

Assignment 03 – Attendance Managment System – Three Modules
CS407 – Mobile Application Development

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Classes ERD

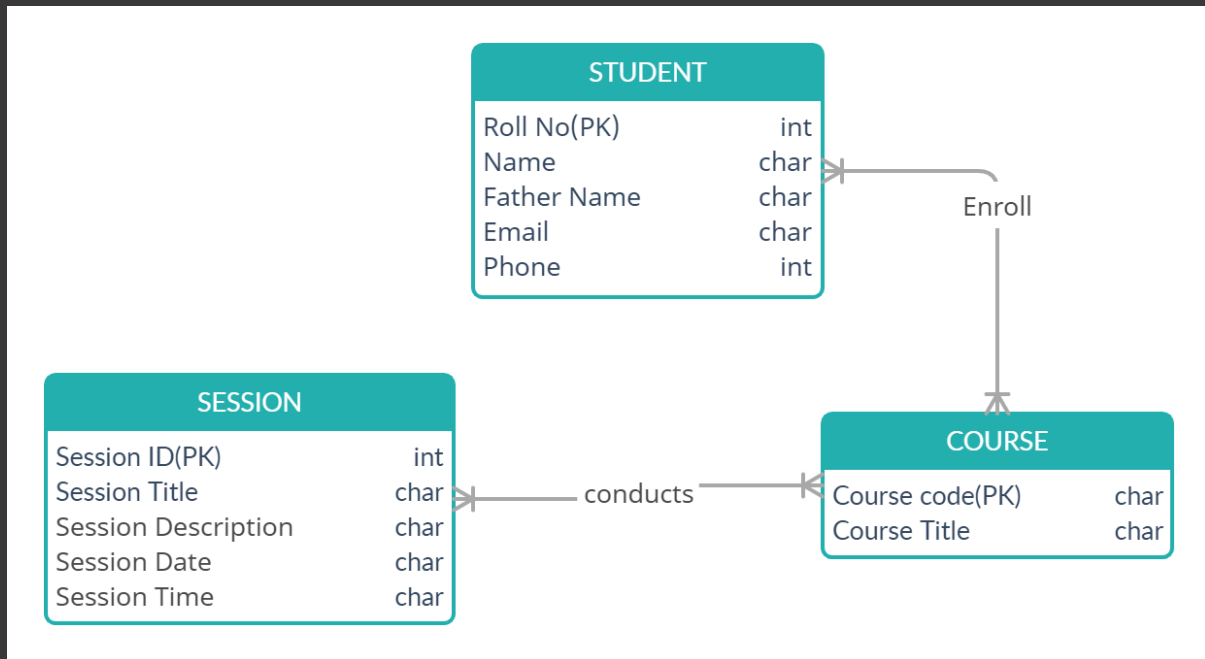


Figure 1 ERD DIAGRAM

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.termproject">

    <uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
    <uses-permission
android:name="android.permission.READ_EXTERNAL_STORAGE" />

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.TermProject">
        <activity android:name=".CourseRegistrationForm"></activity>
        <activity android:name=".CourseRUD" />
        <activity android:name=".CoursesList" />
        <activity android:name=".StudentRegistrationForm" />
        <activity android:name=".StudentRUD" />
        <activity android:name=".StudentList" />
        <activity android:name=".SessionRUD" />
        <activity android:name=".SessionList" />
        <activity android:name=".SessionRegistrationForm" />
    </application>
</manifest>
    
```

```

        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category
android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>

```

DBHelper.java

```

package com.example.termproject;

import java.util.ArrayList;
import java.util.HashMap;
import java.util.Hashtable;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.DatabaseUtils;
import android.database.sqlite.SQLiteOpenHelper;
import android.database.sqlite.SQLiteDatabase;

public class DBHelper extends SQLiteOpenHelper {

    public static final String DATABASE_NAME =
"AttendanceManagement.db";
    public static final String SESSION_TABLE_NAME = "Session";
    public static final String SESSION_COLUMN_SessionID = "SessionID";
    public static final String SESSION_COLUMN_SessionTitle =
"SessionTitle";
    public static final String SESSION_COLUMN_SessionDesc =
"SessionDesc";
    public static final String SESSION_COLUMN_SessionDate =
"SessionDate";
    public static final String Session_COLUMN_SessionTime =
"SessionTime";

    public static final String STUDENT_TABLE_NAME = "Student";
    public static final String STUDENT_COLUMN_ROLLNO = "StudentRollNo";
    public static final String STUDENT_COLUMN_NAME = "StudentName";
    public static final String STUDENT_COLUMN_FATHER_NAME =
"StudentFatherName";
    public static final String STUDENT_COLUMN_EMAIL = "StudentEmail";
    public static final String STUDENT_COLUMN_PHONE = "StudentPhone";

    public static final String COURSE_TABLE_NAME = "Course";
    public static final String COURSE_COLUMN_CourseCode = "CourseCode";
    public static final String COURSE_COLUMN_CourseTitle =

```

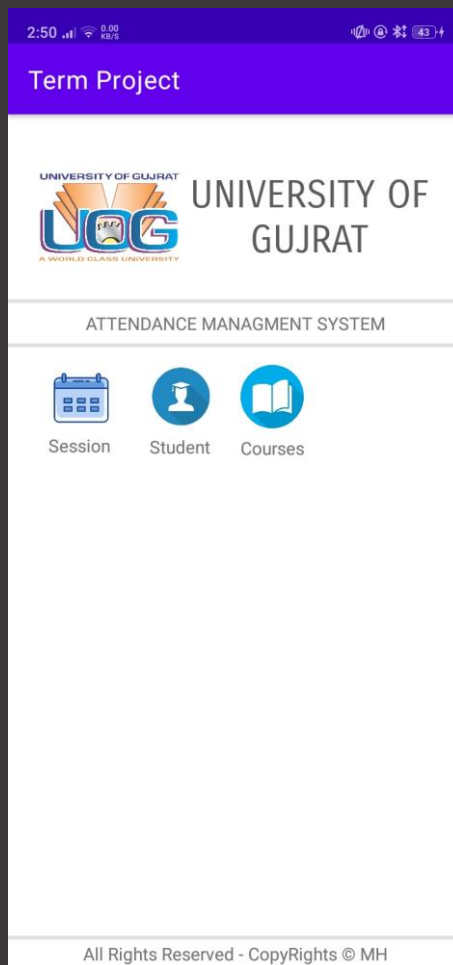



Figure 2 MainMenu

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/UOGLogo"
        android:layout_width="130dp"
        android:layout_height="130dp"
        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginTop="16dp"
```



```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:text="All Rights Reserved - CopyRights © MH"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="@+id/divider3" />

<ImageView
    android:id="@+id/studentLogo"
    android:layout_width="60dp"
    android:layout_height="60dp"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="10dp"
    app:layout_constraintStart_toEndOf="@+id/SessionsLogo"
    app:layout_constraintTop_toBottomOf="@+id/divider2"

app:srcCompat="@drawable/graduate_student_flat_blue_simple_icon_with_long_vector_3247531" />

<TextView
    android:id="@+id/tvStudent"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="59dp"
    android:text="Student"
    app:layout_constraintEnd_toEndOf="@+id/studentLogo"
    app:layout_constraintStart_toStartOf="@+id/studentLogo"
    app:layout_constraintTop_toTopOf="@+id/studentLogo" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageButton;
import android.widget.ImageView;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
    }
}

