

SURVEY APPLICATION

COMPOSE INPUT: A DEMONSTRATION OF TEXT INPUT AND VALIDATION WITH ANDROID

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PROJECT OBJECTIVES:

- ▶ The goal of this project is to develop a user-friendly Android-based survey application that demonstrates text input and validation. The app is designed to provide a reliable platform for users to participate in surveys and for admins to manage survey data effectively. The objectives include:
 - Enabling users to easily create accounts, log in, and participate in surveys.
 - Ensuring smooth and secure access for administrators to view and manage survey results.
 - Demonstrating form validation for both user and admin modules to enhance data integrity and user experience.

FUNCTIONALITIES:

- ▶ This survey application will have two main modules: **Admin Module** and **User Module**, each with specific functionalities. The app's core functions include user registration, login with validation, and a survey-taking feature. Additionally, it includes hard-coded admin credentials to demonstrate an admin interface with restricted access.

OVERVIEW:

The survey app consists of multiple screens for both users and the admin, focusing on validation and secure login. Users can register, log in, and complete surveys, while the admin can log in with hardcoded credentials to view survey results.

DESCRIPTION:

- ▶ The application consists of the following interfaces:
- ▶ **1. Admin Module:**
 - **Login Page:** A login screen where the admin enters a hard-coded password ("admin") to gain access to the admin page. This page demonstrates text validation, allowing only specific credentials.
 - **Admin Page:**
 - Accessible only after successful login with the correct credentials.
 - Displays the survey data and analytics collected from users.
 - Allows the admin to manage and view survey data (e.g., summary of responses).

▶ 2. User Module:

- **Login Page:** A login screen for registered users to enter their credentials and access the main survey interface. Includes validation for correct input format.
- **Register Page:** A registration screen for new users to create an account. It includes:
 - Username and password input with validation checks.
 - Error messages for invalid inputs (e.g., empty fields, password criteria).
- **Main Page:** The primary interface where users can access and take part in available surveys. This page shows the list of available surveys and records user responses.

Main Activity.kt:

```
package com.example.surveyapplication

import android.content.Context
import android.os.Bundle
import androidx.activity.ComponentActivity
import androidx.activity.compose.setContent
import androidx.compose.foundation.Image
import androidx.compose.foundation.layout.*
import androidx.compose.material3.*
import androidx.compose.runtime.*
import androidx.compose.ui.Alignment
import androidx.compose.ui.Modifier
import androidx.compose.ui.graphics.Color
import androidx.compose.ui.layout.ContentScale
```

```
import androidx.compose.ui.res.painterResource
import androidx.compose.ui.text.style.TextAlign
import androidx.compose.ui.unit.dp
import androidx.compose.ui.unit.sp

class MainActivity : ComponentActivity() {
    private lateinit var databaseHelper: SurveyDatabaseHelper
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        databaseHelper = SurveyDatabaseHelper(this)
        setContent {
            FormScreen(this, databaseHelper)
        }
    }
}
```


@Composable

```
fun FormScreen(context: Context, databaseHelper: SurveyDatabaseHelper) {
```

```
Image(
```

```
    painterResource(id = R.drawable.background), contentDescription = "",
```

```
    alpha = 0.1f,
```

```
    contentScale = ContentScale.FillHeight,
```

```
    modifier = Modifier.padding(top = 40.dp)
```

```
)
```

```
// Define state for form fields
```

```
var name by remember { mutableStateOf("") }
```

```
var age by remember { mutableStateOf("") }
```

```
var mobileNumber by remember { mutableStateOf("") }
```

```
var genderOptions = listOf("Male", "Female", "Other")
```

```
var selectedGender by remember { mutableStateOf("") }
```

```
var error by remember { mutableStateOf("") }
```

Column(

modifier = Modifier.padding(24.dp),

horizontalAlignment = Alignment.Start,

verticalArrangement = Arrangement.SpaceEvenly

) {

Text(

fontSize = 36.sp,

textAlign = TextAlign.Center,

text = "Survey on Diabetics",

color = Color(0xFF25b897)) Spacer(modifier = Modifier.height(24.dp))

Text(text = "Name :", fontSize = 20.sp)

TextField(

value = name,

onValueChange = { name = it },

)

