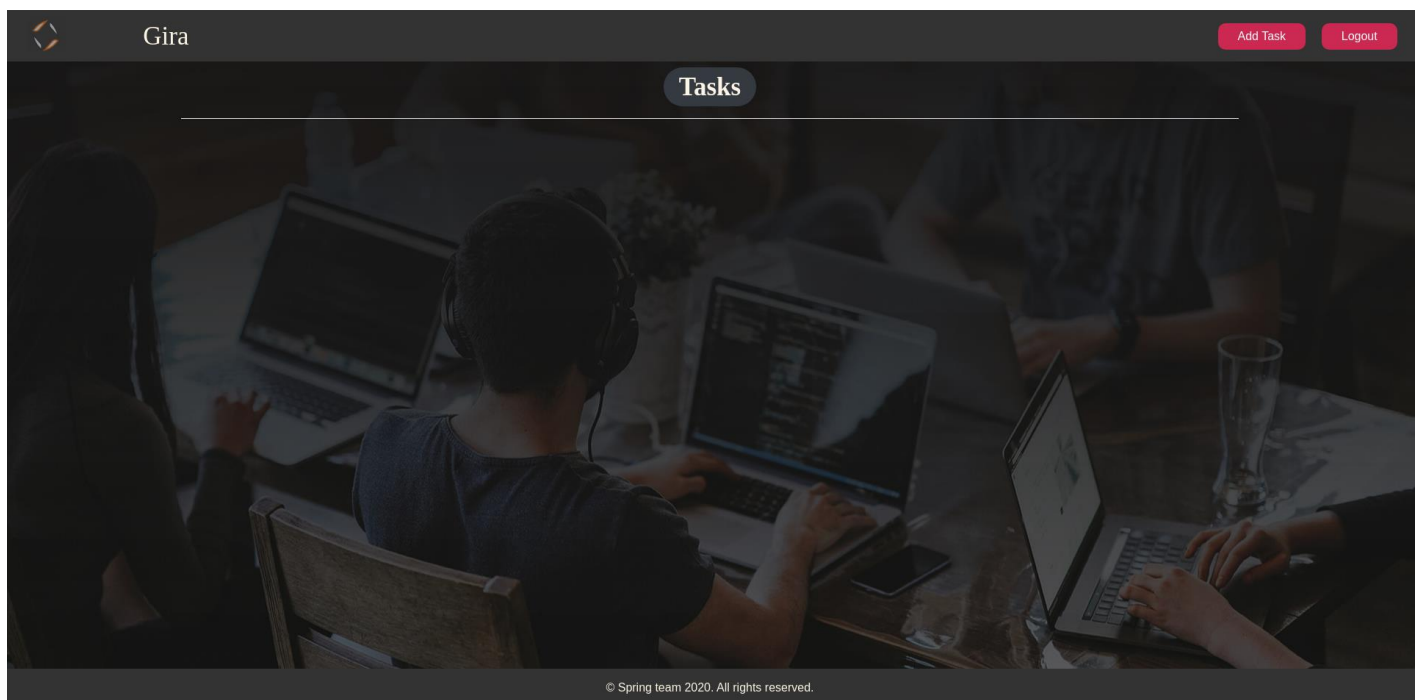
Password must be between 3 and 20 characters!

