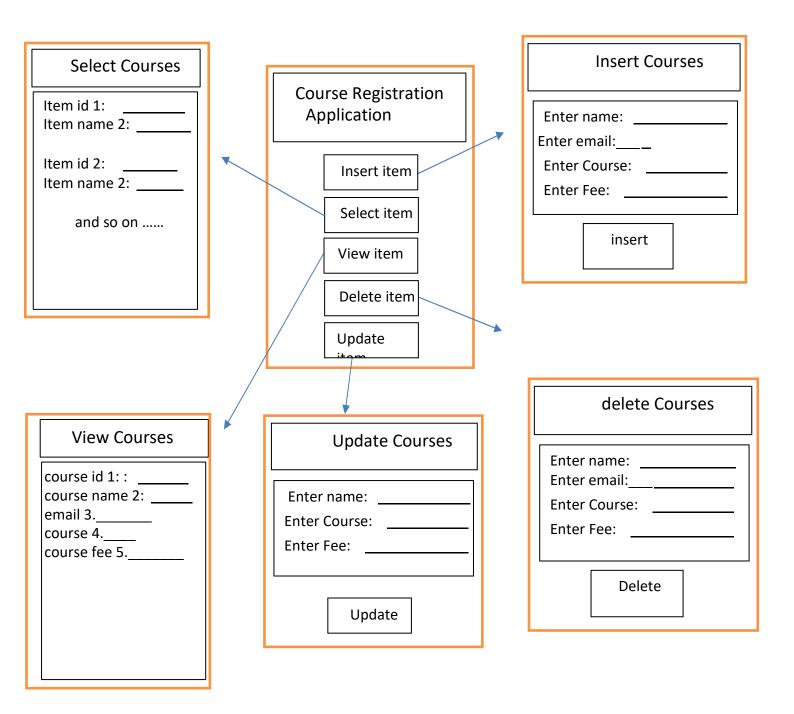
#### **Problem Statement:**

Created an Android application to perform daily tasks of cataloging. Features include adding items along with their price and stock availability, updating existing items in the database, and also deleting the items that are not required. Items in the database can also be viewed.

### **Input and Output Diagram**



#### activity main.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=".EditActivity">
  <TextView
    android:id="@+id/title"
    android:layout_width="264dp"
    android:layout_height="38dp"
    android:layout_marginTop="124dp"
    android:background="#6EE1AF"
    android:text="@string/title"
    android:textColor="#640AF6"
    android:textSize="28sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.387"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <Button
    android:id="@+id/btn edit"
    android:layout width="190dp"
    android:layout_height="55dp"
    android:layout_marginTop="584dp"
    android:text="@string/edit"
    android:textAlignment="center"
    android:textColor="#FFE500"
    android:textColorHighlight="#912323"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <Button
    android:id="@+id/btn_delete"
    android:layout_width="190dp"
    android:layout_height="55dp"
    android:layout_marginTop="636dp"
    android:layout_marginEnd="108dp"
    android:text="@string/delete"
    android:textAlignment="center"
    android:textColor="#FFE500"
    android:textColorHighlight="#912323"
```

```
app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<Button
  android:id="@+id/btn back"
  android:layout_width="190dp"
  android:layout_height="55dp"
  android:layout marginTop="688dp"
  android:layout marginEnd="108dp"
  android:text="@string/back"
  android:textAlignment="center"
  android:textColor="#FFE500"
  android:textColorHighlight="#912323"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/id"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout marginTop="200dp"
  android:layout_marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/name1"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_marginTop="275dp"
  android:layout marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout constraintTop toTopOf="parent" />
<EditText
  android:id="@+id/email1"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="350dp"
  android:layout_marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/course1"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_marginTop="425dp"
  android:layout_marginEnd="44dp"
```