The background of the slide features an abstract design with overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes create a dynamic, layered effect on the right side of the image.

```
Spacer(modifier = Modifier.height(14.dp))
```

```
Text(text = "Age :", fontSize = 20.sp)
```

```
    TextField(
```

```
        value = age,
```

```
        onChange = { age = it },
```

```
    )
```

```
Spacer(modifier = Modifier.height(14.dp))
```

```
Text(text = "Mobile Number :", fontSize = 20.sp)
```

```
    TextField(
```

```
        value = mobileNumber,
```

```
        onChange = { mobileNumber = it },
```

```
    )
```

```
Spacer(modifier = Modifier.height(14.dp))
```

```
Text(text = "Gender :", fontSize = 20.sp)
```

```
    RadioGroup(
```

```
options = genderOptions,  
    selectedOption = selectedGender,  
    onSelectedChange = { selectedGender = it }  
)  
Spacer(modifier = Modifier.height(14.dp))  
Text(text = "Diabetics :", fontSize = 20.sp)  
RadioGroup(  
    options = diabeticsOptions,  
selectedOption = selectedDiabetics,  
    onSelectedChange = { selectedDiabetics = it }  
)  
Text(  
    text = error,  
    textAlign = TextAlign.Center,  
    modifier = Modifier.padding(bottom = 16.dp)
```

```
)  
  
// Display Submit button  
Button(  
    onClick = { if (name.isNotEmpty() && age.isNotEmpty() && mobileNumber.isNotEmpty() &&  
genderOptions.isNotEmpty() && diabeticsOptions.isNotEmpty()) {  
        val survey = Survey(  
            id = null,  
            name = name,  
            age = age,  
            mobileNumber = mobileNumber,  
            gender = selectedGender,  
            diabetics = selectedDiabetics  
        )  
        databaseHelper.insertSurvey(survey)  
        error = "Survey Completed"
```

```
} else {  
    error = "Please fill all fields"  
}  
,  
colors = ButtonDefaults.buttonColors(containerColor = Color(0xFF84adb8)),  
modifier = Modifier.padding(start = 70.dp).size(height = 60.dp, width = 200.dp)  
{  
    Text(text = "Submit")  
}  
}  
}  
  
@Composable  
fun RadioGroup(  
    options: List<String>,  
    selectedOption: String?,
```

```
onSelectedChange: (String) -> Unit
){
    Column {
        options.forEach { option ->
            Row(
                Modifier
                    .fillMaxWidth()
                    .padding(horizontal = 5.dp)
            ){
                RadioButton(
                    selected = option == selectedOption,
                    onClick = { onSelectedChange(option) }
                )
                Text(
                    text = option,
```

```
style = MaterialTheme.typography.bodyLarge,  
    fontSize = 17.sp, // This overrides the default font size in bodyLarge  
    modifier = Modifier.padding(top = 10.dp)  
)  
}  
}  
}  
}
```


AndroidManifest.xml:

```
<?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>
```

USER MODULE :

USER INTERFACE:

12:09



Login

Username

Password


Login

Register

Forget password?

REGISTER PAGE :

12:10



Register

Username


Email

Password

Register

Have an account? [Log in](#)

12:13



Register

Username
Arun Ravi

Email
avk@gmail.com

Password


User registered successfully

Register

Have an account? [Log in](#)

LOGIN PAGE:

12:09



Login

Username


Password

Login

Register

Forget password?

12:13



Login

Username
Arun Ravi

Password

Login

Register

Forget password?

MAIN PAGE FOR USER MODULE:

12:14

Survey on Diabetics

Name :

Age :

Mobile Number :

Gender :

☐ Male

☐ Female

☐ Other

Diabetics :

☐ Diabetic

☐ Not Diabetic

Submit

12:14

Survey on Diabetics

Name :Arun Ravi

Age :18

Mobile Number :8973156771

Gender :

☒ Male

☐ Female

☐ Other

Diabetics :

☒ Diabetic

☐ Not Diabetic


Survey Completed

Submit

ADMIN MODULE :

REGISTER PAGE :

12:15



Register

Username

Arunpandi

Email

avk45@gmail.com

Password

.....


Register

Have an account?

[Log in](#)

LOGIN PAGE :

12:15



The illustration shows a young boy with brown hair, wearing a blue shirt and dark pants, holding a large yellow pencil with a pink eraser. He is standing next to a large white clipboard with a green clip at the top. The clipboard has a checklist with four items, each with a green checkmark. The background of the illustration is light green with some leaves and a yellow star.

Login

Username

Arunpandi

Password

.....

Login

Register

Forget password?

MAIN PAGE FOR ADMIN MODULE :

