Reseller Application

Regular Exam [Spring Fundamentals]

ResellerApp is the newest online marketplace dedicated to buying and selling new or used items. At any given time, the site has a wide variety of listings ranging from hand tools, clothes and books to accessories, pro audio gear, bikes, smartphones, and more...

There are several requirements you must follow in the implementation:

1. Database Requirements

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

User

- **Id** – Accepts **UUID-String** or **Long** values
- **Username**
  - The **length** of the **values** should be **between 3** and **20** characters long (both numbers are **INCLUSIVE**)
  - The values should be **unique** in the database
- **Password**
  - The **length** of the **values** should be **between 3** and **20** characters long (**INCLUSIVE**)
- **Email**
  - The values should contain a **'@'** symbol)
  - The values should be **unique** in the database
- **Created Offers**
  - The offers contains users offers. One **user** may have **many offers** and one **offer** can be **created** by **only one user**
- **Bought Offers**
  - Collection with the **offers** that the **user** bought. **One user may have many offers** in the collection.

Offer

- **Id** – Accepts **UUID-String** or **Long** values
- **Description**
  - The **length** of the **values** should be **between 2** and **50** characters long (both numbers are **INCLUSIVE**)
- **Price** – floating point number
  - The price must be a **positive number**
- **Condition**
  - One offer **has one** condition and one condition can have **many offers**

Condition

- **Id** – Accepts **UUID-String** or **Long** values
- **Condition name**
  - an option between (**EXCELLENT**, **GOOD** and **ACCEPTABLE**)
- **Description**
  - For EXCELLENT - "In perfect condition"
  - For GOOD - "Some signs of wear and tear or minor defects"
  - For ACCEPTABLE - "The item is fairly worn but continues to function properly"

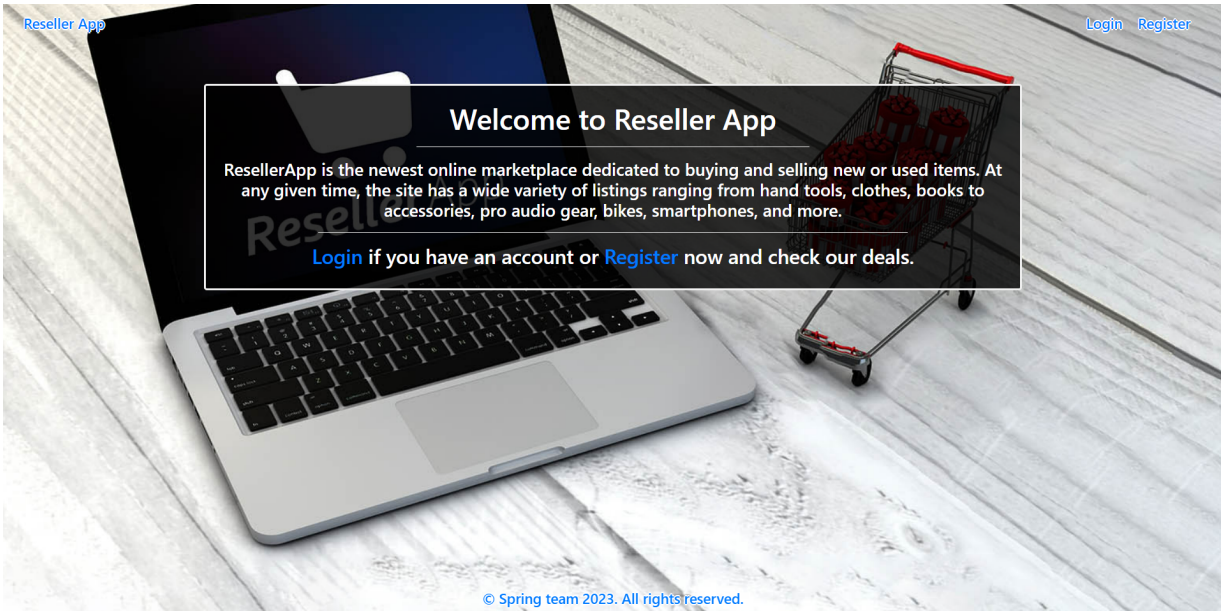
Nullable/Empty/Blank values are not allowed unless explicitly mentioned. Implement the entities with the **correct data types** and implement the **repositories** for them.