```
android:ems="10"
  android:inputType="textPersonName"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/fee1"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout marginTop="500dp"
  android:layout_marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView5"
  android:layout_width="80dp"
  android:layout_height="40dp"
  android:layout_marginStart="24dp"
  android:layout marginTop="200dp"
  android:background="#FFFFFF"
  android:text="@string/id"
  android:textAllCaps="true"
  android:textColor="#F60303"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView"
  android:layout_width="80dp"
  android:layout height="40dp"
  android:layout_marginStart="24dp"
  android:layout_marginTop="275dp"
  android:background="#FFFFFF"
  android:text="@string/name"
  android:textAllCaps="true"
  android:textColor="#F60303"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView4"
  android:layout_width="81dp"
  android:layout height="40dp"
  android:layout_marginStart="24dp"
  android:layout_marginTop="350dp"
  android:background="#FFFFFF"
```

```
android:text="@string/email"
  android:textAllCaps="true"
  android:textColor="#F60303"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView2"
  android:layout_width="80dp"
  android:layout_height="40dp"
  android:layout_marginStart="24dp"
  android:layout_marginTop="425dp"
  android:text="@string/courses"
  android:textAllCaps="true"
  android:textColor="#FF0000"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView3"
  android:layout_width="80dp"
  android:layout_height="40dp"
  android:layout marginStart="24dp"
  android:layout_marginTop="500dp"
  android:text="@string/fee"
  android:textColor="#FA0202"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<ImageView
  android:id="@+id/imageView"
  android:layout_width="180dp"
  android:layout_height="119dp"
  android:layout_marginTop="8dp"
  android:layout_marginEnd="124dp"
  android:baselineAlignBottom="false"
  android:textAlignment="center"
  app:layout constraintEnd toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent"
  app:srcCompat="@drawable/img"/>
```

</androidx.constraintlayout.widget.ConstraintLayout>

### activity\_view.xml:

#### activity edit.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"
  android:orientation="vertical"
  android:gravity="center"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/title"
    android:layout_width="264dp"
    android:layout_height="38dp"
    android:layout marginTop="200dp"
    android:background="#6EE1AF"
    android:text="@string/title"
    android:textColor="#640AF6"
    android:textSize="28sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.387"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <Button
    android:id="@+id/btn add"
    android:layout width="190dp"
```

```
android:layout height="55dp"
  android:layout_marginTop="584dp"
  android:layout_marginEnd="128dp"
  android:text="@string/add"
  android:textAlignment="center"
  android:textColor="#FFE500"
  android:textColorHighlight="#912323"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<Button
  android:id="@+id/btn view"
  android:layout width="190dp"
  android:layout_height="55dp"
  android:layout_marginTop="636dp"
  android:layout marginEnd="128dp"
  android:text="@string/view"
  android:textAlignment="center"
  android:textColor="#FFE500"
  android:textColorHighlight="#912323"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/name"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_marginTop="275dp"
  android:layout_marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
  app:layout constraintEnd toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/email"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="350dp"
  android:layout marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/course"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout marginTop="425dp"
  android:layout_marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
```

```
app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<EditText
  android:id="@+id/fee"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="500dp"
  android:layout_marginEnd="44dp"
  android:ems="10"
  android:inputType="textPersonName"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView"
  android:layout_width="80dp"
  android:layout_height="40dp"
  android:layout_marginStart="24dp"
  android:layout marginTop="275dp"
  android:background="#FFFFFF"
  android:text="@string/name"
  android:textAllCaps="true"
  android:textColor="#F60303"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView4"
  android:layout width="81dp"
  android:layout_height="40dp"
  android:layout_marginStart="24dp"
  android:layout marginTop="350dp"
  android:background="#FFFFFF"
  android:text="@string/email"
  android:textAllCaps="true"
  android:textColor="#F60303"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/textView2"
  android:layout width="80dp"
  android:layout_height="40dp"
  android:layout_marginStart="24dp"
  android:layout marginTop="425dp"
  android:text="@string/courses"
  android:textAllCaps="true"
  android:textColor="#FF0000"
```

```
android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <TextView
    android:id="@+id/textView3"
    android:layout width="80dp"
    android:layout_height="40dp"
    android:layout_marginStart="24dp"
    android:layout_marginTop="500dp"
    android:text="@string/fee"
    android:textColor="#FA0202"
    android:textSize="20sp"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <ImageView
    android:id="@+id/imageView2"
    android:layout_width="187dp"
    android:layout_height="150dp"
    android:layout marginTop="24dp"
    android:layout_marginEnd="128dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:srcCompat="@drawable/img"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

#### MainActivity.java:

```
package com.example.courseregistration;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.Intent;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteStatement;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  Button btn_add, btn_view;
  EditText name, course, email, fee;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    btn_add = findViewById(R.id.btn_add);
    btn_view = findViewById(R.id.btn_view);
    name=findViewById(R.id.name);
    email=findViewById(R.id.email);
    course=findViewById(R.id.course);
    fee=findViewById(R.id.fee);
    btn_view.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v)
         Intent i = new Intent(getApplicationContext(),viewActivity.class);
         startActivity(i);
       }
    });
    btn_add.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
         insert();
       }
```

```
});
         }
         public void onClick(View v) {
           insert();
           if (v.equals(btn_add)) {
              Intent it = new Intent(this, viewActivity.class);
              startActivity(it);
           if (v.equals(btn_view)) {
              Intent it = new Intent(this, viewActivity.class);
              startActivity(it);
            }
         }
         // insert operation of data
         public void insert(){
            try {
               String n= name.getText().toString();
               String e=email.getText().toString();
               String c=course.getText().toString();
               String f=fee.getText().toString();
               // creating database
               SQLiteDatabase db= openOrCreateDatabase("CourseDb",
Context.MODE_PRIVATE,null);
               db.execSQL("CREATE TABLE IF NOT EXISTS records(id INTEGER
PRIMARY KEY AUTOINCREMENT, name VARCHAR, email VARCHAR, course
VARCHAR, fee VARCHAR)");
               String sql = "insert into records(name,email,course,fee)values(?,?,?,?)";
               SQLiteStatement statement = db.compileStatement(sql);
               statement.bindString(1,n);
               statement.bindString(2,e);
               statement.bindString(3,c);
               statement.bindString(4,f);
               statement.execute();
               Toast.makeText(this,"Record Added
Successfully", Toast.LENGTH_LONG).show();
```

**SOLiteDatabase** 

Context.MODE\_PRIVATE,null);

lst = findViewById(R.id.lst);

int id = c.getColumnIndex("id");

```
name.setText("");
               email.setText("");
               course.setText("");
               fee.setText("");
               name.requestFocus();
            }catch (Exception e ){
viewActivity.java:
package com.example.courseregistration;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;
import java.util.ArrayList;
public class viewActivity extends AppCompatActivity {
  ListView lst;
  ArrayList<String> titles = new ArrayList<String>();
  ArrayAdapter arrayAdapter;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_view);
    // creation of database
```

db

final Cursor c = db.rawQuery("select \* from records",null);

openOrCreateDatabase("CourseDb",

```
int name = c.getColumnIndex("name");
   int email =c.getColumnIndex("email");
   int course = c.getColumnIndex("course");
   int fee = c.getColumnIndex("fee");
   titles.clear():
   arrayAdapter=newArrayAdapter(this,
androidx.appcompat.R.layout.support_simple_spinner_dropdown_item,titles);
   lst.setAdapter(arrayAdapter);
   final ArrayList<student> stud = new ArrayList<student>();
   if(c.moveToFirst())
   {
      do{
        student stu = new student();
        stu.id = c.getString(id);
        stu.name = c.getString(name);
        stu.email=c.getString(email);
        stu.course = c.getString(course);
        stu.fee = c.getString(fee);
        stud.add(stu);
        titles.add(c.getString(id) + " \t " + c.getString(name) +" \t " + c.getString(email)
+ " \t " + c.getString(course) + " \t " + c.getString(fee) );
      } while(c.moveToNext());
      arrayAdapter.notifyDataSetChanged();
      lst.invalidateViews();
   }
   lst.setOnItemClickListener(new AdapterView.OnItemClickListener() {
      @Override
      public void onItemClick(AdapterView<?> parent, View view, int position, long
id) {
        String aa = titles.get(position).toString();
        student stu = stud.get(position);
        Intent i = new Intent(getApplicationContext(),EditActivity.class);
        i.putExtra("id",stu.id);
        i.putExtra("name",stu.name);
        i.putExtra("email",stu.email);
        i.putExtra("course",stu.course);
        i.putExtra("fee",stu.fee);
        startActivity(i);
      }
   });
```

#### student.java:

```
package com.example.courseregistration;
public class student {
String id;
String name;
String email;
String course;
String fee;
String title;
  public student (String id, String name, String email, String course, String fee, String
 title) {
     this.id = id;
     this.name = name;
     this.email = email;
     this.course=course;
     this.fee=fee;
     this.title=title;
   }
  public student() {
   }
  public void setId(String id) {
     this.id = id;
  public String getId() {
     return id;
   }
  public void setName(String name) {
     this.name = name;
  public String getName() {
     return name;
  public void setEmail(String email) {
     this.email = email;
  public String getEmail() {
     return email;
  public void setCourse(String course) {
     this.course = course;
```

```
public String getCourse() {
     return course;
  public void setFee(String fee) {
     this.fee = fee;
  public String getFee() {
     return fee;
  public void setTitle(String title) {
     this.title = title;
  public String getTitle() {
     return title;
EditActivity.java:
       package com.example.courseregistration;
       import androidx.appcompat.app.AppCompatActivity;
       import android.content.Context;
       import android.content.Intent;
       import android.database.sqlite.SQLiteDatabase;
       import android.database.sqlite.SQLiteStatement;
       import android.os.Bundle;
       import android.view.View;
       import android.widget.Button;
       import android.widget.EditText;
       import android.widget.Toast;
       public class EditActivity extends AppCompatActivity {
         Button btn_delete, btn_edit,btn_back;
         EditText id,name1, course1,email1, fee1;
          @Override
         protected void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
            setContentView(R.layout.activity_edit);
```

```
btn_delete = findViewById(R.id.btn_delete);
btn_edit = findViewById(R.id.btn_edit);
btn_back = findViewById(R.id.btn_back);
id = findViewById(R.id.id);
name1 = findViewById(R.id.name1);
email1 = findViewById(R.id.email1);
course1 = findViewById(R.id.course1);
fee1 = findViewById(R.id.fee1);
Intent i = getIntent();
  String t1=i.getStringExtra("id").toString();
  String t2 =i.getStringExtra("name").toString();
  String t3 = i.getStringExtra("email").toString();
  String t4 = i.getStringExtra("course").toString();
  String t5 = i.getStringExtra("fee").toString();
  id.setText(t1);
  name1.setText(t2);
  email1.setText(t3);
  course1.setText(t4);
  fee1.setText(t5);
btn_delete.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    Delete();
});
btn_back.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View v) {
    Intent i = new Intent(getApplicationContext(),viewActivity.class);
    startActivity(i);
  }
});
```

```
btn_edit.setOnClickListener(new View.OnClickListener() {
              @Override
              public void onClick(View v) {
                Edit();
            });
         }
         // delete the data
         public void Delete()
           try
              String id1 = id.getText().toString();
       // creating databases
              SQLiteDatabase db = openOrCreateDatabase("CourseDb",
Context.MODE_PRIVATE,null);
              String sql = "delete from records where id = ?";
              SQLiteStatement statement = db.compileStatement(sql);
              statement.bindString(1,id1);
              statement.execute();
              Toast.makeText(this,"Record Deleted",Toast.LENGTH_LONG).show();
              name1.setText("");
              email1.setText("");
              course1.setText("");
              fee1.setText("");
              name1.requestFocus();
           catch (Exception e)
              Toast.makeText(this, "Record Fail", Toast.LENGTH_LONG).show();
            }
         }
         public void Edit()
```

