

# Spring Fundamentals

## Exam Preparation

### Andrey's

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

**Andrey's** is a shop application. Users can register and login from home page. When users register in the app, they see a different navigation bar with more actions and also see all the items from the database. Clicking on add item, they can see the item's detail page. From the details page, they can delete the item if they want. There are several requirements you must follow in the implementation.

## Database Requirements

The **Database** of the **Andrey's** application needs to support **3 entities**:

### User

- Has an **Id** – **UUID-string**
- Has a **Username** (**unique**)
  - Username must be unique
  - Username length must be more than two characters
- Has a **Password**
  - **Password length must be more than two characters**
- Has an **Email**
  - **Email must contain '@'**
- Has a **Budget**
  - **Must be a positive number**

### Item

- Has an **Id** – **UUID-string**
- Has a **Name** (**unique**)
  - Username must be unique
  - Username length must be more than two characters
- Has a **Description**
  - Description length must be more than three characters
- Has a **Price**
  - Price must be positive number
- Has a **Category**
  - **Has a relation with Categories**
- Has a **Gender** – **an option between (Male and Female)**

## Category

- Has an **Id** – **UUID-string**
- Has a **Name** – **an option between (Shirt, Denim, Shorts or Jacket)**
- Has a **Description**

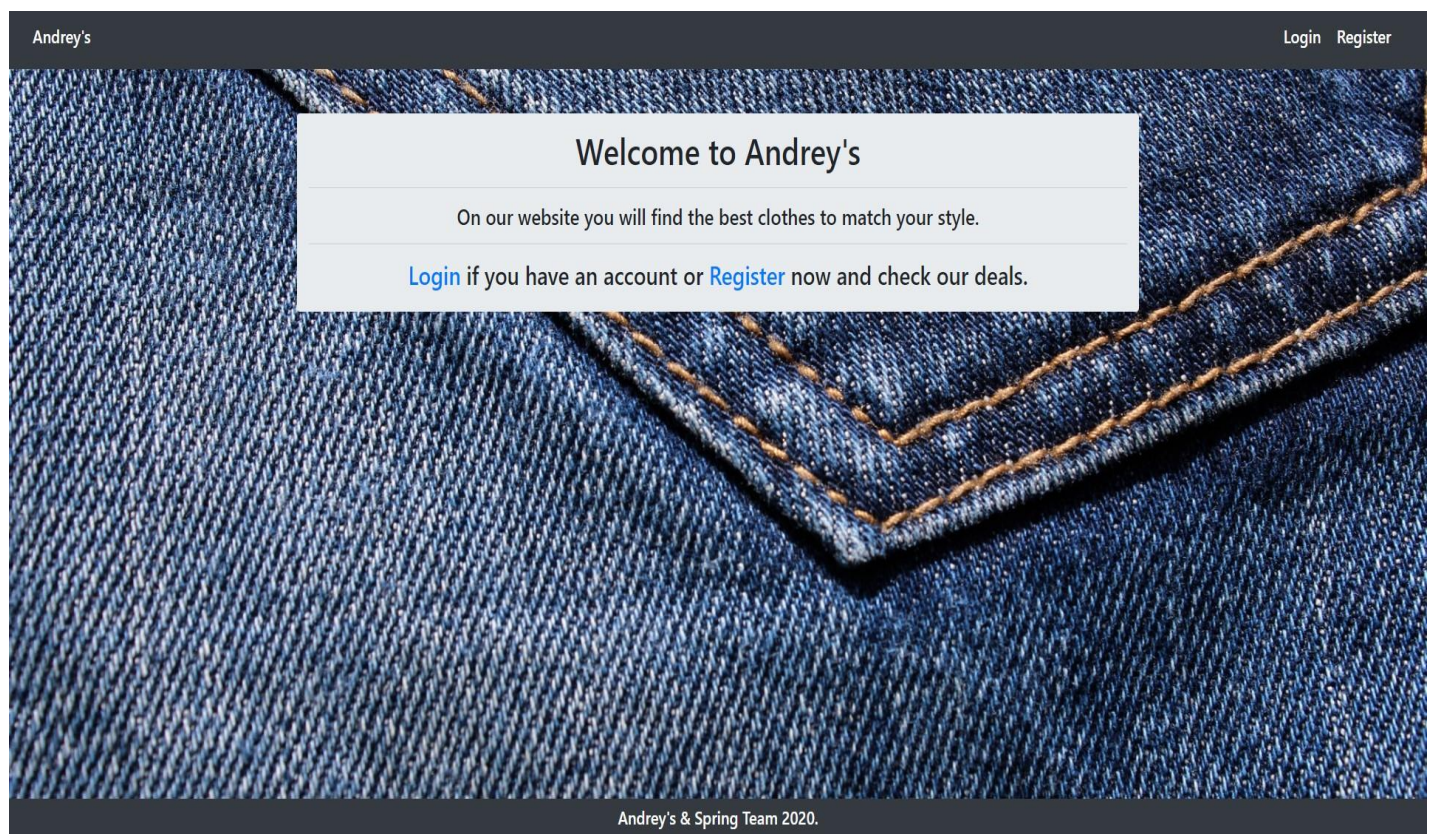
Implement the entities with the **correct datatypes** and implement **repositories** for them.

