

A Demonstration of text input and validation with Android compose

College Name : Angel college of Engineering and Technology

College code:7103

Department : Computer Science and Engineering

NM Project :A Demonstration Of Text Input And Validation With Android Compose

Project Title: A Demonstration of Text Input and Validation in Android Compose

Project Overview

- This project focuses on developing an intuitive and functional Android application using Jetpack Compose.
- The app demonstrates handling user text input with proper validation mechanisms.
- It highlights Compose's declarative UI approach, efficient state handling, and user-friendly validation feedback.

Key Features

1. Dynamic User Input Fields:

- Text fields designed with material design principles.
- Real-time input feedback.

2. Validation Logic:

- Input validation for formats such as email, phone number, and password strength.Immediate error messages for invalid inputs.

3. State Management:

- Utilizes Compose's remember and mutableStateOf for managing UI state effectively.

4. User Feedback:

- Displays user-friendly error hints below the input fields. Valid inputs show a success state

Technology Stack

- Frontend: Jetpack Compose for declarative UI development.
- Language: Kotlin.
- Tools: Android Studio, Live Preview, and Gradle.

Project Workflow

1. UI Design:

- Create text fields with Compose components such as `OutlinedTextField` and `Text`.

2. Validation Implementation:

- Add validation logic using Kotlin functions and `onValueChange` listeners.

3. Testing and Debugging:

- Test various input cases (e.g., empty input, invalid email format).
- Refine error states for better user experience.

Learning Outcomes

- Understanding of Jetpack Compose's declarative UI patterns.
- Hands-on experience with Kotlin's state management.
- Building and validating forms efficiently.
- Improved debugging and testing skills for real-time input scenarios.

Program

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
```

```
    xmlns:tools="http://schemas.android.com/tools">
```

```
<application

    android:allowBackup="true"

    android:dataExtractionRules="@xml/data_extraction_rules"

    android:fullBackupContent="@xml/backup_rules"

    android:icon="@mipmap/ic_launcher"

    android:label="@string/app_name"

    android:supportsRtl="true"

    android:theme="@style/Theme.SurveyApplication"

    tools:targetApi="31">

    <activity

        android:name=".RegisterActivity"

        android:exported="false"

        android:label="@string/title_activity_register"

        android:theme="@style/Theme.SurveyApplication" />

    <activity

        android:name=".MainActivity"

        android:exported="false"

        android:label="MainActivity"

        android:theme="@style/Theme.SurveyApplication" />

    <activity

        android:name=".AdminActivity"

        android:exported="false"

        android:label="@string/title_activity_admin"

        android:theme="@style/Theme.SurveyApplication" />

    <activity
```

```
    android:name=".LoginActivity"

    android:exported="true"

    android:label="@string/app_name"

    android:theme="@style/Theme.SurveyApplication">

    <intent-filter>

        <action android:name="android.intent.action.MAIN" />

        <category android:name="android.intent.category.LAUNCHER" />

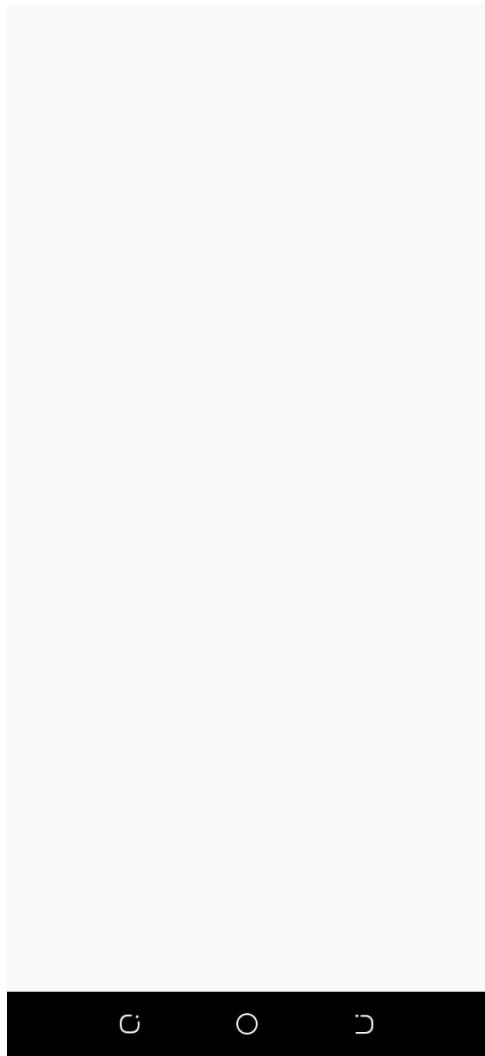
    </intent-filter>

</activity>

</application>
```

```
</manifest>
```

Result





Login

Username

Sankar

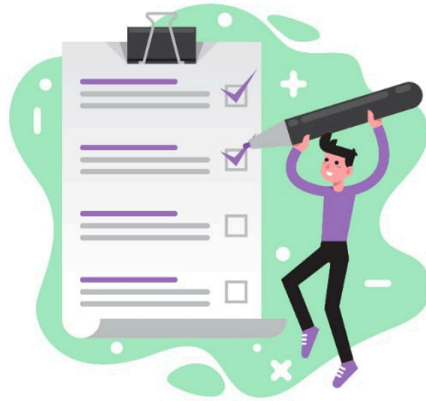
Password

Login

[Register](#)

[Forget password?](#)





Register

Username

Sankar

Email

sankar420kk@gmail.com

Password

User registered successfully

Register



Survey on Diabetics

Name :

Age :

Mobile Number :

Gender :

- ☐ Male
- ☐ Female
- ☐ Other

Diabetics :

- ☐ Diabetic
- ☐ Not Diabetic

Please fill all fields



Survey on Diabetics

Name :

sankar

Age :

19

Mobile Number :

7453647284

Gender :



Male



Female



Other

Diabetics :



Diabetic



Not Diabetic

Submit