10. Create a user registration application that stores the user details in a database table.

Activity\_main.xml

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| <**RelativeLayout 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:paddingLeft="20dp"  android:paddingRight="20dp"  android:paddingTop="20dp"  android:paddingBottom="20dp" tools:context=".MainActivity"**>   <**TextView  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:textAppearance="?android:attr/textAppearanceLarge"  android:text="Name"  android:id="@+id/textView"  android:layout\_alignParentTop="true"  android:layout\_alignParentLeft="true"  android:layout\_alignParentStart="true"** />   <**TextView  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:textAppearance="?android:attr/textAppearanceLarge"  android:text="Email"  android:id="@+id/textView2"  android:layout\_below="@+id/editText\_name"  android:layout\_alignParentLeft="true"  android:layout\_alignParentStart="true"** />   <**TextView  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:textAppearance="?android:attr/textAppearanceLarge"  android:text="Mobile"  android:id="@+id/textView3"  android:layout\_below="@+id/editText\_surname"  android:layout\_alignParentLeft="true"  android:layout\_alignParentStart="true"** />   <**EditText  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:id="@+id/editText\_name"  android:layout\_alignTop="@+id/textView"  android:layout\_toRightOf="@+id/textView"  android:layout\_toEndOf="@+id/textView"** />   <**EditText  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:id="@+id/editText\_surname"  android:layout\_alignTop="@+id/textView2"  android:layout\_toRightOf="@+id/textView2"  android:layout\_toEndOf="@+id/textView2"** />   <**EditText  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:id="@+id/editText\_Marks"  android:layout\_below="@+id/editText\_surname"  android:layout\_toRightOf="@+id/textView3"  android:layout\_toEndOf="@+id/textView3"** />   <**Button  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:text="Add Data"  android:id="@+id/button\_add"  android:layout\_below="@+id/editText\_Marks"  android:layout\_alignParentLeft="true"  android:layout\_alignParentStart="true"  android:layout\_marginTop="76dp"** />   <**Button  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:text="View All"  android:id="@+id/button\_viewAll"  android:layout\_above="@+id/button\_update"  android:layout\_centerHorizontal="true"** />   <**Button  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:text="Update"  android:id="@+id/button\_update"  android:layout\_below="@+id/button\_add"  android:layout\_alignParentLeft="true"  android:layout\_alignParentStart="true"** />    <**Button  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:text="Delete"  android:id="@+id/button\_delete"  android:layout\_centerVertical="true"  android:layout\_below="@+id/button\_viewAll"  android:layout\_alignLeft="@+id/button\_viewAll"  android:layout\_alignStart="@+id/button\_viewAll"** />   <**TextView  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:textAppearance="?android:attr/textAppearanceLarge"  android:text="id"  android:id="@+id/textView\_id"  android:layout\_below="@+id/editText\_Marks"  android:layout\_alignParentLeft="true"  android:layout\_alignParentStart="true"** />   <**EditText  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:id="@+id/editText\_id"  android:layout\_alignTop="@+id/textView\_id"  android:layout\_toRightOf="@+id/textView3"  android:layout\_toEndOf="@+id/textView3"** />  </**RelativeLayout**> |

Databasehelper.java

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| **package** com.example.lab11;  **import** android.content.ContentValues; **import** android.content.Context; **import** android.database.Cursor; **import** android.database.sqlite.SQLiteDatabase; **import** android.database.sqlite.SQLiteOpenHelper;  */\*\*  \* Created by ProgrammingKnowledge on 4/3/2015.  \*/* **public class** databasehelper **extends** SQLiteOpenHelper {  **public static final** String ***DATABASE\_NAME*** = **"Student.db"**;  **public static final** String ***TABLE\_NAME*** = **"student\_table"**;  **public static final** String ***COL\_1*** = **"ID"**;  **public static final** String ***COL\_2*** = **"NAME"**;  **public static final** String ***COL\_3*** = **"SURNAME"**;  **public static final** String ***COL\_4*** = **"MARKS"**;   **public** databasehelper(Context context) {  **super**(context, ***DATABASE\_NAME***, **null**, 1);  }   @Override  **public void** onCreate(SQLiteDatabase db) {  db.execSQL(**"create table "** + ***TABLE\_NAME*** +**" (ID INTEGER PRIMARY KEY AUTOINCREMENT,NAME TEXT,SURNAME TEXT,MARKS INTEGER)"**);  }   @Override  **public void** onUpgrade(SQLiteDatabase db, **int** oldVersion, **int** newVersion) {  db.execSQL(**"DROP TABLE IF EXISTS "**+***TABLE\_NAME***);  onCreate(db);  }   **public boolean** insertData(String name,String surname,String marks) {  SQLiteDatabase db = **this**.getWritableDatabase();  ContentValues contentValues = **new** ContentValues();  contentValues.put(***COL\_2***,name);  contentValues.put(***COL\_3***,surname);  contentValues.put(***COL\_4***,marks);  **long** result = db.insert(***TABLE\_NAME***,**null** ,contentValues);  **if**(result == -1)  **return false**;  **else  return true**;  }   **public** Cursor getAllData() {  SQLiteDatabase db = **this**.getWritableDatabase();  Cursor res = db.rawQuery(**"select \* from "**+***TABLE\_NAME***,**null**);  **return** res;  }   **public boolean** updateData(String id,String name,String surname,String marks) {  SQLiteDatabase db = **this**.getWritableDatabase();  ContentValues contentValues = **new** ContentValues();  contentValues.put(***COL\_1***,id);  contentValues.put(***COL\_2***,name);  contentValues.put(***COL\_3***,surname);  contentValues.put(***COL\_4***,marks);  db.update(***TABLE\_NAME***, contentValues, **"ID = ?"**,**new** String[] { id });  **return true**;  }   **public** Integer deleteData (String id) {  SQLiteDatabase db = **this**.getWritableDatabase();  **return** db.delete(***TABLE\_NAME***, **"ID = ?"**,**new** String[] {id});  } } |