## 1. Initialize categories

- Implement method that check if the database does not have categories and initialize them
  - You are free to do in different ways.

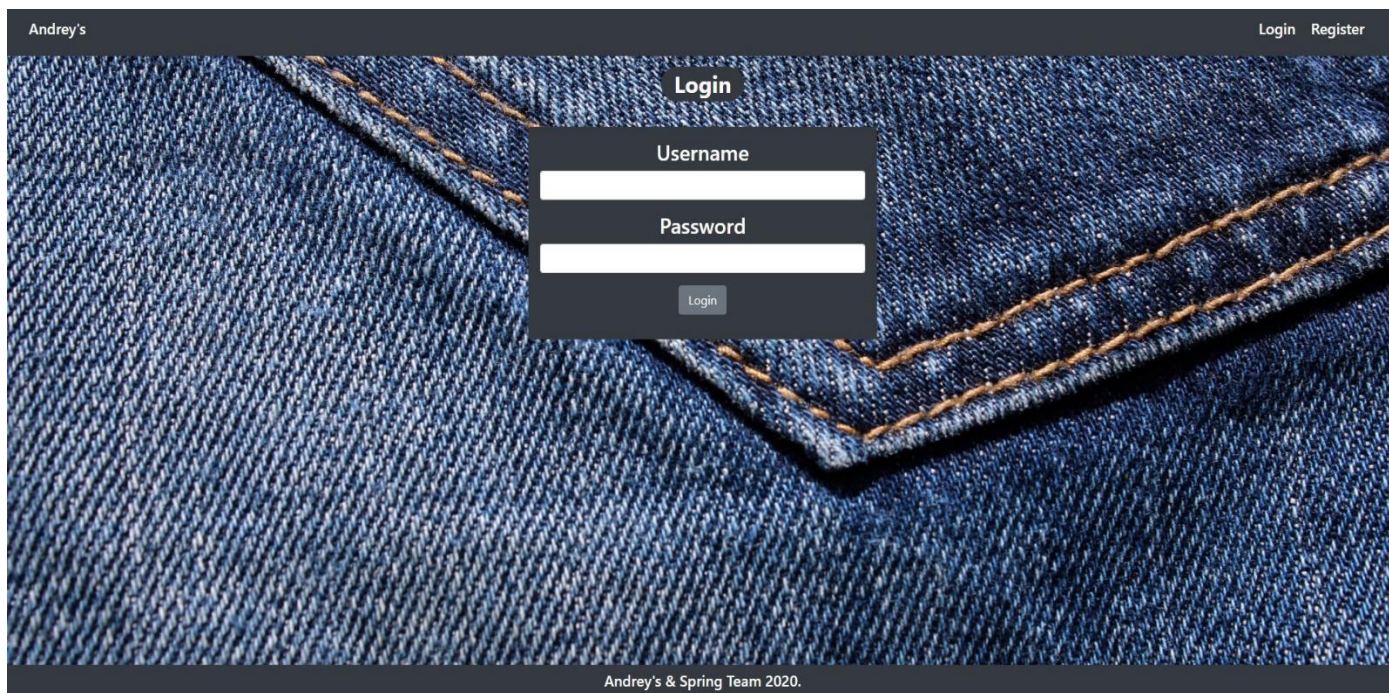
## 2. Page Requirements

### Index Page (logged out user)



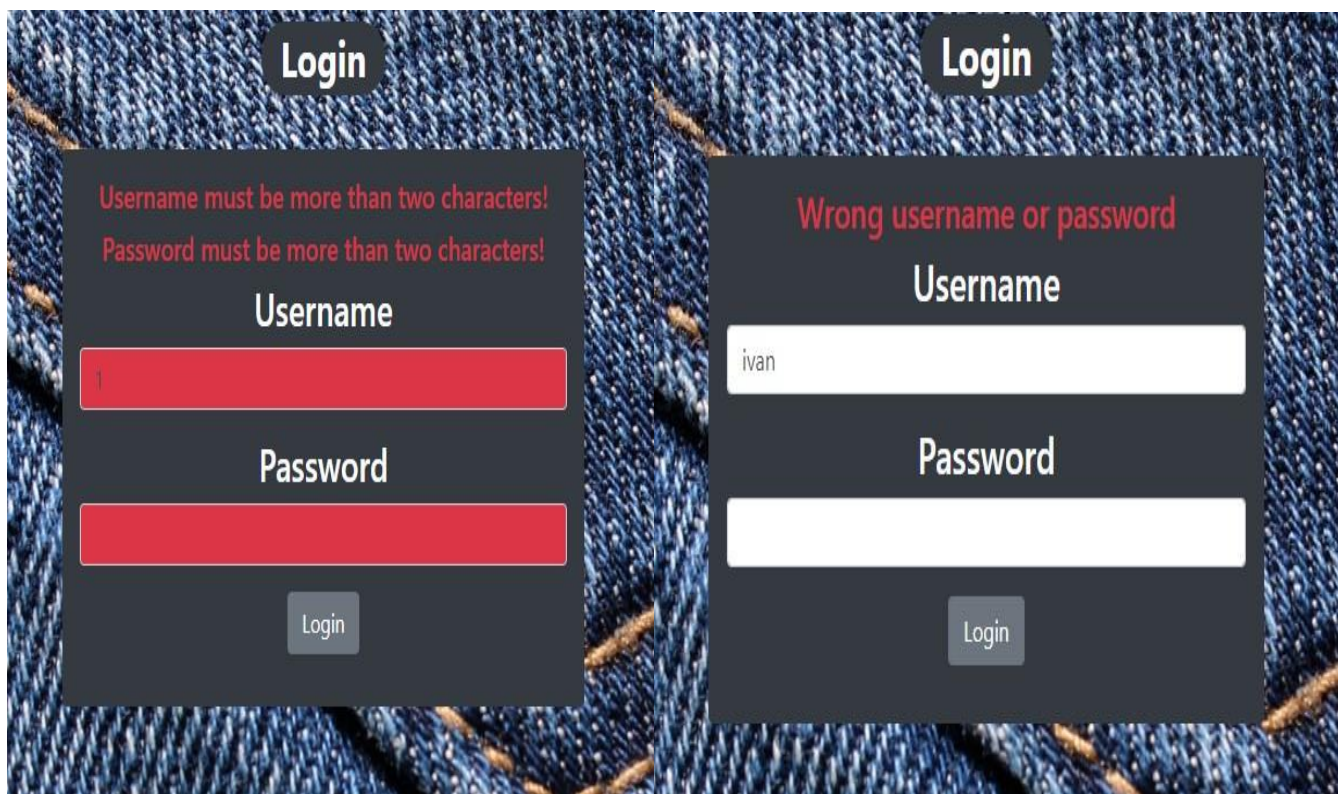


## Login Page (logged out user)



The login page features a dark header with the text "Andrey's" on the left and "Login Register" on the right. The background is a close-up of blue denim jeans. In the center, there is a dark gray login form with the title "Login" in white. The form contains two white input fields labeled "Username" and "Password", and a "Login" button below them. At the bottom of the page, there is a small text credit: "Andrey's & Spring Team 2020."