2. Initialize categories

- Implement a method that checks (when app started) if the database does not have any category and initialize them
  - You are free to do this in some different ways
  - You can skip the description if you want

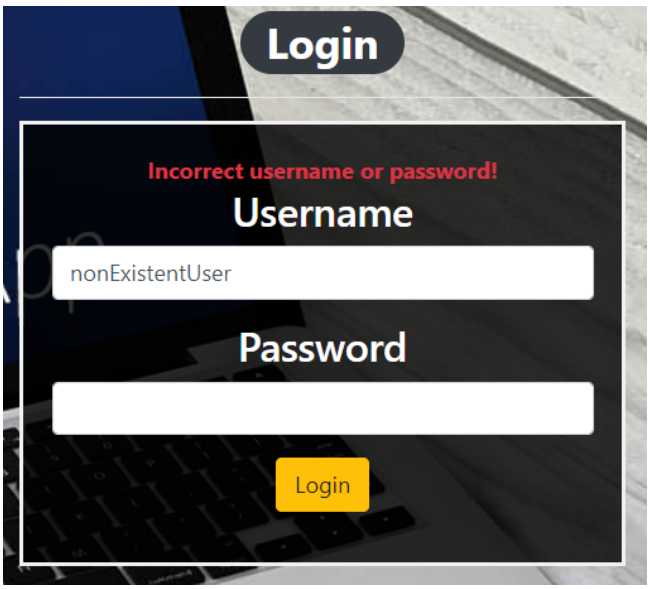
3. Page Requirements

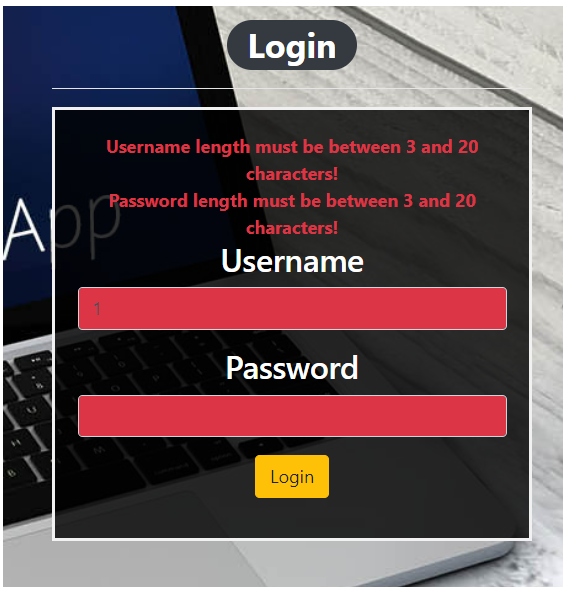
Index Page (logged out user)



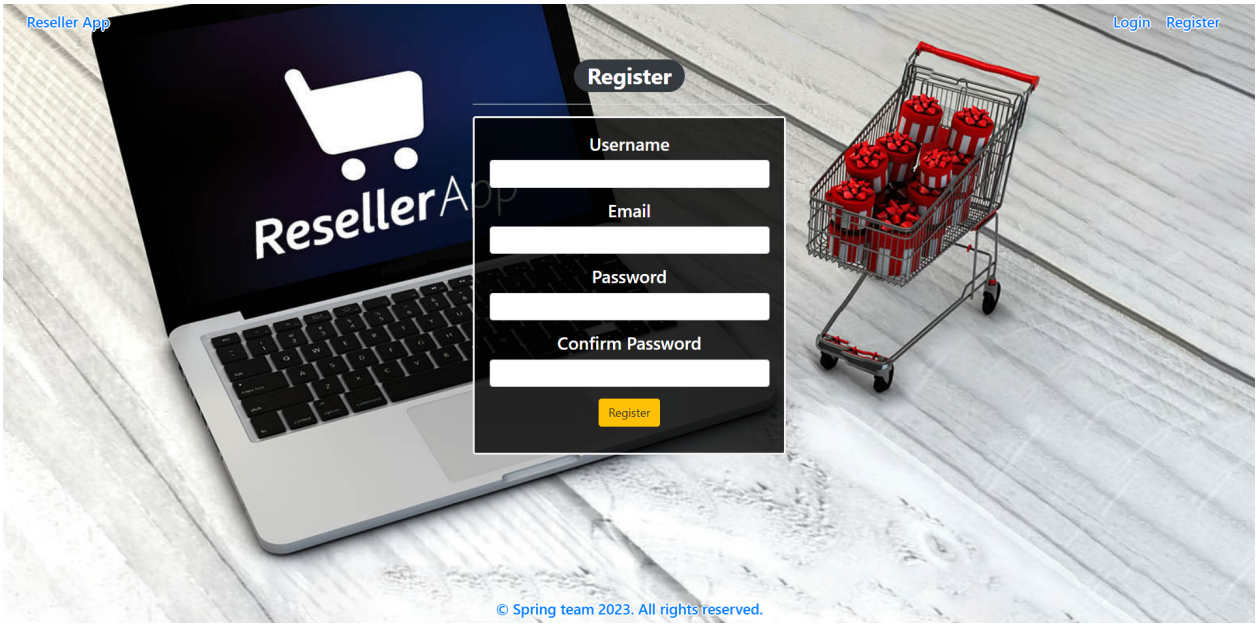
Login Page (logged out user)