```



```

@Override
public void onClick(View v) {
    Intent CoursesIntent = new Intent(MainActivity.this,
CoursesList.class);
    startActivity(CoursesIntent);
}
});

// Opening Courses Activity by clicking on text
tvCourses.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
    Intent CoursesIntent = new Intent(MainActivity.this,
CoursesList.class);
    startActivity(CoursesIntent);
}
});
}
}

```

SESSION

activity_session_list.xml

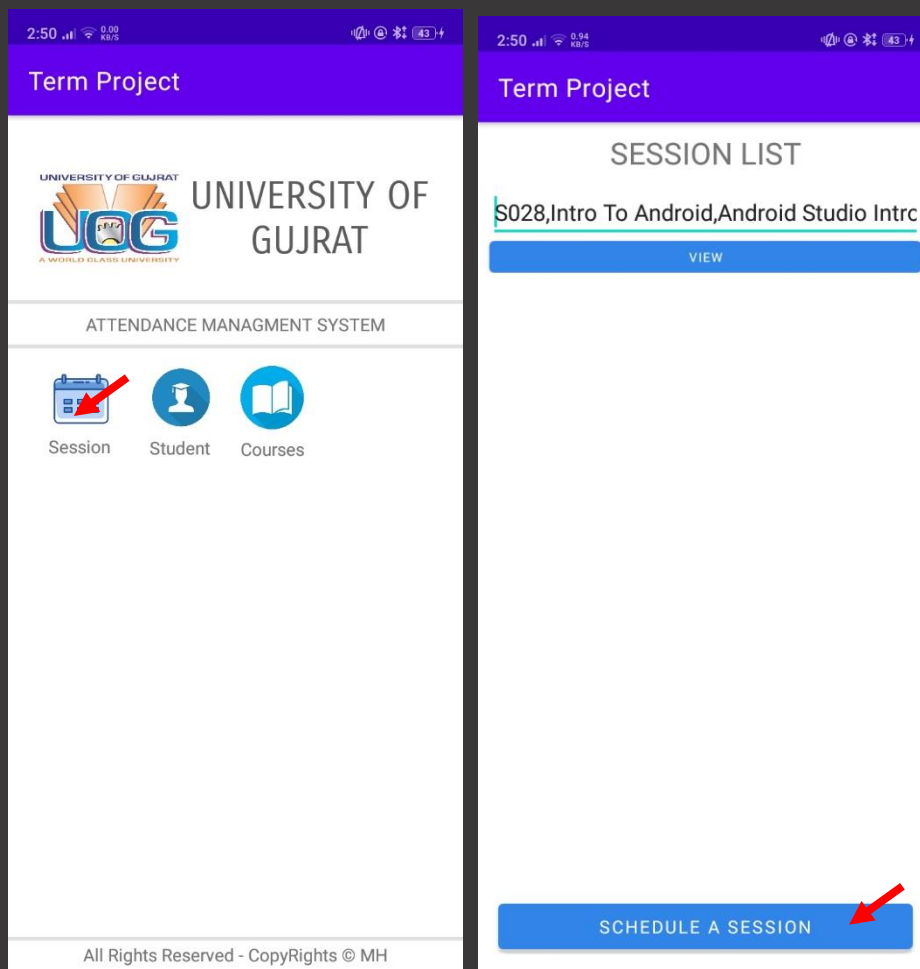


Figure 3 Opening Session Activity and Inserting a new Session


```

package com.example.termproject;

import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.database.Cursor;
import android.os.Bundle;
import android.os.Environment;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.ListView;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.util.ArrayList;
import java.util.List;

public class SessionList extends AppCompatActivity {

    SessionAdapter sessionAdapter;
    ListView lvSessionList;

    //
    RecyclerView rvSessionList;
    RecyclerView.LayoutManager layoutManager;
    List<Session> SessionList = new ArrayList<>();
    SessionRecyclerViewAdapter sessionRecyclerViewAdapter;
    //

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

        /*lvSessionList = findViewById(R.id.lvSessionList);
        sessionAdapter = new SessionAdapter(SessionList);
        lvSessionList.setAdapter(sessionAdapter);*/

        //
        rvSessionList = findViewById(R.id.rvSessionList);

        layoutManager = new LinearLayoutManager(this);
        rvSessionList.setLayoutManager(layoutManager);

```


Term Project

CREATE NEW SESSION

Session ID
S07

Session Title
Lecture07

Description
SQL Lite

DATE AND TIME

3-6-2021 SELECT DATE

14:45 SELECT TIME

ADD

Figure 4 Adding new session

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".SessionRegistrationForm">

    <ScrollView
        android:layout_width="0dp"
        android:layout_height="0dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">
```



```

        android:layout_marginLeft="16dp"
        android:layout_marginTop="8dp"
        app:layout_constraintEnd_toStartOf="@+id/btn_date"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/in_date" />

        <Button
            android:id="@+id/btn_time"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_below="@+id/btn_date"
            android:layout_alignStart="@+id/btn_date"
            android:layout_alignLeft="@+id/btn_date"
            android:layout_marginEnd="16dp"
            android:layout_marginRight="16dp"
            android:text="SELECT TIME"
            app:backgroundTint="#3184E8"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toEndOf="@+id/in_time"
            app:layout_constraintTop_toBottomOf="@+id/btn_date" />

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

```

SessionRegistrationForm.java

```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.widget.Button;

import android.app.TimePickerDialog;
import android.widget.EditText;
import android.widget.TimePicker;

import java.io.File;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.List;

import android.app.DatePickerDialog;
import android.widget.DatePicker;
import android.widget.Toast;

```



```

                                txtDate.getText().toString(),
txtTime.getText().toString());

                                /*Intent intent = new
Intent(SessionRegistrationForm.this, SessionList.class);
                                startActivity(intent);*/
                                finish();
                                }
                                else{
                                    Toast
toast=Toast.makeText(getApplicationContext(),"Fill All
Fields!",Toast.LENGTH_LONG);
                                    toast.show();
                                }
                                }
                                });
                                }

```

session_list_layout.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

    <Button
        android:id="@+id/btnView"
        android:layout_width="0dp"
        android:layout_height="25dp"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:gravity="center"
        android:insetTop="0dp"
        android:insetBottom="0dp"
        android:text="VIEW"
        android:textColor="#FFFFFF"
        android:textSize="10sp"
        app:backgroundTint="#3184E8"
        app:iconTint="#FFFFFF"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/tvSessionItem" />

    <EditText
        android:id="@+id/tvSessionItem"
        android:layout_width="0dp"
        android:layout_height="wrap_content"

