

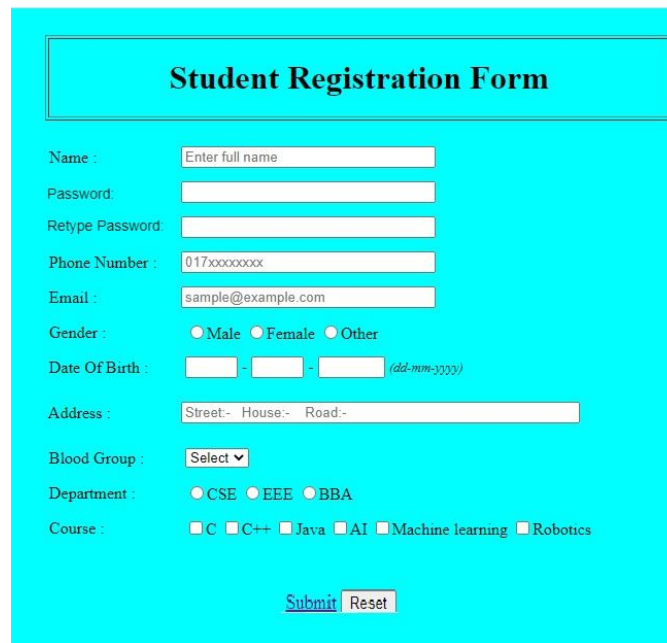
(420-JD5-AB) Programming III Summer 2022

Class Exercise #2 [Worth 5%]

Due: 31 October 2022 at 8 PM on Lea

Question: STUDENT AUTHENTICATION

Design a Spring Boot MVC web application for student authentication as in the figure below.



The figure shows a web form titled "Student Registration Form". It contains the following fields and controls:

- Name :** A text input field with placeholder text "Enter full name".
- Password:** A text input field.
- Retype Password:** A text input field.
- Phone Number :** A text input field with placeholder text "017xxxxxxxx".
- Email :** A text input field with placeholder text "sample@example.com".
- Gender :** Three radio buttons labeled "Male", "Female", and "Other".
- Date Of Birth :** Three text input fields for day, month, and year, with a placeholder "(dd-mm-yyyy)".
- Address :** A text input field with placeholder text "Street:- House:- Road:-".
- Blood Group :** A dropdown menu with "Select" as the current selection.
- Department :** Three radio buttons labeled "CSE", "EEE", and "BBA".
- Course :** Five checkboxes labeled "C", "C++", "Java", "AI", "Machine learning", and "Robotics".
- Buttons:** A blue "Submit" button and a grey "Reset" button.

The following validation rules (constraints) must be applied on the form:

- name: must have 5 to 15 characters. Not blank
- password: must not be blank, hashed and encrypted. must contain between 8 to 20 chars.
- retype password: must always match the password field.
- phone number: must be exactly 8 characters long.
- birthday: must be in the date format yyyy-mm-dd. (@DateTimeFormat(pattern = "yyyy-mm-dd"))
- email: must be not blank, email format.
- gender: make use of radio buttons, must not be blank.
- address: optional field, up to 20 chars
- blood group: choose between A+, B+, O+, AB+, A-, B-, O-, AB-
- department: radio buttons, must not be blank.
- course: checkboxes, at least one must be selected.

- Once the program starts, a page named **home.xxx** is shown, which contains the name of the program (**USER REGISTRATION FORM**) with a button called **Add User** that will redirect the user to the registration page named **signup.xxx**
- Once the user has successfully registered from page **signup.xxx** by clicking the button **Register**, the details are saved in an appropriate table from a database called **userDatabase**.
- then the program should redirect to a sign-in page named **signin.xxx** for authentication based on a name and password. After authentication, the **welcome.xxx** page is displayed.
- The **welcome.xxx** page should read "Welcome \$name" and then list all the users in the DB.
- On the welcome page, the user can perform CRUD operations on each authenticated student.

IMPORTANT: Submission guidelines

1. The project name should be called after your surname followed by your student ID.
2. Submit a single zip of your spring boot project as well as 5 screenshots corresponding to the following running test scenarios:
 - a. picture of a database table with at least 3 registered students.
 - b. picture of demonstrating create, update and delete on a student.
 - c. picture of whole blank registration page with all constraints displayed.
 - d. picture of a welcome page with list of at least 3 authenticated students.
 - e. picture of the hierarchy of all files from spring boot
3. All screenshots must show a background with your project name in Spring Boot. The browser can be resized in the screenshot to make room for a background.
4. Only the last submission will be evaluated.
5. Failure to follow these guidelines will result in losing points
6. Plagiarism and cheating will be strongly penalized as per college policies.
7. Do not submit any work via MIO or TEAMS.