Login Page validations

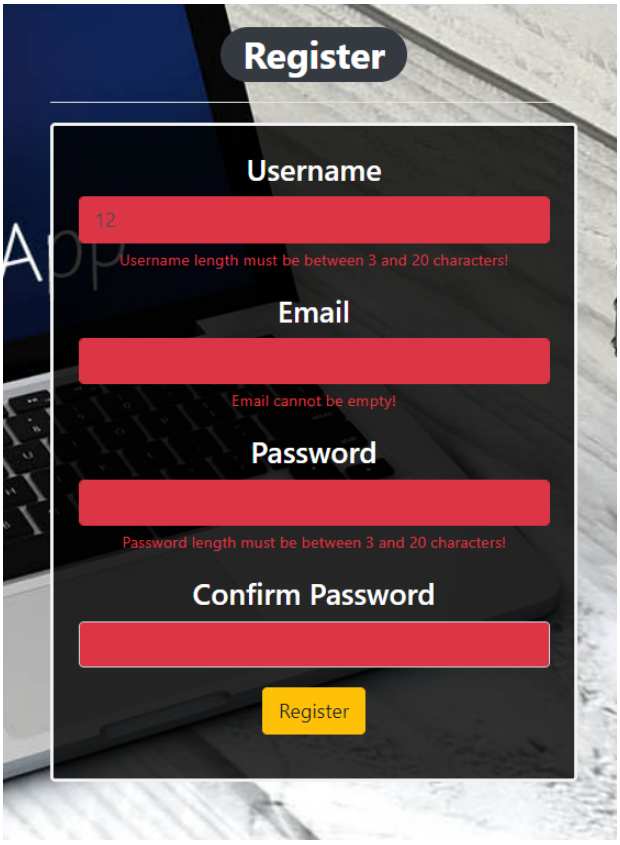




Registration Page (logged out user)