```

```

        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

SessionRecyclerAdapter.java

```

package com.example.termproject;

import android.annotation.SuppressLint;
import android.content.Context;
import android.content.Intent;
import android.os.Build;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.EditText;

import androidx.annotation.NonNull;
import androidx.annotation.RequiresApi;
import androidx.recyclerview.widget.RecyclerView;

import java.util.List;

public class SessionRecyclerAdapter extends
RecyclerView.Adapter<SessionRecyclerAdapter.sessionRecyclerHolder>{
    Context context;
    List<Session> sessionList;
    public SessionRecyclerAdapter(List<Session> sl){
        sessionList=sl;
    }

    @NonNull
    @Override
    public SessionRecyclerAdapter.sessionRecyclerHolder
onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
        context = parent.getContext();
        LayoutInflater inflater =
LayoutInflater.from(parent.getContext());
        @SuppressLint("ViewHolder") View view =
inflater.inflate(R.layout.session_list_layout, parent, false);

        SessionRecyclerAdapter.sessionRecyclerHolder
sessionRecyclerHolder = new
SessionRecyclerAdapter.sessionRecyclerHolder(view);

```

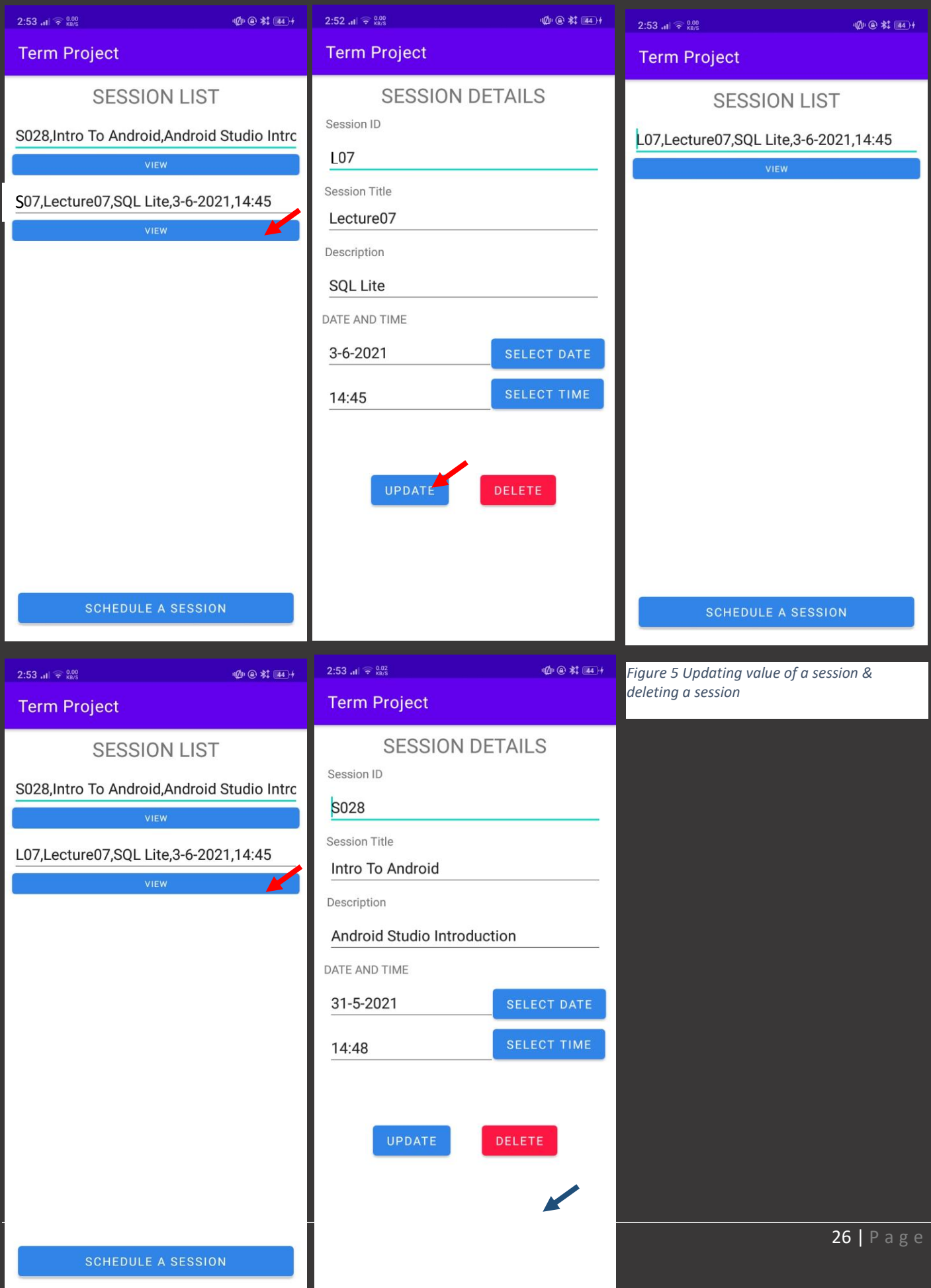



Figure 5 Updating value of a session & deleting a session


```

        <Button
            android:id="@+id/btn_time"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_below="@+id/btn_date"
            android:layout_alignStart="@+id/btn_date"
            android:layout_alignLeft="@+id/btn_date"
            android:layout_marginEnd="16dp"
            android:layout_marginRight="16dp"
            android:text="SELECT TIME"
            app:backgroundTint="#3184E8"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toEndOf="@+id/in_time"
            app:layout_constraintTop_toBottomOf="@+id/btn_date"
        />

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

```

SessionRUD.java

```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;

import android.app.DatePickerDialog;
import android.app.TimePickerDialog;
import android.content.Intent;
import android.database.Cursor;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.TimePicker;
import android.widget.Toast;

import java.util.ArrayList;
import java.util.Calendar;
import java.util.List;

public class SessionRUD extends AppCompatActivity {

    DBHelper dbHelper = new DBHelper(SessionRUD.this);

    Button btnDatePicker, btnTimePicker;
    EditText txtDate, txtTime;
    private int mYear, mMonth, mDay, mHour, mMinute;

```



```

        }
        else{
            Toast
toast=Toast.makeText(getApplicationContext(),"Fill All
Fields!",Toast.LENGTH_LONG);
            toast.show();
        }
    }
});

btnDelete.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        dbHelper.deleteSession(ID);
        finish();
    }
});
}
}

```

Session.java

