Registration and Login Form

Designed and Documented

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1. INTRODUCTION

A **Registration form** is a list of fields that a user will input data into and submit to a company or individual, in order to register.

User needs to fill out the fields, and click the “Register” button on the form. If the user has filled the correct details for all the fields, then the details will get stored in the database. And the employee details that were stored will be displayed back to the user on the next page.

If the user has left any field empty, and has clicked on “Submit” button. Then all the empty fields will get highlighted in red border with a pop-up message “This is a required field”.

Otherwise, the user’s details get stored in database and the user gets the successful message for Registration and the details of registered user are shown in a tabular form on the next page.

A **Login form** is used to enter authentication credentials to access a restricted page or **form**. The **login form** contains a field for the username and another for the password. When the **login form** is submitted its underlying code checks that the credentials are authentic, giving the user can access the restricted page.

2. REQUIREMENT GATHERING

There are many reasons why you would want a person to fill out a registration form. Companies use registration forms to sign up customers for subscriptions, services, or other programs or plans.

Some organizations may need their employees to fill out a registration form for some event or for joining the organization.

For any event in colleges, school or a city we can have a registration form as a webpage and we can just provide the link to that form. So that interested ones can fill it from anywhere. We will not need anyone to go to societies on himself to manually register everyone.

Interested ones can simply fill the form to register and when they hit “Submit” or “Register” button, the details get stored in database.

Suppose that, a company needs to register the employees for some contest. The HR can just forward the link of the registration form to all the employees and the employees can visit the link and fill the details in the form and register from anywhere.

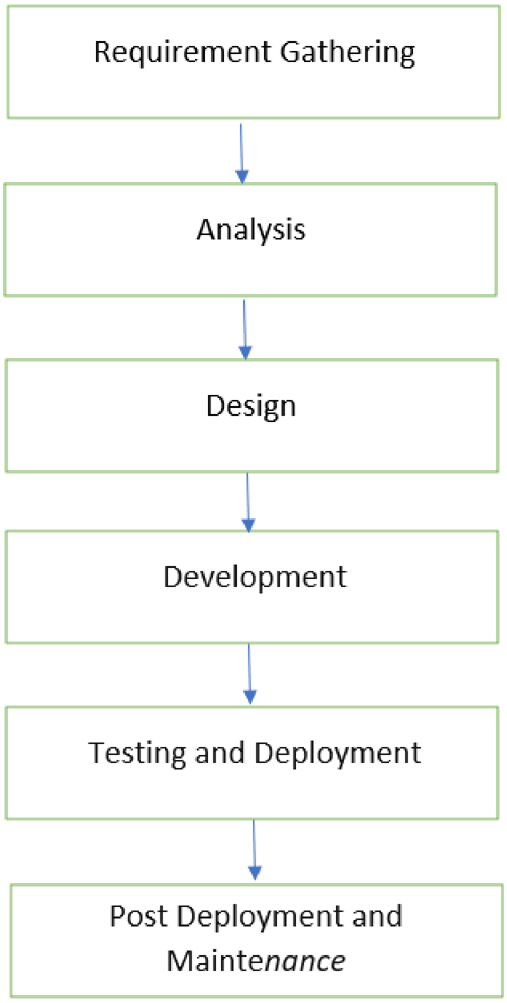
Before designing the form, the designers and developers must know what are the fields that the user needs to fill in order to register, which fields will be mandatory and which fields will be optional.

The login page should be the first page that users see in the modified application. It should provide two text fields - one for entering a login name and one for entering a password. In addition, it should have a command button that initiates the password checking action. If either of the text fields is left blank it is an error that must be reported to the user. If both fields are filled in but there is no record of the user name or the password is incorrect that must also be reported to the user.