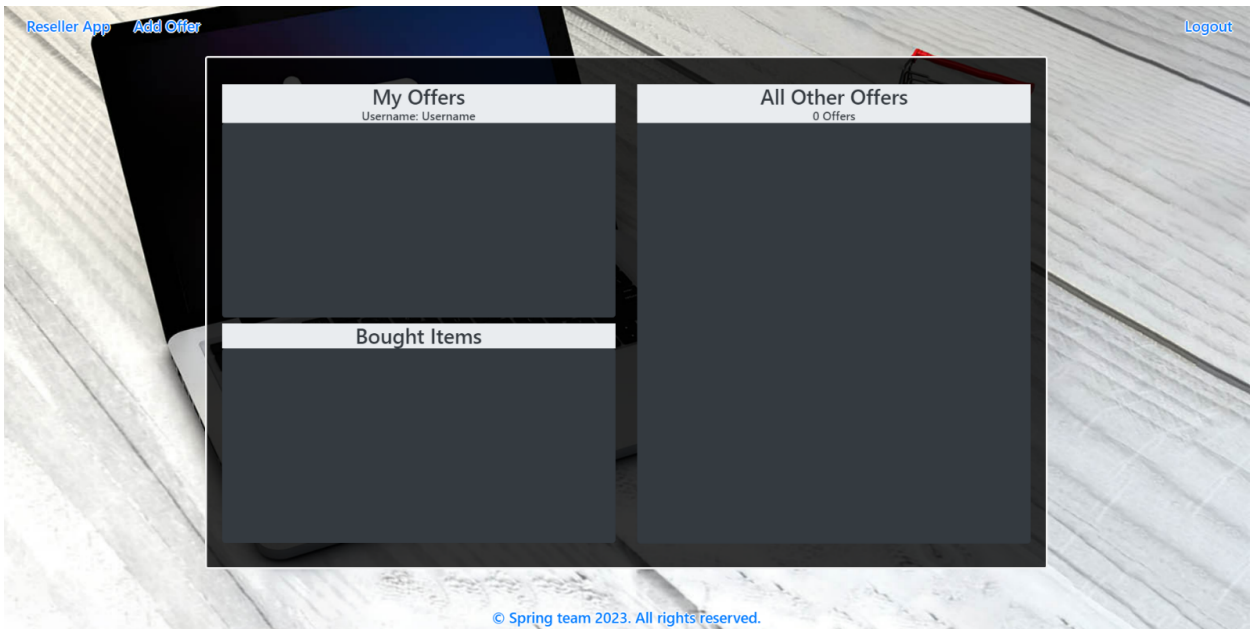


Registration Page validations

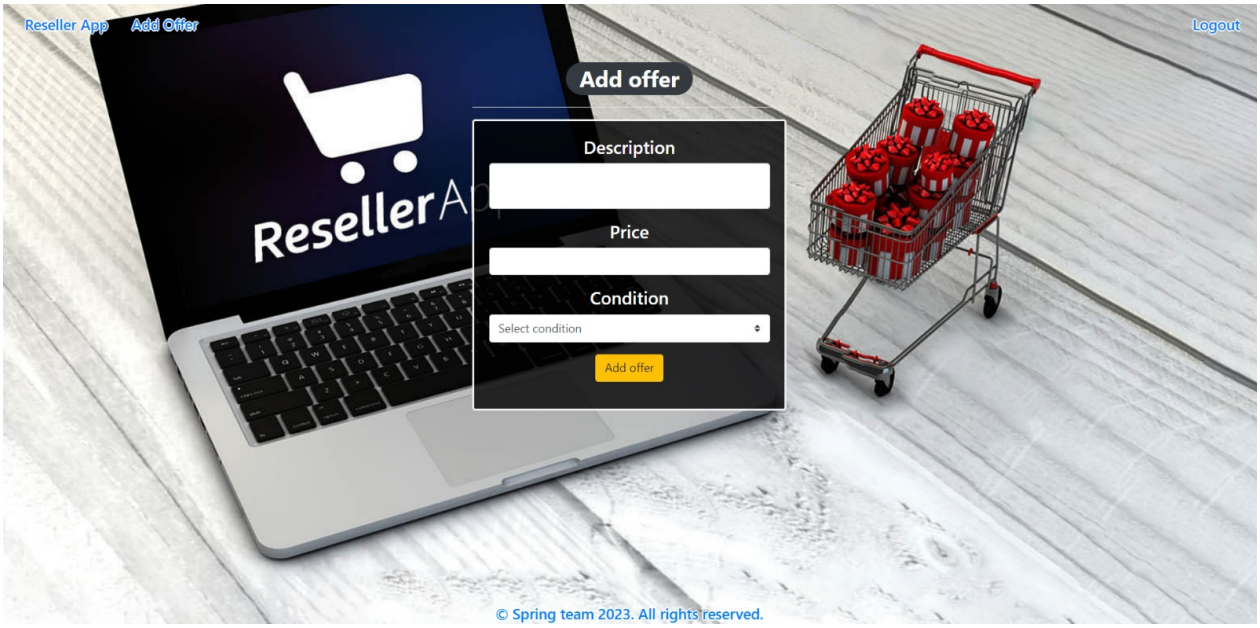


Home Page (without having any offers)

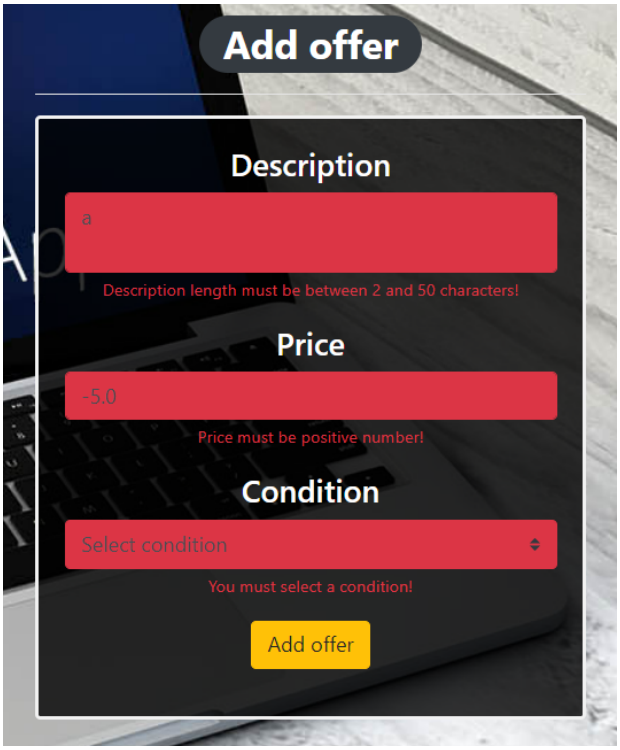
- The left and upper section (My Offers) of the page should visualize **all of the current logged user offers** from the database which he owns.
- The the left and down section (Bought Items) of the page should visualize **the bought items (offers) by the current logged user from All Other Offers** section
- The right section (All Other Offers) of the page should visualize the available (not bought) **offers** from **all other users** (except the current logged one).