```

package com.example.termproject;

import androidx.annotation.CallSuper;

import java.sql.Time;
import java.util.Date;

public class Session {

    private String sessionId;
    private String sessionTitle;
    private String sessionDesc;
    private String sessionDate;
    private String sessionTime;

    public Session(String sid, String st, String sdesc, String sdate,
String stime){
        sessionId = sid;
        sessionTitle = st;
        sessionDesc = sdesc;
        sessionDate = sdate;
        sessionTime = stime;
    }

    public Session(String str) {
        String[] Data = str.split(",");

        sessionId = Data[0];
        sessionTitle = Data[1];
    }
}

```

```

        sessionDesc = Data[2];
        sessionDate = Data[3];
        sessionTime = Data[4];
    }

    public String getSessionId() { return sessionId; }

    public void setSessionId(String sessionId) { this.sessionId =
sessionId; }

    public String getSessionTitle() { return sessionTitle; }

    public void setSessionTitle(String sessionTitle) { this.sessionTitle
= sessionTitle; }

    public String getSessionDesc() { return sessionDesc;}

    public void setSessionDesc(String sessionDesc) { this.sessionDesc =
sessionDesc; }

    public String getSessionDate() {
        return sessionDate;
    }

    public void setSessionDate(String sessionDate) {
        this.sessionDate = sessionDate;
    }

    public String getSessionTime() {
        return sessionTime;
    }

    public void setSessionTime(String sessionTime) {
        this.sessionTime = sessionTime;
    }

    @Override
    public String toString() {
        return sessionId + "," + sessionTitle + "," + sessionDesc + ","
+
        sessionDate + "," +sessionTime ;
    }
}

```

STUDENT

activity_student_list.xml

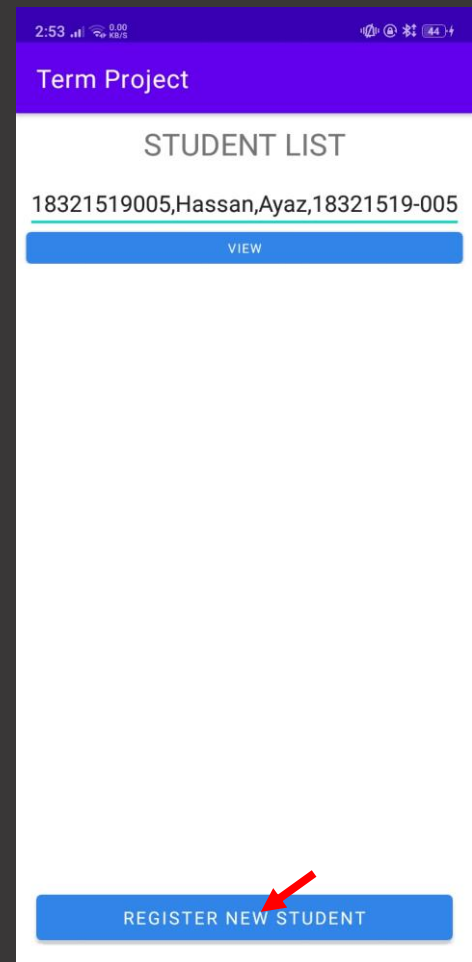
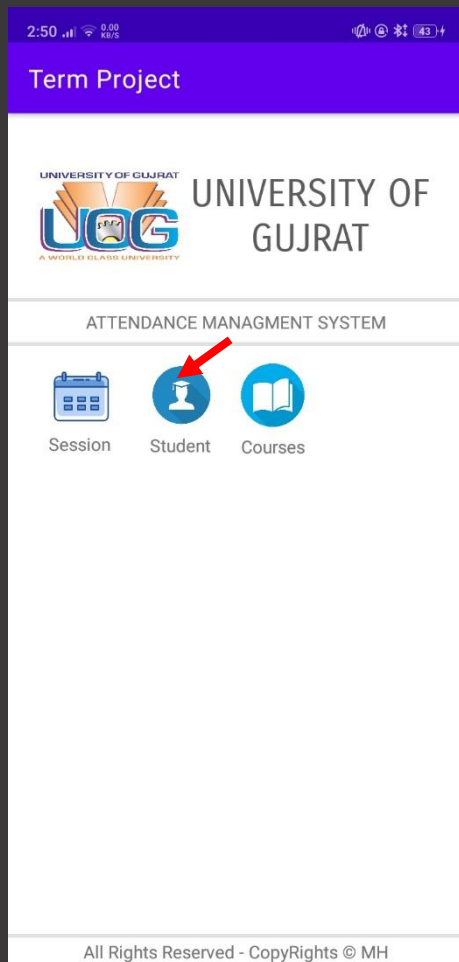


Figure 6 Opening Student Activity & Registering a new student

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".StudentList">

    <TextView
        android:id="@+id/tvStudentListHeader"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:text="STUDENT LIST"
        android:textSize="24sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
```

```

        android:id="@+id/btnRegisterStudent"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginEnd="16dp"
        android:layout_marginRight="16dp"
        android:layout_marginBottom="16dp"
        android:text="register new student"
        app:backgroundTint="#3184E8"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent" />

<androidx.recyclerview.widget.RecyclerView
    android:id="@+id/rvStudentList"
    android:layout_width="0dp"
    android:layout_height="0dp"

app:layout_constraintBottom_toTopOf="@+id/btnRegisterStudent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/tvStudentListHeader" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

StudentList.java

```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ListView;

import java.util.ArrayList;
import java.util.List;

public class StudentList extends AppCompatActivity {

    /*StudentAdapter studentAdapter;
    ListView lvStudentList;*/

    //
    RecyclerView rvStudentList;

```



```
}
}
```

Term Project

REGISTER NEW STUDENT

ROLL NO

17

STUDENT NAME

Ali

FATHER NAME

Ayaz

EMAIL

Ali@gmail.com

PHONE

0300-1234567

REGISTER

Term Project

STUDENT LIST

18321519005,Hassan,Ayaz,18321519-005

VIEW

17,Ali,Ayaz,Ali@gmail.com,0300-1234567

VIEW

REGISTER NEW STUDENT

activity_student_registration_form.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".StudentRegistrationForm">

    <ScrollView
        android:layout_width="0dp"
        android:layout_height="0dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">
```



```

        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/tvStdName" />

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

</androidx.constraintlayout.widget.ConstraintLayout>