```
try
              String n= name1.getText().toString();
              String e=email1.getText().toString();
              String c=course1.getText().toString();
              String f=fee1.getText().toString();
              String i=id.getText().toString();
              SQLiteDatabase db =
openOrCreateDatabase ("CourseDb", Context. MODE\_PRIVATE, null);\\
              String sql = "update records set name = ?,email = ?,course=?,fee=? where
id= ?";
              SQLiteStatement statement = db.compileStatement(sql);
              statement.bindString(1,n);
              statement.bindString(2,e);
              statement.bindString(3,c);
              statement.bindString(4,f);
              statement.bindString(5,i);
              statement.execute();
              Toast.makeText(this,"Record Updated Successfully
",Toast.LENGTH_LONG).show();
              name1.setText("");
              email1.setText("");
              course1.setText("");
              fee1.setText("");
              name1.requestFocus();
            }
            catch (Exception e)
            {
              Toast.makeText(this, "Record Fail", Toast.LENGTH_LONG).show();
            }
          }
       }
```

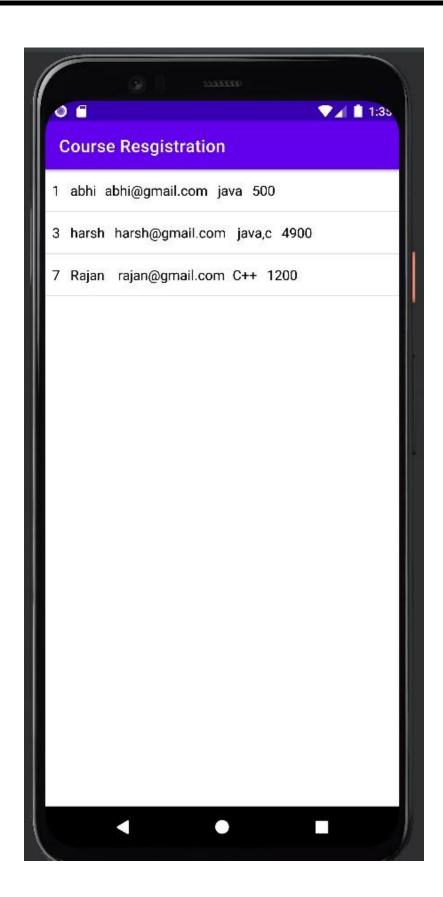


# **Taking Courses:**



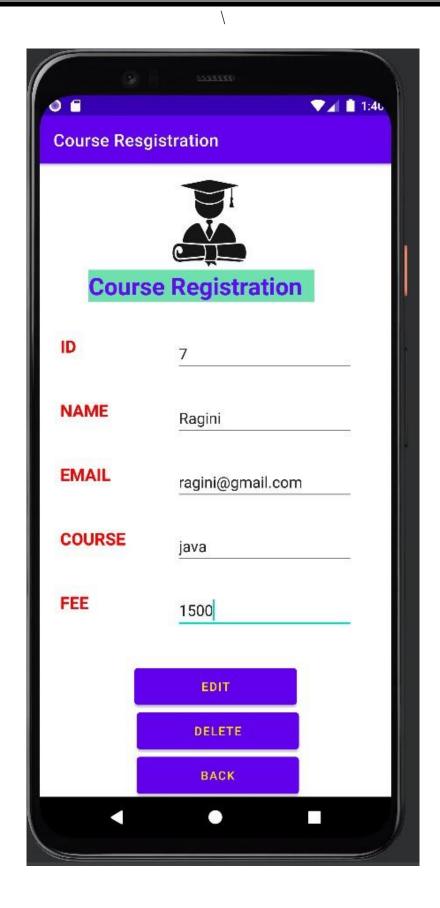
# List of Courses Taken by Student:

Dept. of CSE, JIT 2021-2022 21



**Update Courses by Student:** 

Dept. of CSE, JIT 2021-2022 22





## **Deleted Courses by Student:**