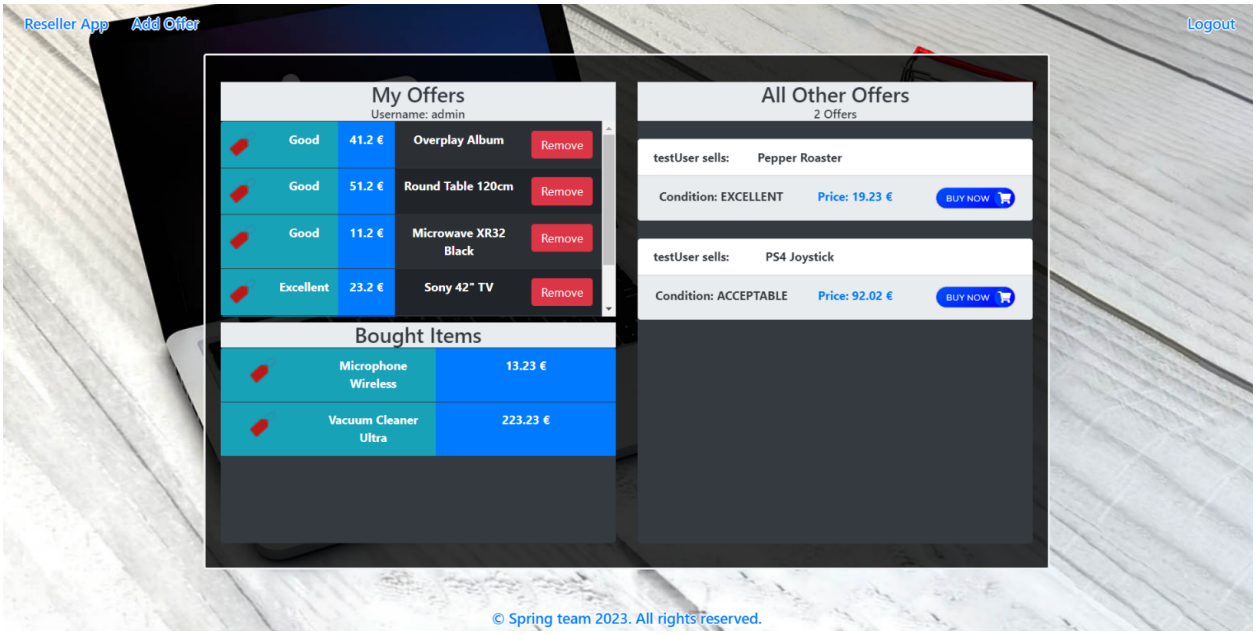
Add Offer



Add Offer Validation



Home Page (with offers)



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

NOTES:

- The templates should look **EXACTLY** as shown above
- The templates do **NOT require additional CSS** for you to write. Only **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 log in, register and view the Index page.

The application should provide **Users** (logged in) with the functionality to **log out, add a new offer (Add offer page), view all offers (Home page) and buy an offer from All Other Offers to Bought Items**.

Reseller Application in navbar should **redirect** to the appropriate URL depending on that if the **user is logged in**. The application should provide functionality for **adding offers** with conditions of **Excellent, Good or Acceptable**. The offers should be separated into different sections according to their ownership.

When the user clicks on the **BUY NOW button of some offer**, he buys the offer to **his Bought Items**. You should **not delete** this offer from DB. The offer should be removed from the collection with offers from the seller and should be added to the collection with boughtOffers of the buyer.

The **Remove** button in My Offers section **should remove the offer** from DB.

Bellow the All Other Offers banner is located an info bar that shows the sum of the offers in this field.

The application should store its data in 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;
  - **Login** page;
  - **Register** page.
- **Users** (logged in) can access:
  - **Home** page;
  - **Add Offer** page;
  - **Logout** functionality.

6. Scoring

Database – 10 points
Pages – 25 points
Functionality – 35 points
Security – 5 points
Validations – 15 points
Code Quality – 10 points