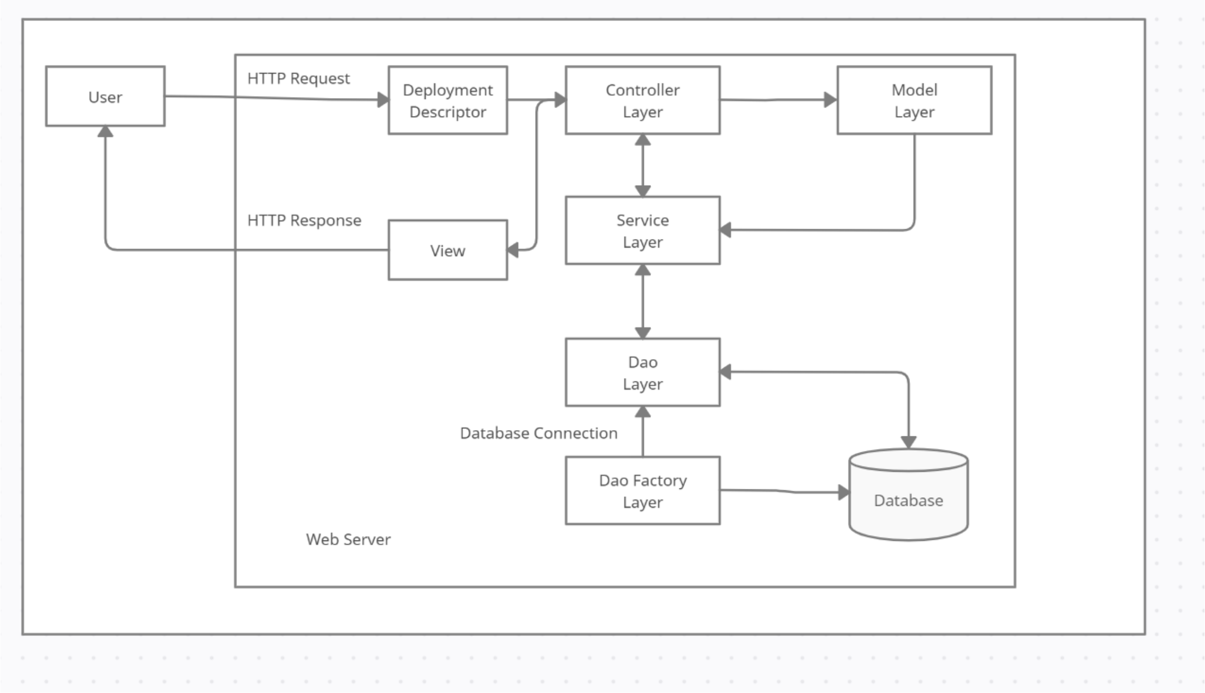
Users that have not yet registered cannot log in. They must first register by clicking on the register command button. They should be able to do this without getting an error for an empty name or password field.

3. WEB DEVELOPMENT LIFE CYCLE

The software and web development life cycle adheres to a specific standard that has to be followed to move in the right direction. There are frameworks, methodologies, modelling tools, and languages involved.



4. Model – View Controller



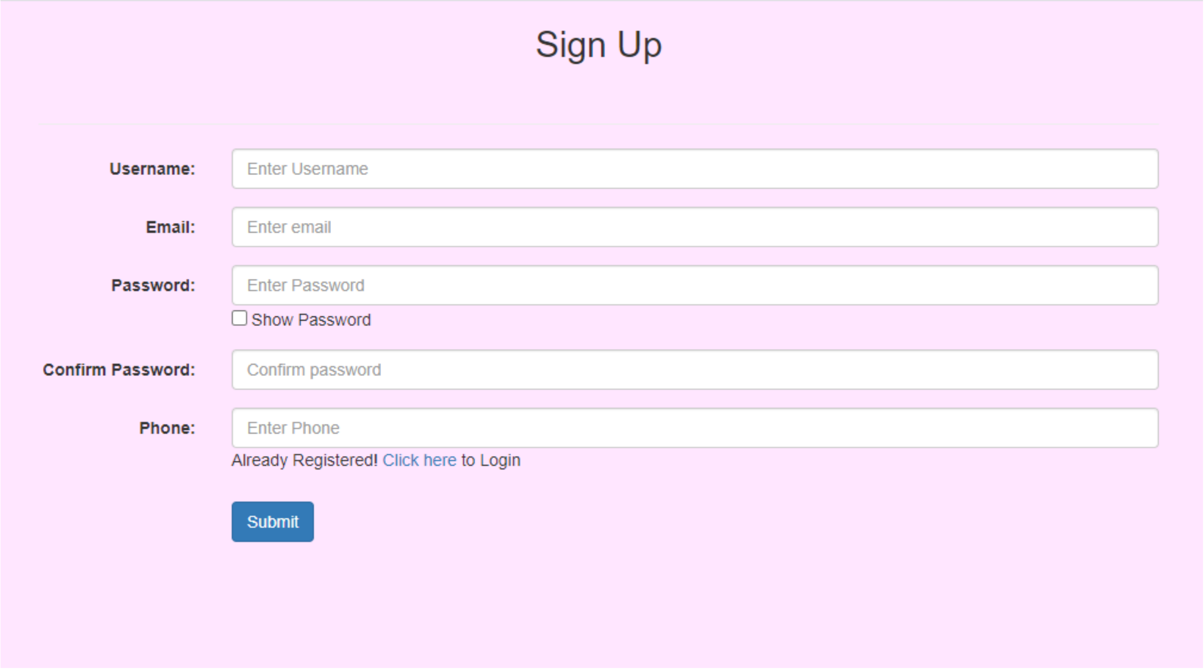
- User will be shown “register.jsp” page. This page is having a form for filling the required details.