```

StudentRegistrationForm.java

```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.util.ArrayList;
import java.util.List;

public class StudentRegistrationForm extends AppCompatActivity {

    List<Student> students = new ArrayList<>();

    DBHelper dbHelper = new DBHelper(StudentRegistrationForm.this);

    EditText etStdRollNo;
    EditText etStdName;
    EditText etStdFName;
    EditText etStdEmail;
    EditText etStdPh;

    Button btnStdRegister;

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

        // References
        etStdRollNo = findViewById(R.id.etStdRollNo);
        etStdName = findViewById(R.id.etStdName);
        etStdFName = findViewById(R.id.etStdFName);
        etStdEmail = findViewById(R.id.etStdEmail);
        etStdPh = findViewById(R.id.etStdPh);

        btnStdRegister = findViewById(R.id.btnStdRegister);
    }
}

```

```

        btnStdRegister.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if(!etStdRollNo.getText().toString().isEmpty() &&
!etStdName.getText().toString().isEmpty() &&
!etStdFName.getText().toString().isEmpty() &&
!etStdEmail.getText().toString().isEmpty() &&
!etStdPh.getText().toString().isEmpty()){

dbHelper.insertStudent(etStdRollNo.getText().toString()
,etStdName.getText().toString(), etStdFName.getText().toString(),
                                etStdEmail.getText().toString(),
etStdPh.getText().toString());

                finish();
            }
            else{
                Toast
toast=Toast.makeText(getApplicationContext(),"Fill All
Fields!",Toast.LENGTH_LONG);
                toast.show();
            }
        }
    });
}
}

```

student_list_layout.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

    <Button
        android:id="@+id/btnStdView"
        android:layout_width="0dp"
        android:layout_height="25dp"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginRight="8dp"
        android:gravity="center"
        android:insetTop="0dp"
        android:insetBottom="0dp"
        android:text="VIEW"
        android:textColor="#FFFFFF"
        android:textSize="10sp"
    />

```

```

        app:backgroundTint="#3184E8"
        app:iconTint="#FFFFFF"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/tvStudentItem" />

<EditText
    android:id="@+id/tvStudentItem"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

StudentRecyclerAdapter.java

```

package com.example.termproject;

import android.annotation.SuppressLint;
import android.content.Context;
import android.content.Intent;
import android.os.Build;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.EditText;

import androidx.annotation.NonNull;
import androidx.annotation.RequiresApi;
import androidx.recyclerview.widget.RecyclerView;

import java.util.List;

public class StudentRecyclerAdapter extends
RecyclerView.Adapter<StudentRecyclerAdapter.studentRecyclerHolder>{
    Context context;
    List<Student> studentList;
    public StudentRecyclerAdapter(List<Student> sl){
        studentList=sl;
    }

    @NonNull
    @Override

```



```

        public StudentRecyclerAdapter.studentRecyclerHolder
onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
    context = parent.getContext();
    LayoutInflater inflater =
LayoutInflater.from(parent.getContext());
    @SuppressWarnings("ViewHolder") View view =
inflater.inflate(R.layout.student_list_layout, parent, false);

    StudentRecyclerAdapter.studentRecyclerHolder
studentRecyclerHolder = new
StudentRecyclerAdapter.studentRecyclerHolder(view);
    return studentRecyclerHolder;
}

@Override
public void onBindViewHolder(@NonNull
StudentRecyclerAdapter.studentRecyclerHolder holder, int position) {
holder.tvStudentItem.setText(studentList.get(position).toString());
    String OldData = holder.tvStudentItem.getText().toString();

    holder.btnStdView.setOnClickListener(new View.OnClickListener()
{
        @RequiresApi(api = Build.VERSION_CODES.KITKAT)
        @Override
        public void onClick(View v) {
            String temp = studentList.get(position).getRollNo();

            Intent intent = new Intent(context, StudentRUD.class);
            intent.putExtra("ID", temp);
            context.startActivity(intent);
        }
    });
}

@Override
public int getItemCount() {
    return studentList.size();
}

public class studentRecyclerHolder extends RecyclerView.ViewHolder {
    EditText tvStudentItem;
    Button btnStdView;
    public studentRecyclerHolder(@NonNull View itemView) {
        super(itemView);
        tvStudentItem = itemView.findViewById(R.id.tvStudentItem);
        btnStdView = itemView.findViewById(R.id.btnStdView);
    }
}
}