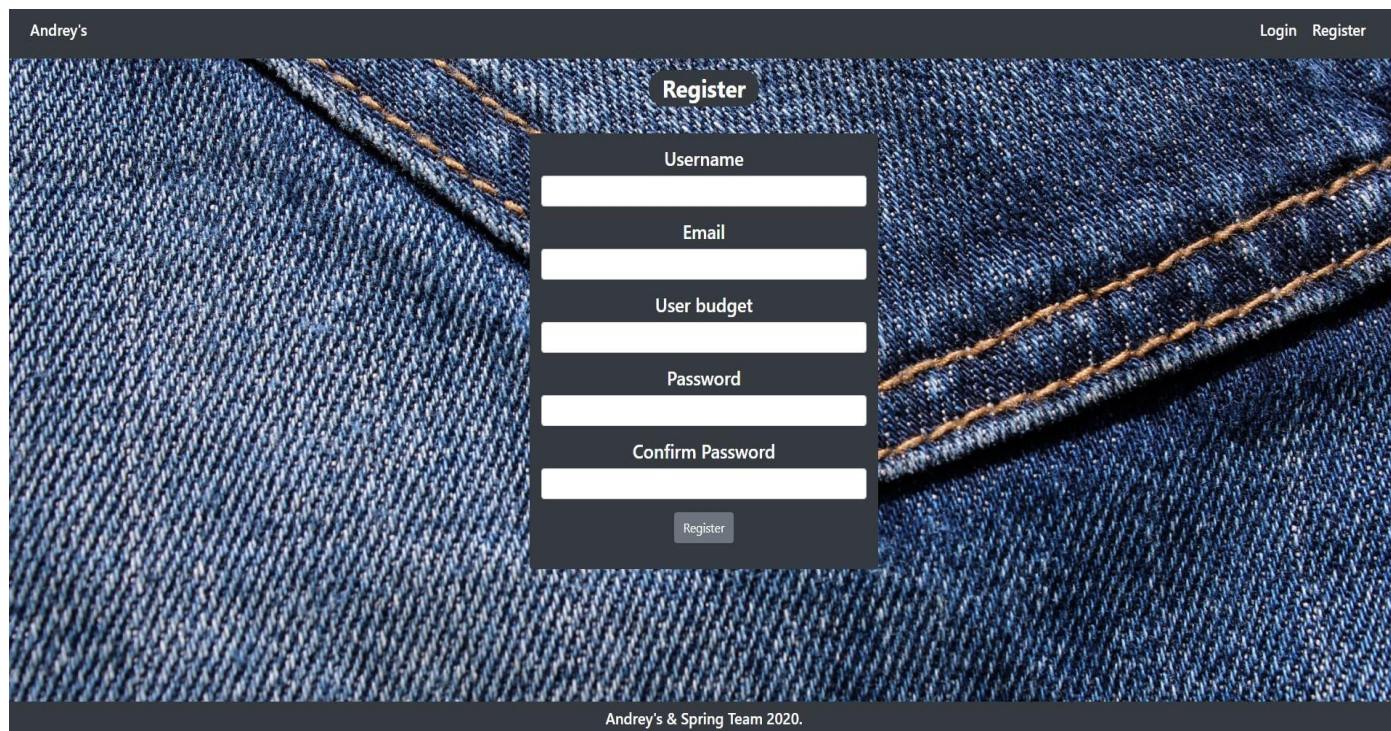
## Login Page (wrong input and missing user)



Two side-by-side screenshots of the login page showing error states. Both have a dark header with "Login" in the center. The left screenshot shows a red error message: "Username must be more than two characters! Password must be more than two characters!". The input fields are highlighted in red, and the "Login" button is visible. The right screenshot shows a red error message: "Wrong username or password". The "Username" input field contains the text "ivan", and the "Password" field is empty. The "Login" button is visible.