  Fields Required to be filled:

  Username, Email, Password, Confirm Password, Phone.

5. INPUT AND OUTPUT EXPLANATION

When we run the project. A Registration page will open.



Sign Up

Username: Enter Username

Email: Enter email

Password: Enter Password

□ Show Password

Confirm Password: Confirm password

Phone: Enter Phone

Already Registered! Click here to Login

User Name: User should provide username.

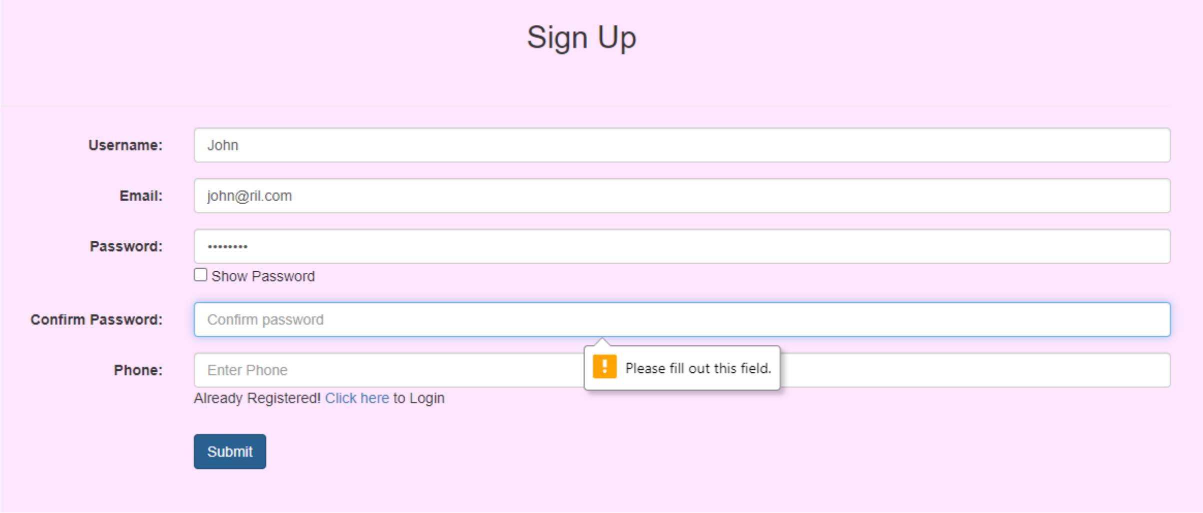
Email: Unregistered email id of user.

Password: The password of the user.

Confirm Password: Confirm password should be same as password

Phone: The contact number of the user.

Case 1: User has not filled the complete form and is trying to submit:



Sign Up

Username: John

Email: john@ril.com

Password: ••••••••

□ Show Password

Confirm Password: Confirm password

Please fill out this field.

Phone: Enter Phone

Already Registered! Click here to Login

The next unfilled field will be highlighted with a popup “Please fill out this field”.

Case 2: If user has not selected strong password

Criteria for valid password:

Need: 8-16 characters

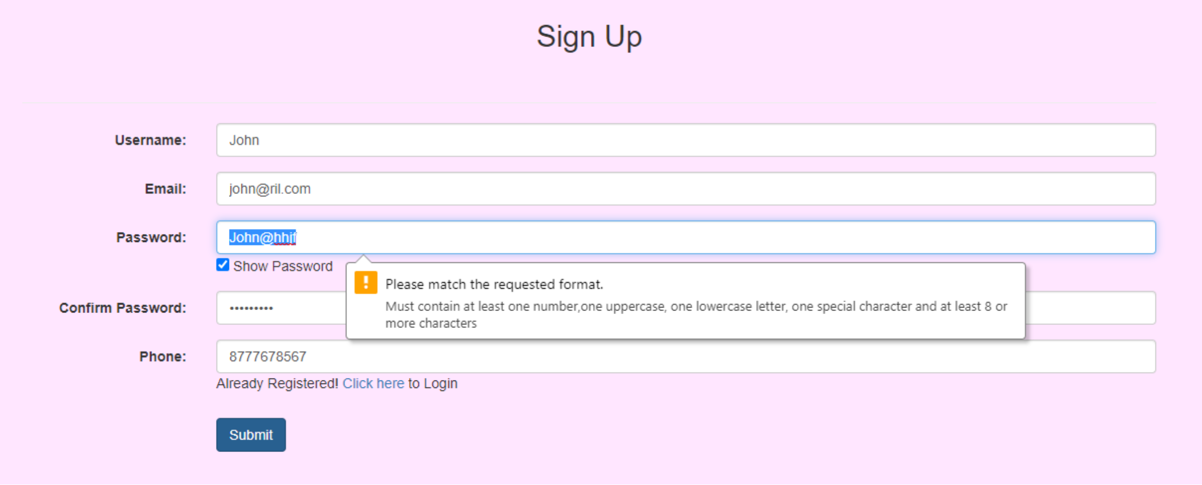
Requires at least:

1. An uppercase alphabet

2. A lowercase alphabet

3. A digit

4: A special character



Sign Up

Username: John

Email: john@ril.com

Password: John@hhjf

☑ Show Password

Please match the requested format.

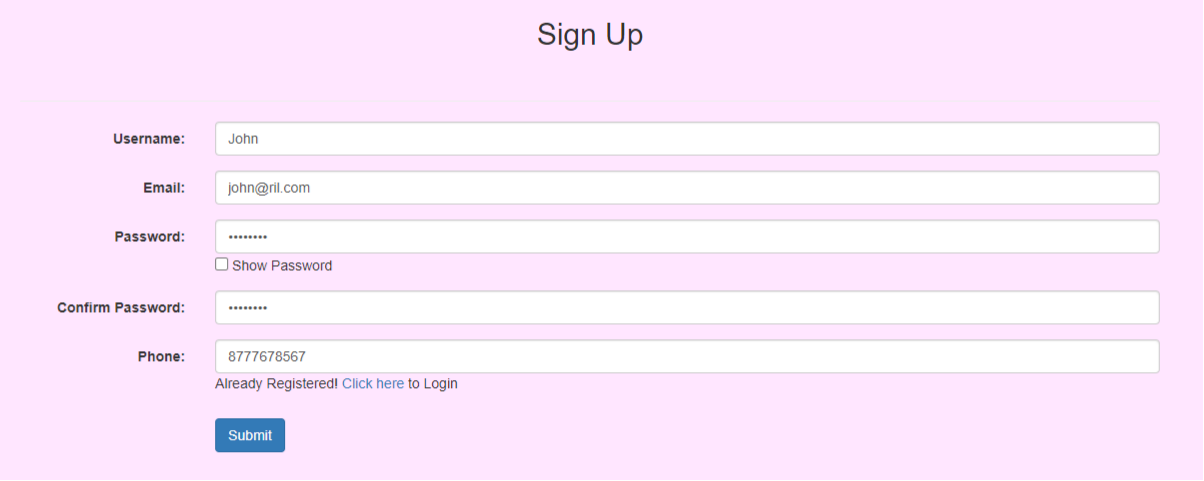
Must contain at least one number,one uppercase, one lowercase letter, one special character and at least 8 or more characters

Confirm Password: •••••••••

Phone: 8777678567

Already Registered! Click here to Login

Case 3: User has filled the complete form and clicks on “Submit”:

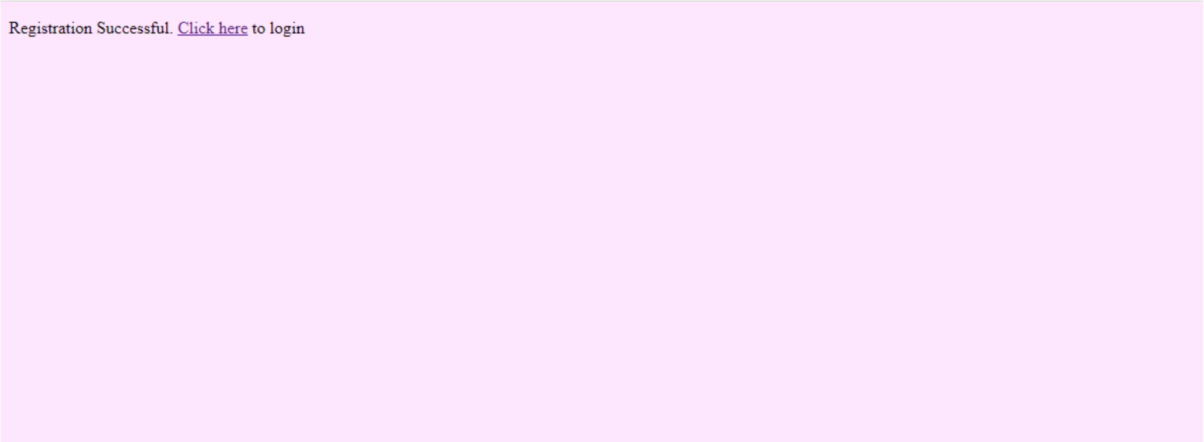


Sign Up

Username:	John
Email:	john@ril.com
Password:	••••••••
	□ Show Password
Confirm Password:	••••••••
Phone:	8777678567

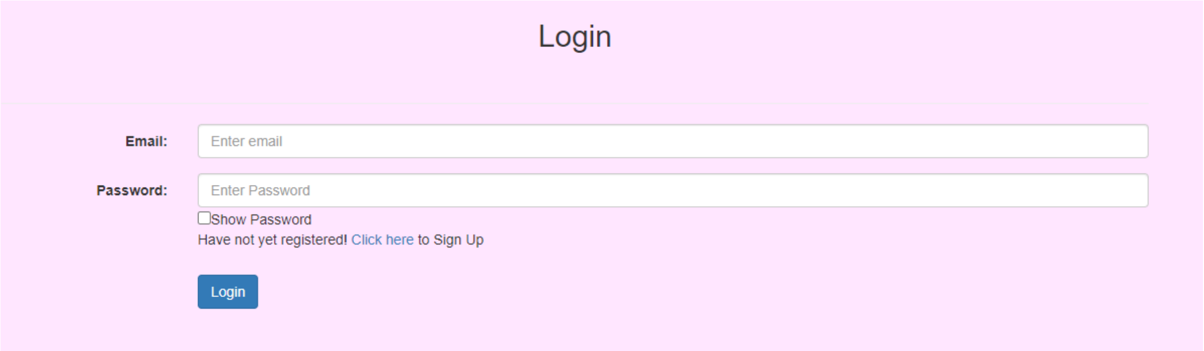
Already Registered! Click here to Login

A message “Registration Successful” will be displayed with a link to login page.



Registration Successful. Click here to login

Login form :-



Login

Email: Enter email

Password: Enter Password

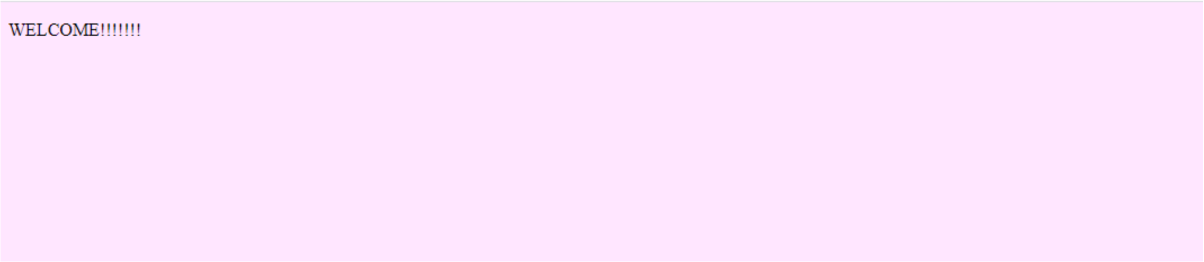
□Show Password

Have not yet registered! Click here to Sign Up

Email: - User has to provide the same email id for login through which he/she had registered

Password: User has to enter password set by him/her.