Confirm Password

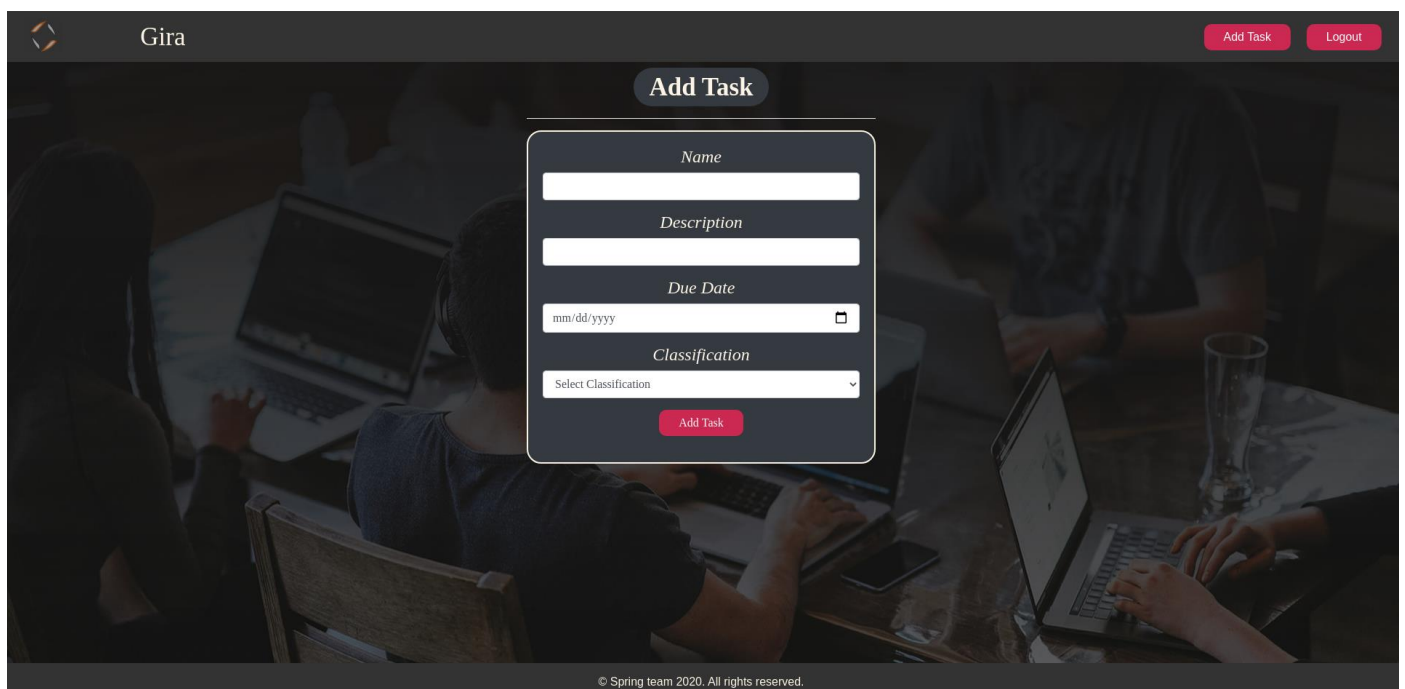
Register

Home Page (without having any tasks)

- Note: The home page should visualize **all of the tasks** from the database



Add task



Add task validation

Add Task

Name

Name length must be between 3 and 20 characters characters!

Description

Description length must be more than 5 characters!

Due Date

06/30/2020

The date cannot be in the past!

Classification

Select Classification

Classification cannot be null!

Add Task

Home Page (with tasks)

Tasks					
Name	Assigned to	Classification	Due Date	Progress	
Dark mode	ivan	FEATURE	2021-01-01	OPEN	Progress
Name	Assigned to	Classification	Due Date	Progress	
New Laptop	ivan	SUPPORT	2020-08-30	IN_PROGRESS	Progress
Name	Assigned to	Classification	Due Date	Progress	
Login breaks	ivan	BUG	2020-08-14	COMPLETED	Progress
Name	Assigned to	Classification	Due Date	Progress	
Restock apples	ivan	OTHER	2020-08-07	OPEN	Progress

The templates have been given to you in the application skeleton, so make sure you implement the pages correctly.

NOTE: The templates should look **EXACTLY** as shown above.

NOTE: The templates do **NOT require additional CSS** for you to write. The **bootstrap** and the **given css** are enough.

4. Functional Requirements

The **Functionality Requirements** describe the functionality that the **Application** must support.

The **application** should provide **Guest** (not logged in) users with the functionality to **login**, **register** and **view** the **Index** page.

The **application** should provide **Users** (logged in) with the functionality to **logout**, **add a Task**, **view all Tasks (Home page)**. When creating a task, the "**Assigned to**" field should have **the person's name who created the task** and the initial progress should be "**OPEN**".

The **progress button** changes the progress column of the task:

- If the progress is "**OPEN**", the progress becomes "**IN_PROGRESS**".
- If the progress is "**IN_PROGRESS**", the progress becomes "**COMPLETED**".
- If the progress is "**COMPLETED**", **delete** the task **from the database**.

Gira in navbar should redirect to appropriate **URL depending** on that if the user is logged in.

The **application** should provide **functionality** for **adding tasks** with **classification (BUG, FEATURE, SUPPORT, OTHER)**.

The **task's classification** should have different colours. (The colours and the classes are in the end of the style.css file)

The **appropriate task's classification** should have the **appropriate style class**. The names are the same for **the css classes** and **the classification names**. For example:

```
<small class="classifications SUPPORT">SUPPORT</small>
```

The **application** should **store** its **data** into a **MySQL** database.

5. Security Requirements

The **Security Requirements** are mainly access requirements. Configurations about which users can access specific functionalities and pages.

- **Guest** (not logged in) users can access **Index** page.
- **Guest** (not logged in) users can access **Login** page.
- **Guest** (not logged in) users can access **Register** page.
- **Users** (logged in) can access **Home** page.
- **Users** (logged in) can access **Add Task** page.
- **Users** (logged in) can access **Logout** functionality.

6. Scoring

Database – 10 points.

Pages – 25 points.

Functionality – 35 points.

Security – 5 points.

Validations – 15 points.

Code Quality – 10 points.