## Register Page (logged out user)



Andrey's Login Register

**Register**

Username

Email

User budget

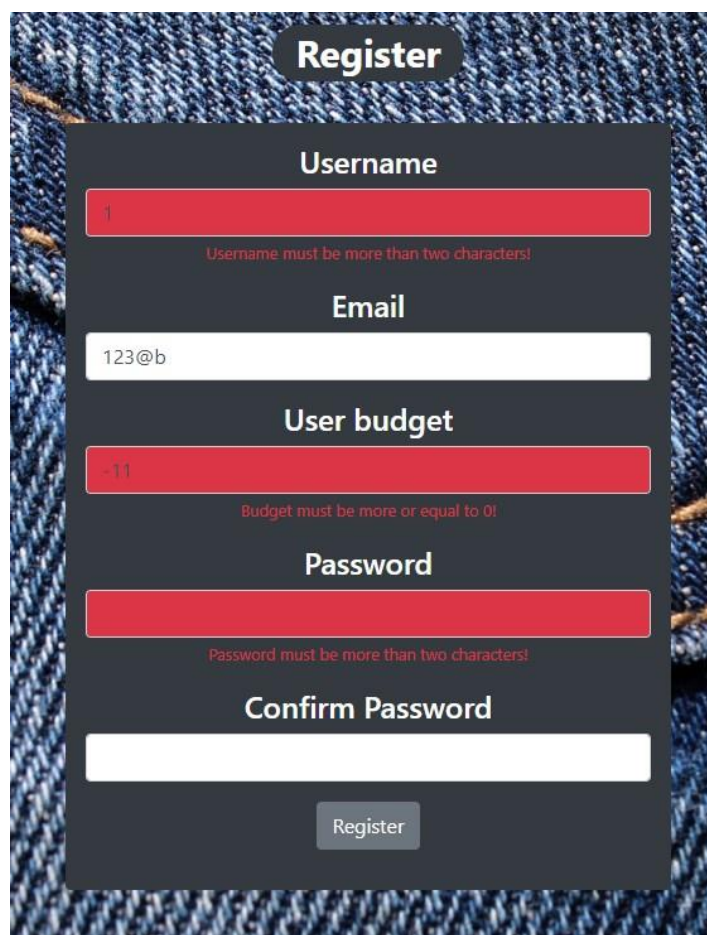
Password

Confirm Password

Register

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## Register Page (wrong input)



**Register**

Username

1

Username must be more than two characters!

Email

123@b

User budget

-11

Budget must be more or equal to 0!