```

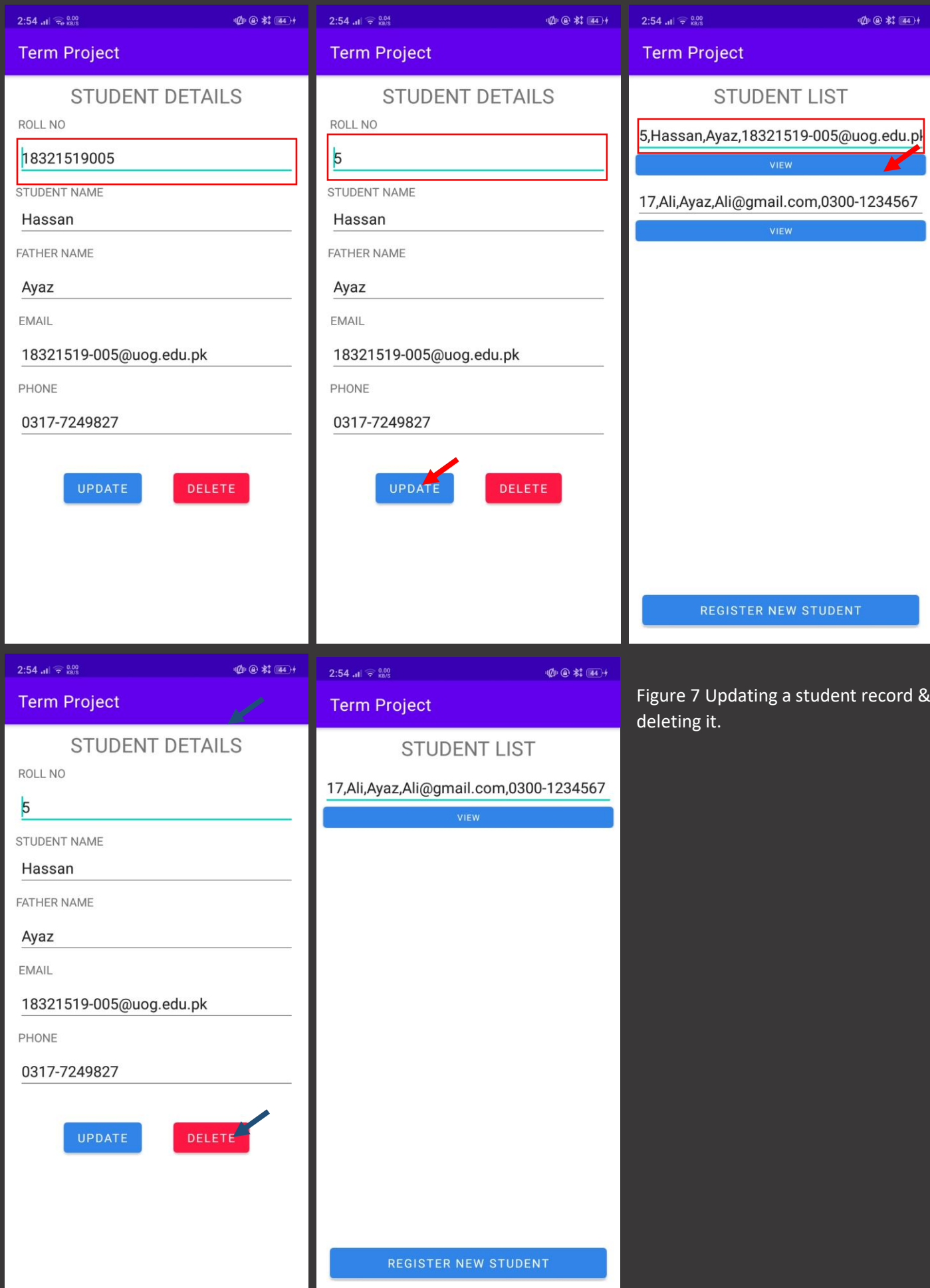


Figure 7 Updating a student record & deleting it.


```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class StudentRUD extends AppCompatActivity {

    DBHelper dbHelper = new DBHelper(StudentRUD.this);

    EditText etUStdRollNo;
    EditText etUStdName;
    EditText etUStdFName;
    EditText etUStdEmail;
    EditText etUStdPh;
    Button btnStdUpdate, btnStdDelete;

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

        Intent intent = getIntent();
        String ID = intent.getStringExtra("ID");

        // References
        etUStdRollNo = findViewById(R.id.etUStdRollNo);
        etUStdName = findViewById(R.id.etUStdName);
        etUStdFName = findViewById(R.id.etUStdFName);
        etUStdEmail = findViewById(R.id.etUStdEmail);
        etUStdPh = findViewById(R.id.etUStdPh);

        btnStdUpdate = findViewById(R.id.btnStdUpdate);
        btnStdDelete = findViewById(R.id.btnStdDelete);

        Cursor cursor = new DBHelper(this).getAllStdData();

        while (cursor.moveToNext()) {

            if (ID.equals(cursor.getString(0))) {
                etUStdRollNo.setText(cursor.getString(0));
                etUStdName.setText(cursor.getString(1));
                etUStdFName.setText(cursor.getString(2));
                etUStdEmail.setText(cursor.getString(3));
            }
        }
    }
}

```

```

        etUStdPh.setText(cursor.getString(4));
    }

}

btnStdUpdate.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

        dbHelper.updateStudent(ID,
etUStdRollNo.getText().toString(), etUStdName.getText().
        toString(),
etUStdFName.getText().toString(), etUStdEmail.getText().toString(),
        etUStdPh.getText().toString());
        finish();
    }
});

btnStdDelete.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        dbHelper.deleteStudent(ID);
        finish();
    }
});
}
}

```

Student.java

```

package com.example.termproject;

public class Student {
    private String rollNo;
    private String Name;
    private String fatherName;
    private String email;
    private String phone;

    public Student(String rollNo, String name, String fatherName, String
email, String phone) {
        this.rollNo = rollNo;
        this.Name = name;
        this.fatherName = fatherName;
        this.email = email;
        this.phone = phone;
    }

    public String getRollNo() {
        return rollNo;
    }

    public void setRollNo(String rollNo) {

```



```

        this.rollNo = rollNo;
    }

    public String getName() {
        return Name;
    }

    public void setName(String name) {
        Name = name;
    }

    public String getFatherName() {
        return fatherName;
    }

    public void setFatherName(String fatherName) {
        this.fatherName = fatherName;
    }

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    public String getPhone() {
        return phone;
    }

    public void setPhone(String phone) {
        this.phone = phone;
    }

    @Override
    public String toString() {
        return rollNo + "," + Name + "," + fatherName + "," +
            email + "," + phone ;
    }
}

```

COURSE

activity_course_list.xml

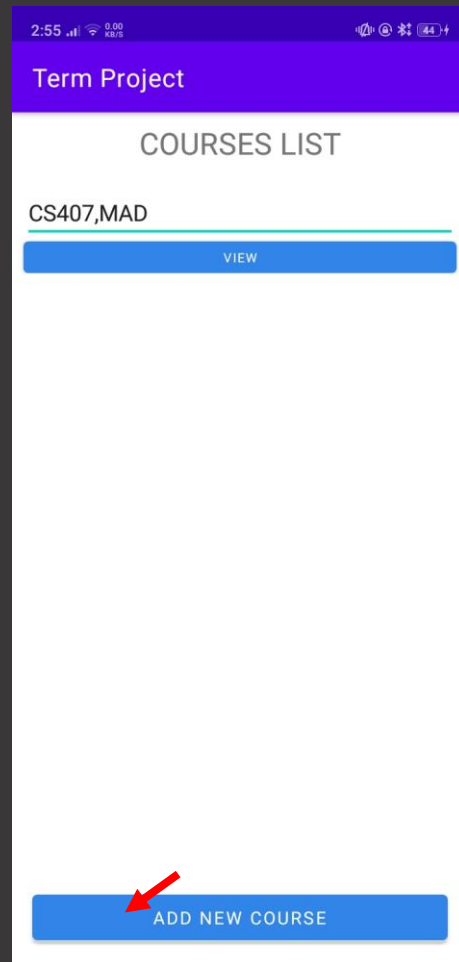
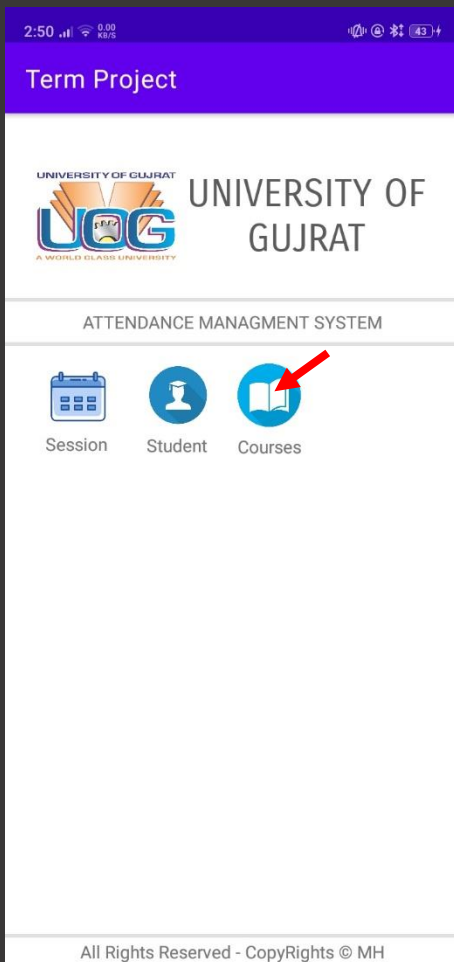