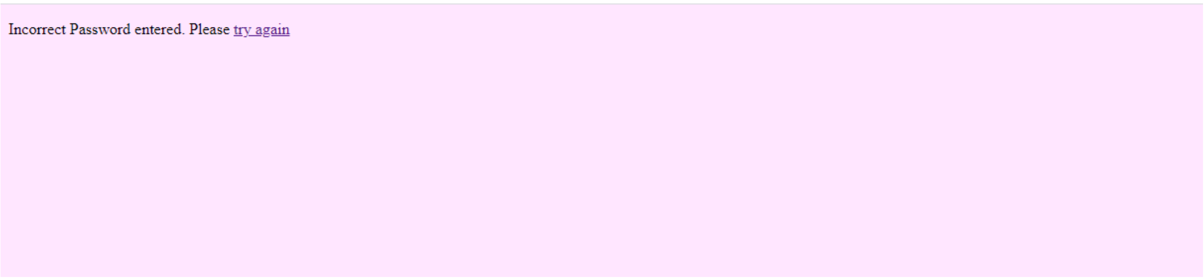
Case 1: If user enters correct email and password



WELCOME!!!!!!!

Welcome message to be displayed to user on successful login.

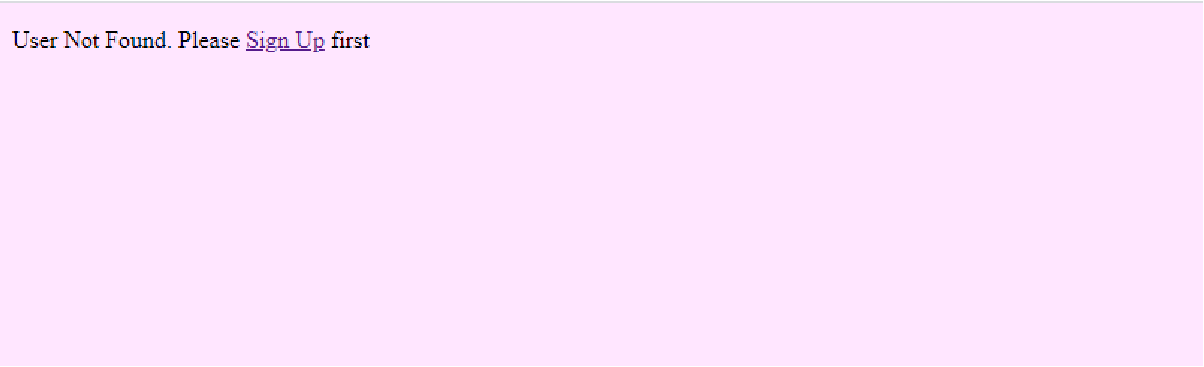
Case 2: User enter correct email but incorrect password



Incorrect Password entered. Please try again

Message will be displayed as Incorrect password entered with a try again link which will again redirect to login page

Case 3: User enters unregistered email and try to login



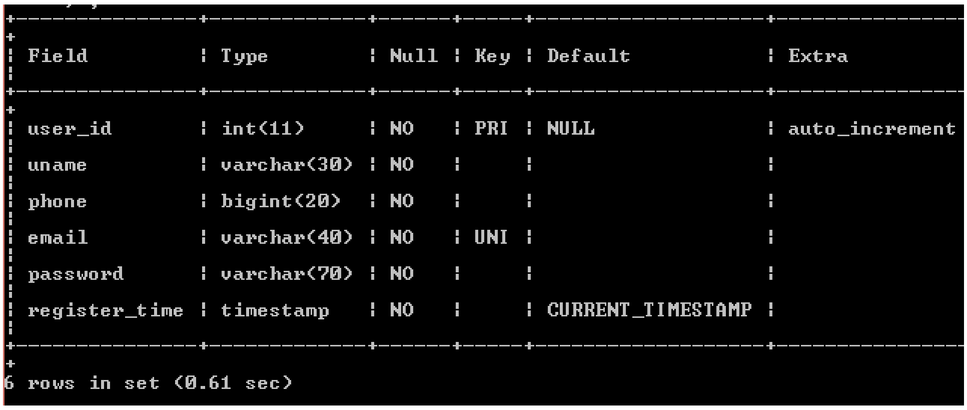
User Not Found. Please Sign Up first

Message will be displayed as **User Not Found. Please Sign Up first**.

6. Database Schema

In Database, we have user_registration table to store the record all the registered users.