Password

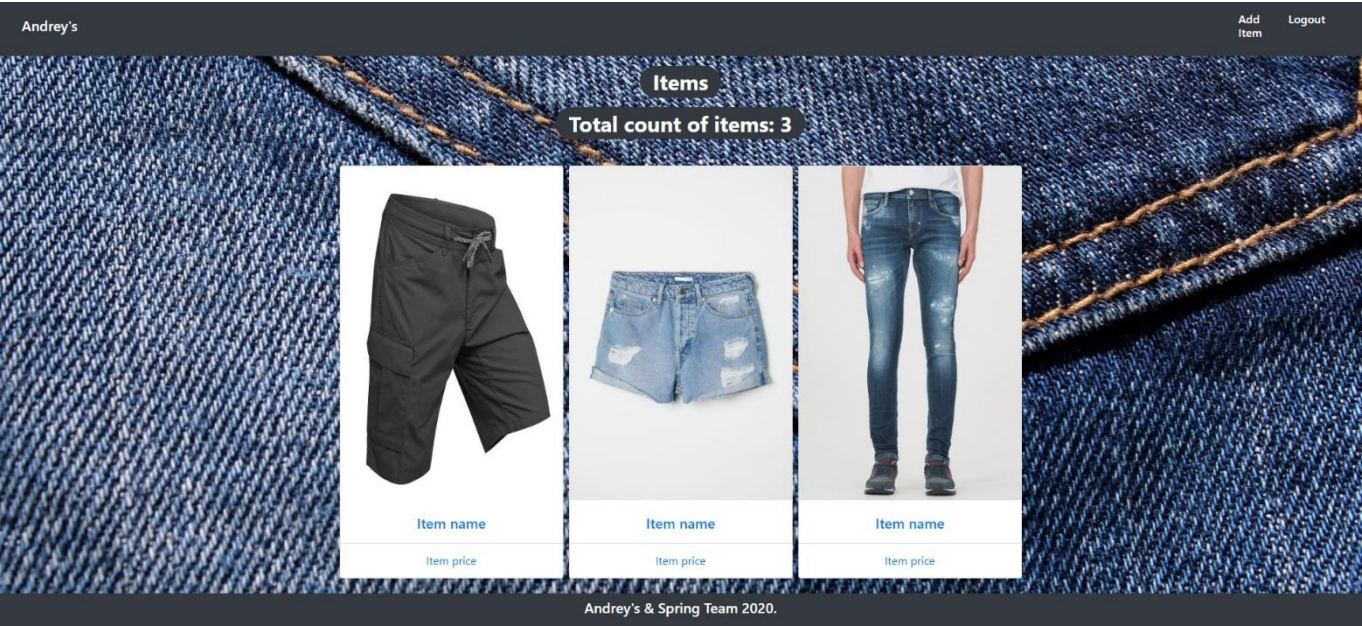
Password must be more than two characters!