Figure 7 Opening Course Activity and registering a new course

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".CoursesList">

    <TextView
        android:id="@+id/tvCoursesListHeader"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="8dp"
        android:text="COURSES LIST"
        android:textSize="24sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/btnAddCourse"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
```

```

        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginEnd="16dp"
        android:layout_marginRight="16dp"
        android:layout_marginBottom="16dp"
        android:text="ADD NEW COURSE"
        app:backgroundTint="#3184E8"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent" />

<androidx.recyclerview.widget.RecyclerView
    android:id="@+id/rvCourseList"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_marginStart="1dp"
    android:layout_marginLeft="1dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="1dp"
    android:layout_marginRight="1dp"
    app:layout_constraintBottom_toTopOf="@+id/btnAddCourse"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/tvCoursesListHeader"
/>

</androidx.constraintlayout.widget.ConstraintLayout>

```

CoursesList.java

```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ListView;

import java.util.ArrayList;
import java.util.List;

public class CoursesList extends AppCompatActivity {

    CourseAdapter courseAdapter;
    ListView lvCourseList;
}

```


Term Project

REGISTER COURSE

COURSE CODE

CS123

COURSE TITLE

Info Security

REGISTER

Term Project

COURSES LIST

CS407,MAD

VIEW

CS123,Info Security

VIEW

ADD NEW COURSE

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".CourseRegistrationForm">

    <ScrollView
        android:layout_width="0dp"
        android:layout_height="0dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

        <androidx.constraintlayout.widget.ConstraintLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent">
```



```

        <Button
            android:id="@+id/btnCourseRegister"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="32dp"
            android:layout_marginBottom="8dp"
            android:text="REGISTER"
            app:backgroundTint="#3184E8"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/etCourseTitle"
            app:layout_constraintVertical_bias="0.0" />

        <EditText
            android:id="@+id/etCourseTitle"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_marginStart="16dp"
            android:layout_marginLeft="16dp"
            android:layout_marginEnd="16dp"
            android:layout_marginRight="16dp"
            android:ems="10"
            android:inputType="textPersonName"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/tvCourseTitle"
        />

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

</androidx.constraintlayout.widget.ConstraintLayout>

```

CourseRegistrationForm.java

```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.util.ArrayList;
import java.util.List;

public class CourseRegistrationForm extends AppCompatActivity {

    List<Course> Courses = new ArrayList<>();

```

```

DBHelper dbHelper = new DBHelper(CourseRegistrationForm.this);

EditText etCourseCode;
EditText etCourseTitle;

Button btnCourseRegister;

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

    // References
    etCourseCode = findViewById(R.id.etCourseCode);
    etCourseTitle = findViewById(R.id.etCourseTitle);

    btnCourseRegister = findViewById(R.id.btnCourseRegister);

    btnCourseRegister.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View v) {
            if(!etCourseCode.getText().toString().isEmpty() &&
!etCourseTitle.getText().toString().isEmpty()){

dbHelper.insertCourse(etCourseCode.getText().toString()
,etCourseTitle.getText().toString());
                finish();
            }
            else{
                Toast
toast=Toast.makeText(getApplicationContext(),"Fill All
Fields!",Toast.LENGTH_LONG);
                toast.show();
            }
        }
    });
}
}

```

course_list_layout.xml

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

```



```

<Button
    android:id="@+id/btnCourseView"
    android:layout_width="0dp"
    android:layout_height="25dp"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:gravity="center"
    android:insetTop="0dp"
    android:insetBottom="0dp"
    android:text="VIEW"
    android:textColor="#FFFFFF"
    android:textSize="10sp"
    app:backgroundTint="#3184E8"
    app:iconTint="#FFFFFF"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/tvCourseItem" />

```

```

<EditText
    android:id="@+id/tvCourseItem"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="8dp"
    android:layout_marginRight="8dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

```

```

</androidx.constraintlayout.widget.ConstraintLayout>

```

CourseRecyclerViewAdapter.java

```

package com.example.termproject;

import android.annotation.SuppressLint;
import android.content.Context;
import android.content.Intent;
import android.os.Build;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import androidx.annotation.NonNull;

```

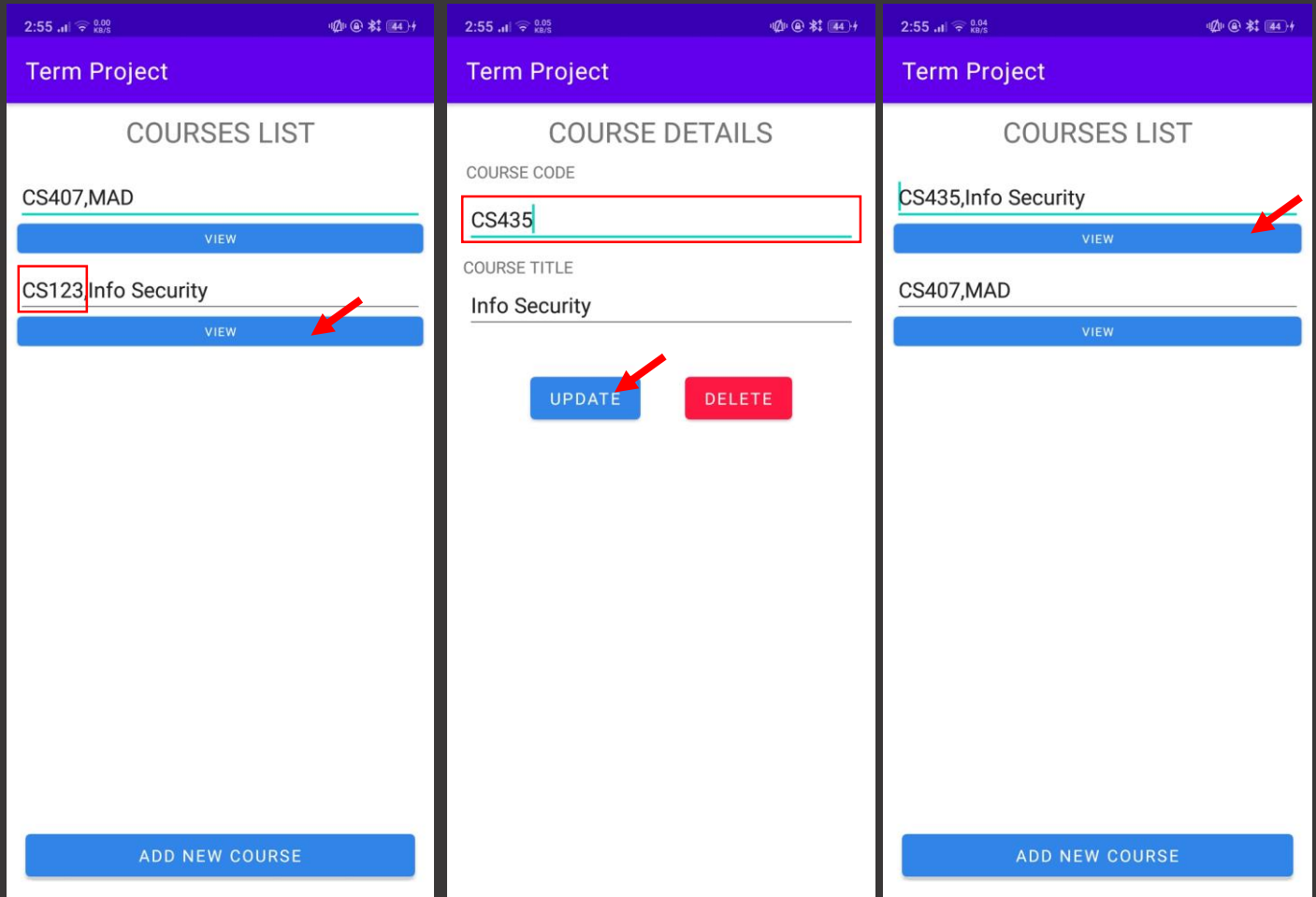


