Experiment3.3

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Subject Name: Mobile App Development **Subject Code: 21CSH-355**

1. **Aim:** Create an Android application for user registration that stores the user details in a database table.

2. **Objective:**The objective of an Android application for user registration that stores user details in a database table is to create a secure, efficient, and user-friendly registration system. This type of app is commonly developed for services that require user accounts, such as social media platforms, e-commerce applications, or any service where personalized user data needs to be stored.

3. **Input/Apparatus Used:**

- **Android Studio:** The official IDE for Android development. Download and install Android Studio from the official website: Android Studio.
- **Android SDK:**The Android Software Development Kit (SDK) is essential for developing Android applications.
- **Java Development Kit (JDK):**Android apps are primarily written in Java or Kotlin. Make sure you have the Java Development Kit installed. Android Studio supports JDK.
- **Android Virtual Device (AVD) or Physical Android Device:**You need a device to test your Android application. You can use an emulator (AVD) that comes with Android Studio or a physical Android device connected to your computer.

4. Code:

Java Code:

```
package com.example.exp10;

import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
  private EditText nameEdt, idEdt, salaryEdt, designationEdt;
  private Button addEmployeeBtn;
  private DBHandler dbHandler;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    // Initialize views
    nameEdt = findViewById(R.id.idEdtName);
    idEdt = findViewById(R.id.idEdtId);
    salaryEdt = findViewById(R.id.idEdtSalary);
    designationEdt = findViewById(R.id.idEdtDesignation);
    addEmployeeBtn = findViewById(R.id.idBtnAddEmployee);

    // Initialize DBHandler
    dbHandler = new DBHandler(this);

    addEmployeeBtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        // Retrieve data from EditText fields
        String name = nameEdt.getText().toString();
        String id = idEdt.getText().toString();
        String salaryStr = salaryEdt.getText().toString();
```

```
            String designation = designationEdt.getText().toString();

            // Check if any field is empty
            if (TextUtils.isEmpty(name) || TextUtils.isEmpty(id) ||
                    TextUtils.isEmpty(salaryStr) || TextUtils.isEmpty(designation)) {
                Toast.makeText(MainActivity.this, "Please enter all the data.",
Toast.LENGTH_SHORT).show();
                return;
            }

            // Convert salary to double
            double salary = Double.parseDouble(salaryStr);

            // Add employee to database
            dbHandler.addNewEmployee(name, salary, designation);

            // Display success message
            Toast.makeText(MainActivity.this, "Employee has been added.",
Toast.LENGTH_SHORT).show();

            // Clear EditText fields after adding employee
            clearEditTextFields();
        }
    });
  }

  private void clearEditTextFields() {
    nameEdt.getText().clear();
    idEdt.getText().clear();
    salaryEdt.getText().clear();
    designationEdt.getText().clear();
  }
}
```

Activity_main.xml code:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:tools="http://schemas.android.com/tools"
```

```
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp"
    tools:context=".MainActivity">

<EditText
        android:id="@+id/idEdtName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Name"
        android:inputType="text" />

<EditText
        android:id="@+id/idEdtId"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter ID"
        android:inputType="number" />

<EditText
        android:id="@+id/idEdtSalary"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Salary"
        android:inputType="numberDecimal" />

<EditText
        android:id="@+id/idEdtDesignation"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Designation"
        android:inputType="text" />

