Experiment 3.3

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Subject Name: MAD LAB **Subject Code: 20CSP_356**

1. Aim:

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

2. Objective:

Understanding of the interactions between user interface and underlying application infrastructure.

3. System Requirements:

- Microsoft Windows 7/8/10 (32-bit or 64-bit)
- 4 GB RAM minimum, 8 GB RAM recommended (plus 1 GB for the Android Emulator)
- 2 GB of available disk space minimum, 4 GB recommended (500 MB for IDE plus 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution
- Java JDK5 or later version
- Java Runtime Environment (JRE) 6 or higher.

4. Steps/Program:

AndroidManifest.xml <uses-permission

android:name="android.permission.READ_EXTERNAL_STORAGE" /> **MainActivity.java**
package com.example.fragmentapp; import android.os.Bundle; import android.view.View; import android.widget.Button; import android.widget.EditText; import android.widget.Toast; import androidx.appcompat.app.AppCompatActivity; public class MainActivity4 extends AppCompatActivity { private EditText nameEdt, courseEdt, uidEdt, sectionEdt; private Button addStudentBtnEdt; private DBHandler dbHandler;

@Override

protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.*activity_main4*); nameEdt = findViewById(R.id.*idName*); courseEdt = findViewById(R.id.*idCourse*); uidEdt = findViewById(R.id.*idUID*); sectionEdt = findViewById(R.id.*idSection*); addStudentBtnEdt = findViewById(R.id.*idBtnAddStudent*); dbHandler = new DBHandler(MainActivity4.this);

addStudentBtnEdt.setOnClickListener(new View.OnClickListener() {

```
        @Override
        public void onClick(View v) {
            String name = nameEdt.getText().toString();
            String course = courseEdt.getText().toString();
            String uid = uidEdt.getText().toString();
            String section = sectionEdt.getText().toString();
            if (name.isEmpty() && course.isEmpty() && uid.isEmpty() && section.isEmpty()) {
            Toast.makeText(MainActivity4.this, "Please enter all the data..",
Toast.LENGTH_SHORT).show();
return;
            }
             dbHandler.addNewStudent(name, course, uid, section);
Toast.makeText(MainActivity4.this, "Student has been added.", Toast.LENGTH_SHORT).show();
            nameEdt.setText("");
courseEdt.setText("");              uidEdt.setText("");
            sectionEdt.setText("");
        }

});
}
}
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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"
tools:context=".MainActivity4">
   <LinearLayout
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical"
tools:context=".MainActivity4">        <!--Edit text
to enter student name-->
      <EditText
         android:id="@+id/idName"          android:layout_width="match_parent"
android:layout_height="wrap_content"          android:layout_margin="10dp"
android:hint="@string/enter_name"          android:minHeight="48dp" />
```

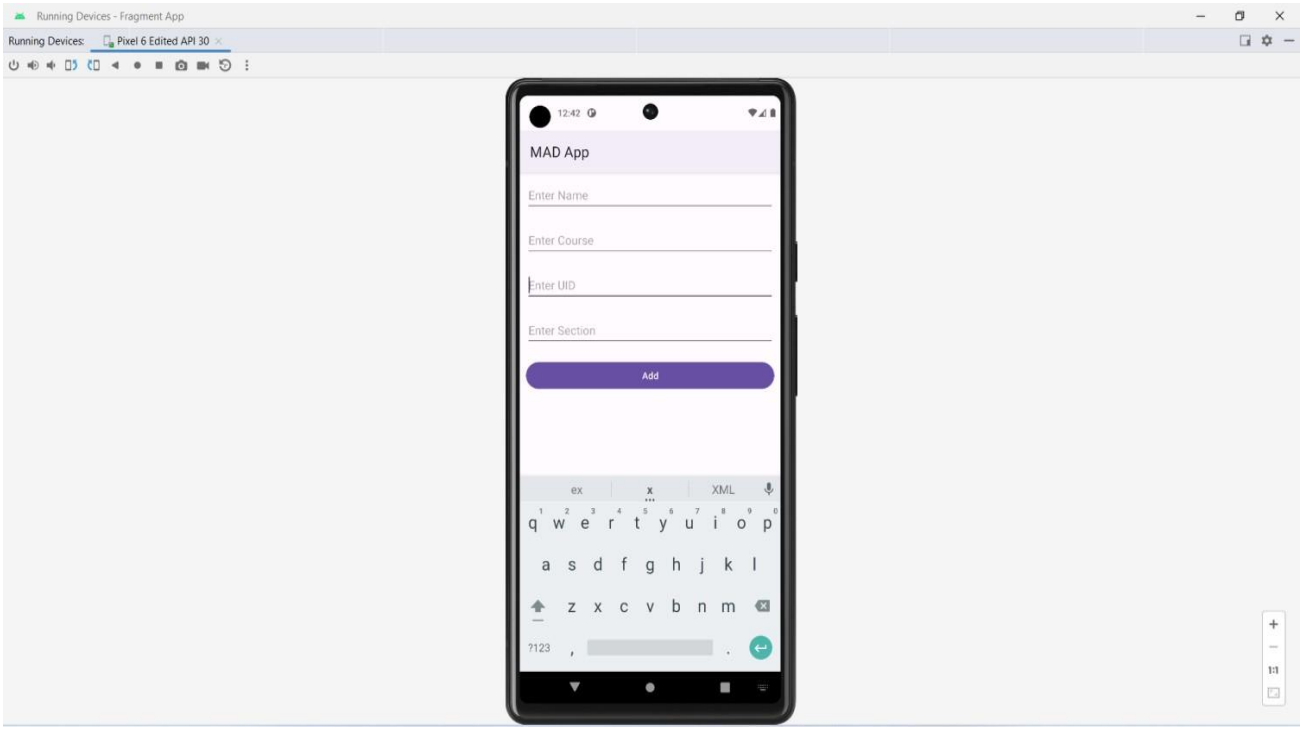
```
    <!--edit text to enter course-->

    <EditText           android:id="@+id/idCourse"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:hint="@string/enter_course"
android:minHeight="48dp" />

    <!--edit text to display uid-->

    <EditText           android:id="@+id/idUID"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:hint="Enter UID"
android:minHeight="48dp" />

    <!--edit text for section-->

    <EditText           android:id="@+id/idSection"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:hint="Enter Section"
android:minHeight="48dp" />        <!--button for
adding new student-->

    <Button

        android:id="@+id/idBtnAddStudent"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="10dp"           android:text="Add"
android:textAllCaps="false" />

  </LinearLayout>

</androidx.constraintlayout.widget.ConstraintLayout>
```