Confirm Password

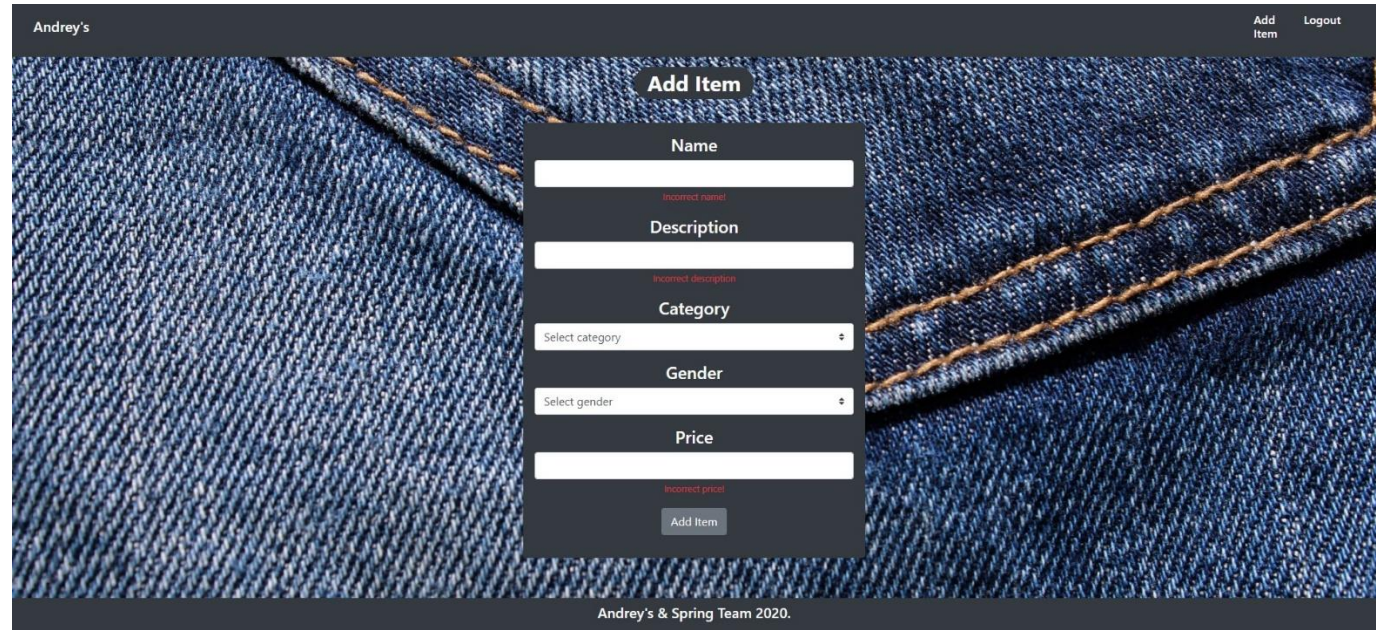
Register



## Home Page (logged in user)

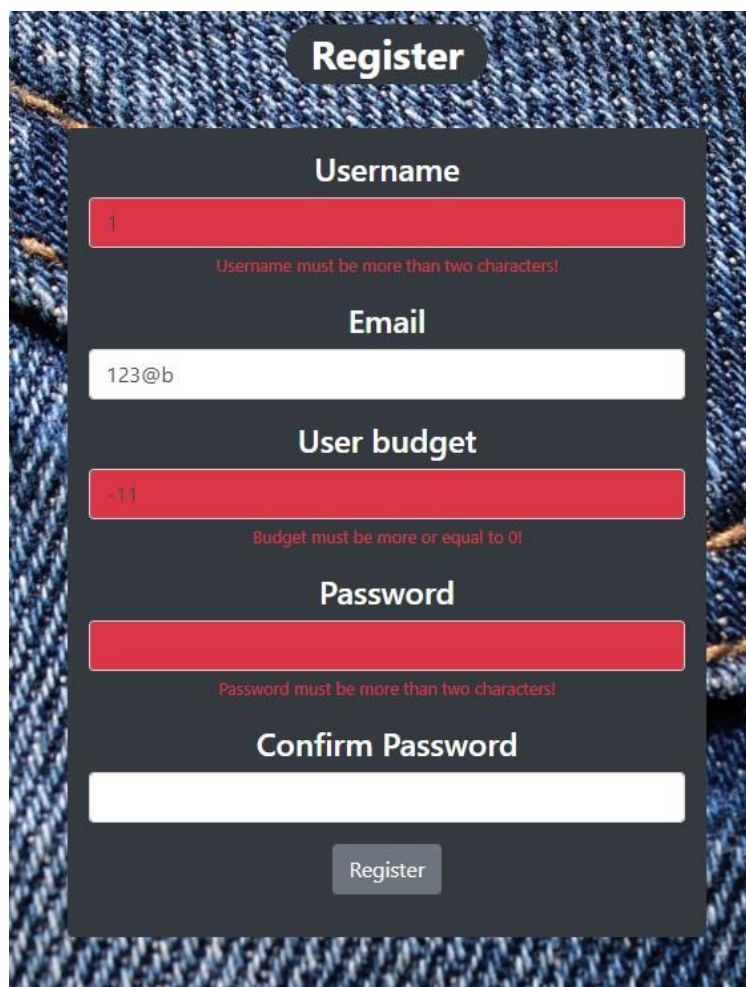


## Add Item (logged in user)





## Add Item (logged in user)



**Register**

**Username**

Username must be more than two characters!

**Email**

**User budget**

Budget must be more or equal to 0!