<Button
        android:id="@+id/idBtnAddEmployee"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Add Employee"
        android:textAllCaps="false" />
```

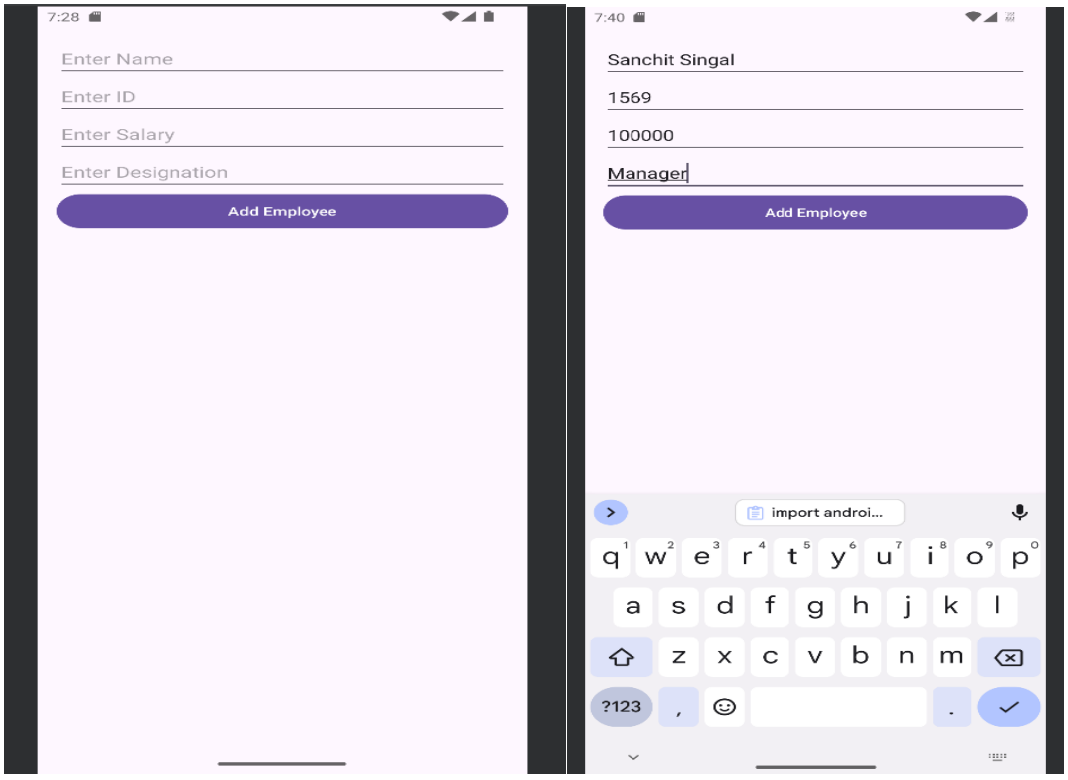
```
</LinearLayout>
```

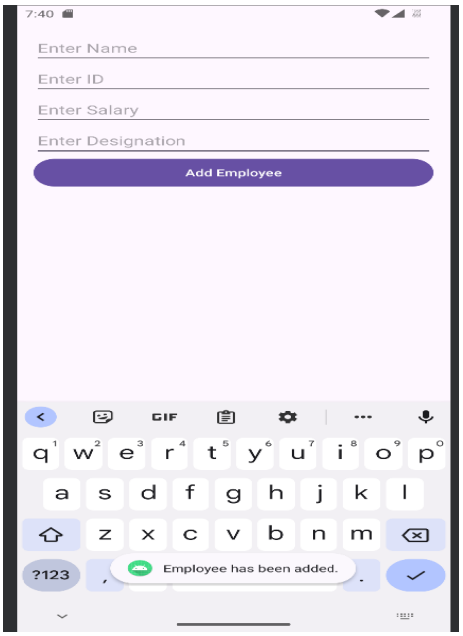
DBHandler.java code:

```
package com.example.exp10;

import android.content.ContentValues;
import android.content.Context;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

public class DBHandler extends SQLiteOpenHelper {

  private static final String DB_NAME = "employeedb";
  private static final int DB_VERSION = 1;
  private static final String TABLE_NAME = "employees";
  private static final String ID_COL = "id";
  private static final String NAME_COL = "name";
  private static final String SALARY_COL = "salary";
  private static final String DESIGNATION_COL = "designation";

  public DBHandler(Context context) {
    super(context, DB_NAME, null, DB_VERSION);
  }

  @Override
  public void onCreate(SQLiteDatabase db) {
    String query = "CREATE TABLE " + TABLE_NAME + " ("
        + ID_COL + " INTEGER PRIMARY KEY AUTOINCREMENT, "
        + NAME_COL + " TEXT,"
        + SALARY_COL + " REAL,"
        + DESIGNATION_COL + " TEXT)";
    db.execSQL(query);
  }

  public void addNewEmployee(String name, double salary, String designation) {
    SQLiteDatabase db = this.getWritableDatabase();
    ContentValues values = new ContentValues();
    values.put(NAME_COL, name);
```

```
        values.put(SALARY_COL, salary);
        values.put(DESIGNATION_COL, designation);
        db.insert(TABLE_NAME, null, values);
        db.close();
    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        db.execSQL("DROP TABLE IF EXISTS " + TABLE_NAME);
        onCreate(db);
    }
}
```

5. Output:




7:40
Enter Name
Enter ID
Enter Salary
Enter Designation
Add Employee
GIF
Employee has been added.
?123