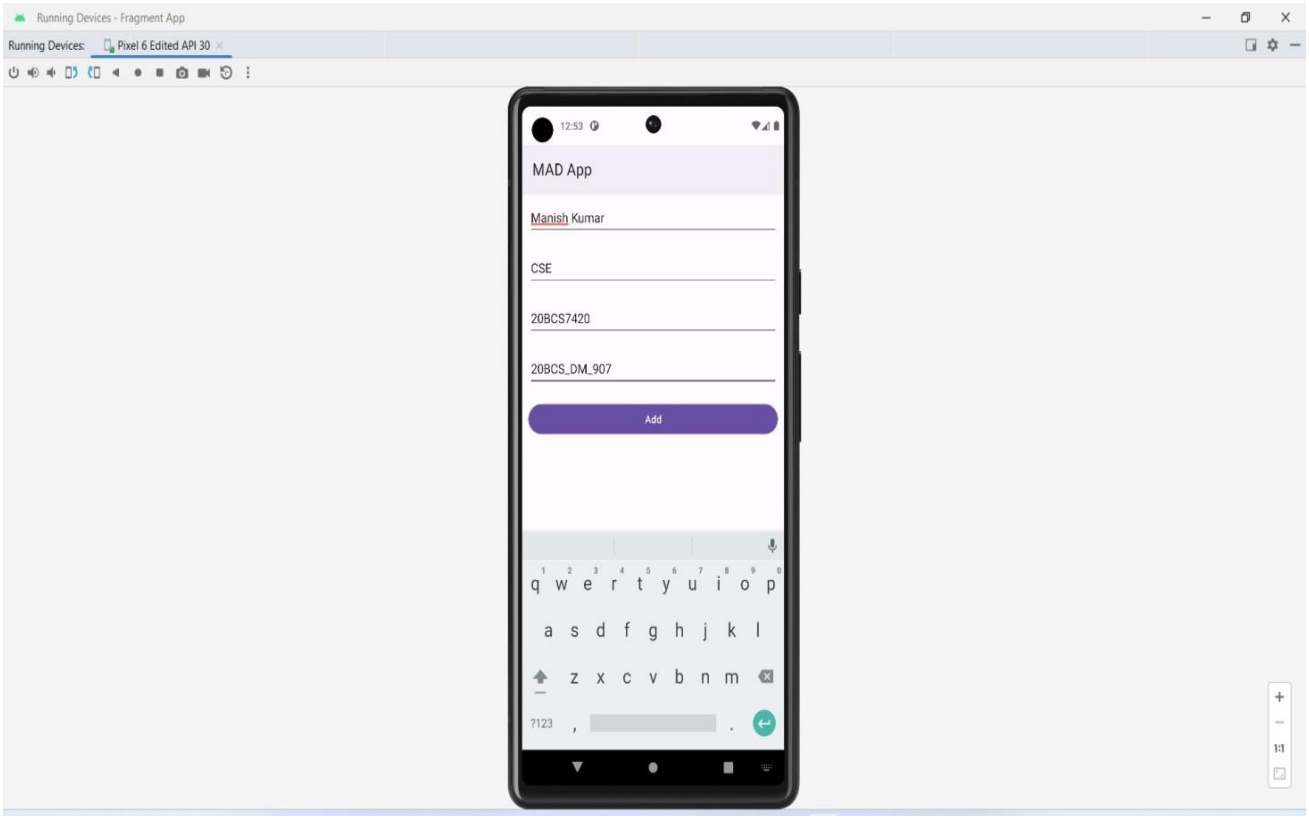
DBHandler.java

```
package com.example.fragmentapp; 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 = "studentdb";     private static
final int DB_VERSION = 1;

  private static final String TABLE_NAME = "mystudent";
```

```
    private static final String ID_COL = "id";     private static final
String NAME_COL = "name";     private static final String
ENTER_COURSE = "course";

    private static final String UID = "uid";     private static
final String SECTION = "section";     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,"

                    + ENTER_COURSE + " TEXT,"

                + UID + " TEXT,"
+ SECTION + " TEXT)";
db.execSQL(query);

    }

    public void addNewStudent(String name, String course, String uid, String section) {

        SQLiteDatabase db = this.getWritableDatabase();         ContentValues
values = new ContentValues();         values.put(NAME_COL, name);
values.put(ENTER_COURSE, course);

        values.put(UID, uid);         values.put(SECTION,
section);

        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);

    }
}
```

Output:


Running Devices - Fragment App
Running Devices:
Pixel 6 Edited API 30
12:42
MAD App
Enter Name
Enter Course
Enter UID
Enter Section
Add


Running Devices - Fragment App
Running Devices:
Pixel 6 Edited API 30
12:53
MAD App
Manish Kumar
CSE
20BCS7420
20BCS_DM_907
Add