**Restaurant ASD**

**Restaurant ASD** is an application which provides a service to user to find a restaurant. The services based on **Flutter** which will be used by the **restaurant staffs** and **their customers** to **view list of restaurants** and to **reserve** a table. As a developer, you are asked to develop this application based on some requirements below:

This application will contain several forms which are:

1. **Login Form**

   This form will be used to **authenticate** the user to this application. The **authentication process** will need **username and password** which already **registered before in the application database**. Some conditions for this **Login Form** are:

   a. Use **EditText** component for **username** and **password** input field.

   b. Use **Button** component for:

   - **Login**

     This button will be used to **validate** and **authenticate the user information** to the application. The **validation** and **authentication process** are:

     • Validate the **username must be filled**.

     • Validate the **password must be filled**.

     • Validate the **username** and **password** must be **registered before in the application's database**.

     • **Redirect** user **to** the **Main Form** if the user gave the **right username and password combination**.

     • Show the right error message for each validation process.

   - **Reset**

     This button will **clear the username** and **password value** in the Login Form.

   - **Register**

     This button will **redirect user to the Register Form**.

## 2. Register Form

This form will be used to **register new users** in the application database. The registration process needs some information like **username**, **password**, **nickname**, **date of birth**, **gender**, **address**, and **nationality**.

Some conditions for the register form are:

a. Use **EditText** component for **username**, **password**, **confirm password**, **nationality**, **nickname**, and **date of birth** input field.

b. Use **RadioButton** component for **male** and **female gender**.

c. Use **Button** component for:

- **Register**

  This button will be used to **validate** and **register the given information** to the **application database**. The **validation** and **register processes** are:

  - Validate the **username** must be **between 3 and 30 characters**.

  - Validate the **password** must be **between 8 and 32 characters**, must **contain at least 1 Capital letter**, and must **contain at least 1 Digit**.

  - Validate the **confirm password** must be **match with password**.

  - Validate the **nick name** must be **between 3 and 21 characters**.

  - Validate the **date of birth** must be **match with following format**:

    | |
    |---|
    | **DD-MM-YYYY** <br> **Where:** <br> **DD between 1 – 31** <br> **MM between 1 – 12** <br> **YYYY between 1975 – 2005** <br><br> **Example:** <br> **Date = 31-3-1992** |

  - Validate the **gender** must be **chosen**.

  - Validate the **address** must be **ends with** " **Street**".

  - Validate the **username** must be **unique** or **has not been registered in the application database before**.

  - Validate the **nationality** must be **filled**.

- After all validations has been fulfilled, **register** the **given information** in the **application database**. Then, **redirect user to the Login Form**.
  - **Reset**
    This button will **clear all the values of the fields** in the Register Form.

3. **Main Form**

This form will **show all the list of restaurant** that is available to the user.

Some conditions for this form are:

a. Use **ListView** component to display **all the restaurants**.

b. **Display** the **restaurant name**, **restaurant rating**, **restaurant image**, and **Detail button** in the **ListView**.

c. Use the **Detail button** to **go to View Restaurant Form with the selected data** in the list.

d. Use **MenuItem** component for:
   - **View Reservation History**

     This menu will be used to **redirect user to View Reservation History Form**.

4. **View Restaurant Form**

This form will show the **restaurant's information** which **user has chosen** in the **Main Form**.

Some conditions for this form are:

a. Use **TextView** components to display all of the restaurant's data. The data are **Name**, **ID**, **Address**, **Description**, **Email**, **Website**, **Phone number**, and **Rating**.

b. User **ImageView** compoenent to display **restaurant's Image**.

c. Use **Button** component for:
   - **Reserve Table**
     - **Insert** the **reservation data** which need **Reservation ID**, **User ID**, **Restaurant ID**, **Seat Number**, and **Reservation Date**.
       - **Reservation ID** will be **generated automatically** based on the **last item** in the database with following format. "**BKXXX**" (where X is a number between 0-9).
         Example: **BK017**
       - **User ID** is obtained from **current logged in user**.

- Restaurant ID is obtained from **current viewed restaurant**.
- Seat Number is obtained from a **random** number **between 1 and 30**.
- Reservation Date is obtained from **current date**.

5. **View Reservation History Form**

   This form will be used by **customer** to **view all reservations that had been done by the customer** according to the data in **the application database**. Some conditions for this form are:

   a. Use **ListView** to **show the list of the reservations**.

   b. **Display** the **restaurant name**, and **reservation date** in the **ListView**.

NB:

- For the **database management** use **SqlLite**

<p align="center"><b>If there is something you don't understand, free to ask</b></p>