Fig. user_registration table schema



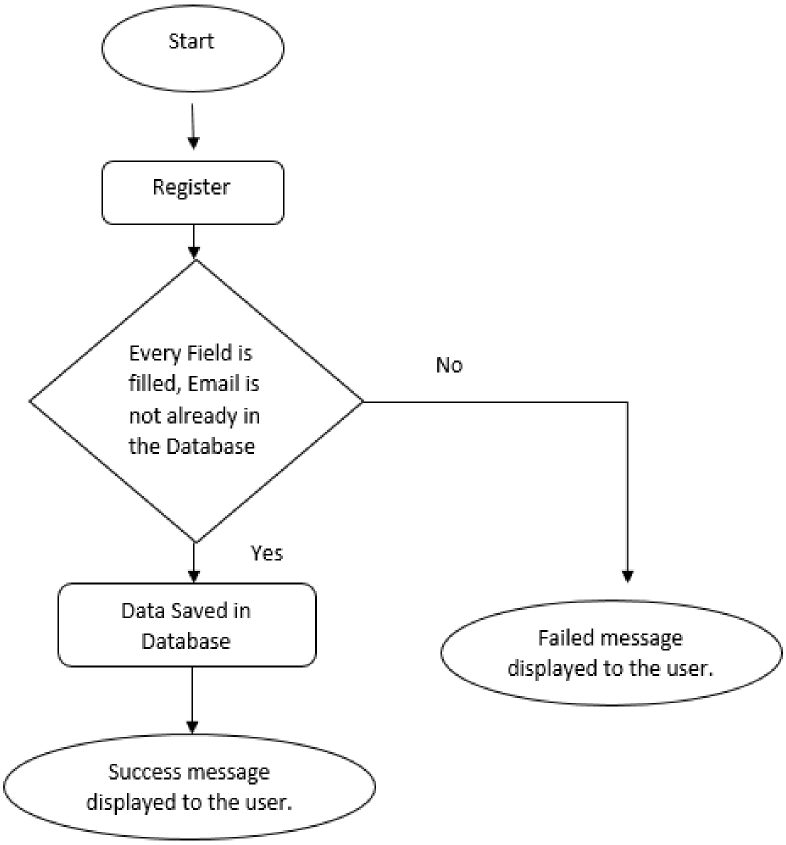
```
+---------------+-------------+------+-----+-------------------+----------------
+
¦ Field         ¦ Type        ¦ Null ¦ Key ¦ Default           ¦ Extra
¦
+---------------+-------------+------+-----+-------------------+----------------
+
¦ user_id       ¦ int(11)     ¦ NO   ¦ PRI ¦ NULL              ¦ auto_increment
¦
¦ uname         ¦ varchar(30) ¦ NO   ¦     ¦                   ¦
¦
¦ phone         ¦ bigint(20)  ¦ NO   ¦     ¦                   ¦
¦
¦ email         ¦ varchar(40) ¦ NO   ¦ UNI ¦                   ¦
¦
¦ password      ¦ varchar(70) ¦ NO   ¦     ¦                   ¦
¦
¦ register_time ¦ timestamp   ¦ NO   ¦     ¦ CURRENT_TIMESTAMP ¦
¦
+---------------+-------------+------+-----+-------------------+----------------
+
6 rows in set (0.61 sec)
```

‘user_registration’ table fields:

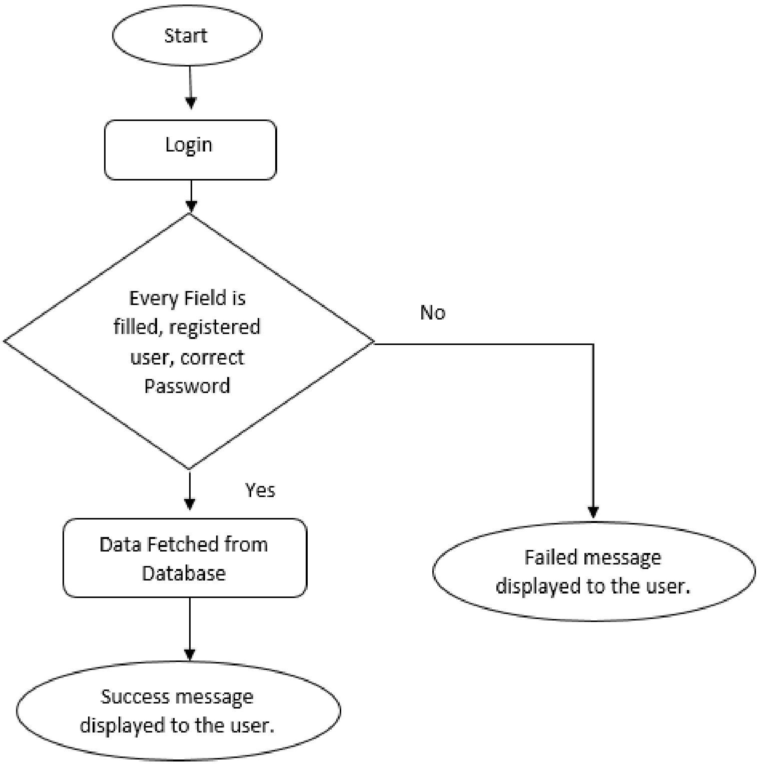
1. **user_id:** It represents ID for that user through the event. It acts as a primary key and will automatically increment and will be assigned to that entry when any user registers for the event.
2. **uname**: The user name of the user. Should be a string
3. **phone :** The contact number of the user. Should be number.
4. **email:** The email address of the user. Should be a String.
5. **password**: The password of the user. Can be any string with any characters.
6. **register_time:** Time at which user registered. Should be of timestamp type