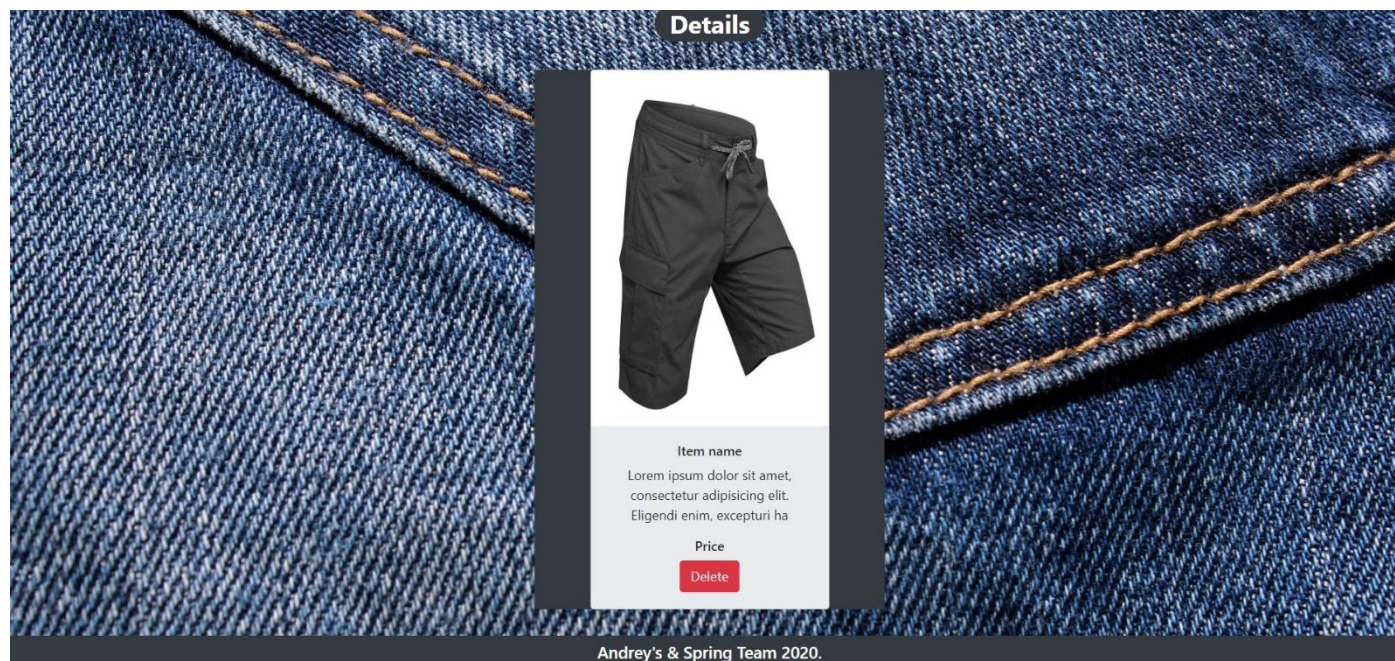
**Password**

Password must be more than two characters!


**Confirm Password**

Register

## Item Details Page (logged in user)



**Details**



**Item name**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Eligendi enim, excepturi ha

**Price**

Delete

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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 given **bootstrap** and **css** are enough.

### 3. Functional Requirements

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

The **application** should provide the **Users** (logged in) with the functionality to **logout**, **add an Item**, **view details** about an **Item**, **delete** an **Item**, and **view all Items (Home page)**.

**Andrey's button** on the navbar should redirect to appropriate **URL depending** if the user is logged in.

The **application** should provide **functionality** for **adding items** with **categories (Shirt, Denim, Shorts, Jacket)** and **gender (Male, Female)**

The **image** is combination between **category** and **gender**. When you click on the image on **Home Page**, you should be redirected to **Details page**. On **Details page** you should have **Delete button**.

The **application** should **store** its **data** into a **MySQL** database, using **Hibernate** native.

### 4. 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 the **Index** page.
- **Guest** (not logged in) users can access the **Login** page.
- **Guest** (not logged in) users can access the **Register** page.
- **Users** (logged in) can access the **Home** page.
- **Users** (logged in) can access the **Item Add** page.
- **Users** (logged in) can access the **Item Details** page.
- **Users** (logged in) can access the **Logout** functionality.

### 5. Scoring

**Database – 10 points.**

**Pages – 25 points.**

**Functionality – 35 points.**

**Security – 5 points.**

**Validations – 15 points.**

**Code Quality – 10 points.**