```

public class courseRecyclerHolder extends RecyclerView.ViewHolder {
    EditText tvCourseItem;
    Button btnCourseView;
    public courseRecyclerHolder(@NonNull View itemView) {
        super(itemView);
        tvCourseItem = itemView.findViewById(R.id.tvCourseItem);
        btnCourseView = itemView.findViewById(R.id.btnCourseView);
    }
}

```

activity_course_rud.xml



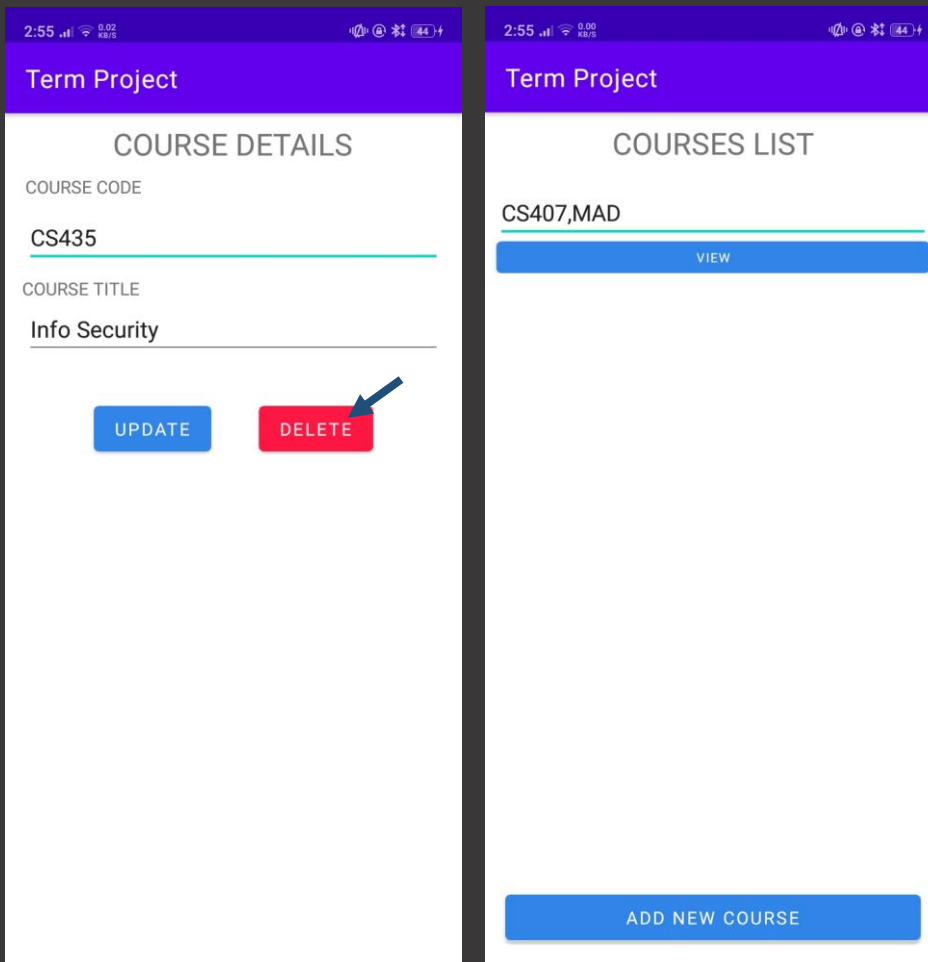


Figure 8 Updating a course & Deleting it.

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".CourseRUD">

    <ScrollView
        android:layout_width="0dp"
        android:layout_height="0dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

        <androidx.constraintlayout.widget.ConstraintLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent">

            <TextView
                android:id="@+id/tvUCourseHeader"
                android:layout_width="wrap_content"
```



```

package com.example.termproject;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class CourseRUD extends AppCompatActivity {

    DBHelper dbHelper = new DBHelper(CourseRUD.this);

    EditText etUCourseCode;
    EditText etUCourseTitle;

    Button btnCourseUpdate, btnCourseDelete;

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

        Intent intent = getIntent();
        String ID = intent.getStringExtra("ID");

        // References
        etUCourseCode = findViewById(R.id.etUCourseCode);
        etUCourseTitle = findViewById(R.id.etUCourseTitle);

        btnCourseUpdate = findViewById(R.id.btnCourseUpdate);
        btnCourseDelete = findViewById(R.id.btnCourseDelete);

        Cursor cursor = new DBHelper(this).getAllCourseData();

        while (cursor.moveToNext()) {

            if (ID.equals(cursor.getString(0))) {
                etUCourseCode.setText(cursor.getString(0));
                etUCourseTitle.setText(cursor.getString(1));
            }

        }
    }
}

```

```

        btnCourseUpdate.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                dbHelper.updateCourse(ID,
etUCourseCode.getText().toString(),etUCourseTitle.getText().toString());
                finish();
            }
        });

        btnCourseDelete.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                dbHelper.deleteCourse(ID);
                finish();
            }
        });
    }
}

```

Course.java

```

package com.example.termproject;

public class Course {
    private String courseCode;
    private String courseTitle;

    public Course(String courseCode, String courseTitle) {
        this.courseCode = courseCode;
        this.courseTitle = courseTitle;
    }

    public String getCourseCode() {
        return courseCode;
    }

    public void setCourseCode(String courseCode) {
        this.courseCode = courseCode;
    }

    public String getCourseTitle() {
        return courseTitle;
    }

    public void setCourseTitle(String courseTitle) {
        this.courseTitle = courseTitle;
    }

    @Override
    public String toString() {

```