7. Control Flow Chart

(a) Registration


Start
Register
Every Field is filled, Email is not already in the Database
No
Yes
Data Saved in Database
Failed message displayed to the user.
Success message displayed to the user.

(b) Login


Start
Login
Every Field is filled, registered user, correct Password
No
Yes
Data Fetched from Database
Failed message displayed to the user.
Success message displayed to the user.

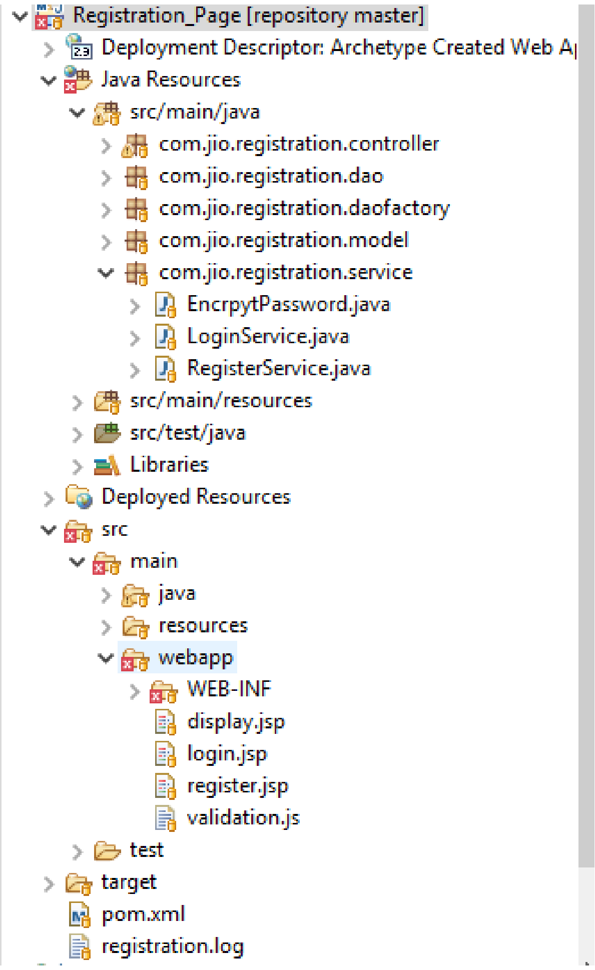
8. Project Structure

- It a maven project in which pom.xml have all the dependencies mentioned.

- src/main/java contains different packages such as model, controller, service, dao, daoFactory. And each package has multiple classes and servlet which are responsible to handle the processing of user entered by user.

- src/main/resources contains the properties file for database connection and logging using Log4J

- src/main/webapp has all the jsp pages which are responsible for showing view to user



```
Registration_Page [repository master]
  Deployment Descriptor: Archetype Created Web A
  Java Resources
    src/main/java
      com.jio.registration.controller
      com.jio.registration.dao
      com.jio.registration.daofactory
      com.jio.registration.model
      com.jio.registration.service
        EncrpytPassword.java
        LoginService.java
        RegisterService.java
    src/main/resources
    src/test/java
    Libraries
  Deployed Resources
  src
    main
      java
      resources
      webapp
        WEB-INF
        display.jsp
        login.jsp
        register.jsp
        validation.js
    test
  target
  pom.xml
  registration.log
```

Fig. Project Structure