Main Activity.java

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| **package** com.example.lab11;  **import** androidx.appcompat.app.AppCompatActivity; **import** android.app.AlertDialog; **import** android.database.Cursor; **import** android.support.v4.app.INotificationSideChannel; **import** android.os.Bundle; **import** android.view.Menu; **import** android.view.MenuItem; **import** android.view.View; **import** android.widget.Button; **import** android.widget.EditText; **import** android.widget.Toast;  **import** android.os.Bundle;  **public class** MainActivity **extends** AppCompatActivity {  databasehelper **myDb**;  EditText **editName**,**editSurname**,**editMarks** ,**editTextId**;  Button **btnAddData**;  Button **btnviewAll**;  Button **btnDelete**;  Button **btnviewUpdate**;   @Override  **protected void** onCreate(Bundle savedInstanceState) {  **super**.onCreate(savedInstanceState);  setContentView(R.layout.***activity\_main***);  **myDb** = **new** databasehelper(**this**);   **editName** = (EditText)findViewById(R.id.***editText\_name***);  **editSurname** = (EditText)findViewById(R.id.***editText\_surname***);  **editMarks** = (EditText)findViewById(R.id.***editText\_Marks***);  **editTextId** = (EditText)findViewById(R.id.***editText\_id***);  **btnAddData** = (Button)findViewById(R.id.***button\_add***);  **btnviewAll** = (Button)findViewById(R.id.***button\_viewAll***);  **btnviewUpdate**= (Button)findViewById(R.id.***button\_update***);  **btnDelete**= (Button)findViewById(R.id.***button\_delete***);  AddData();  viewAll();  UpdateData();  DeleteData();  }  **public void** DeleteData() {  **btnDelete**.setOnClickListener(  **new** View.OnClickListener() {  @Override  **public void** onClick(View v) {  Integer deletedRows = **myDb**.deleteData(**editTextId**.getText().toString());  **if**(deletedRows > 0)  Toast.*makeText*(MainActivity.**this**,**"Data Deleted"**,Toast.***LENGTH\_LONG***).show();  **else** Toast.*makeText*(MainActivity.**this**,**"Data not Deleted"**,Toast.***LENGTH\_LONG***).show();  }  }  );  }  **public void** UpdateData() {  **btnviewUpdate**.setOnClickListener(  **new** View.OnClickListener() {  @Override  **public void** onClick(View v) {  **boolean** isUpdate = **myDb**.updateData(**editTextId**.getText().toString(),  **editName**.getText().toString(),  **editSurname**.getText().toString(),**editMarks**.getText().toString());  **if**(isUpdate == **true**)  Toast.*makeText*(MainActivity.**this**,**"Data Update"**,Toast.***LENGTH\_LONG***).show();  **else** Toast.*makeText*(MainActivity.**this**,**"Data not Updated"**,Toast.***LENGTH\_LONG***).show();  }  }  );  }  **public void** AddData() {  **btnAddData**.setOnClickListener(  **new** View.OnClickListener() {  @Override  **public void** onClick(View v) {  **boolean** isInserted = **myDb**.insertData(**editName**.getText().toString(),  **editSurname**.getText().toString(),  **editMarks**.getText().toString() );  **if**(isInserted == **true**)  Toast.*makeText*(MainActivity.**this**,**"Data Inserted"**,Toast.***LENGTH\_LONG***).show();  **else** Toast.*makeText*(MainActivity.**this**,**"Data not Inserted"**,Toast.***LENGTH\_LONG***).show();  }  }  );  }   **public void** viewAll() {  **btnviewAll**.setOnClickListener(  **new** View.OnClickListener() {  @Override  **public void** onClick(View v) {  Cursor res = **myDb**.getAllData();  **if**(res.getCount() == 0) {  *// show message* showMessage(**"Error"**,**"Nothing found"**);  **return**;  }   StringBuffer buffer = **new** StringBuffer();  **while** (res.moveToNext()) {  buffer.append(**"Id :"**+ res.getString(0)+**"\n"**);  buffer.append(**"Name :"**+ res.getString(1)+**"\n"**);  buffer.append(**"Email :"**+ res.getString(2)+**"\n"**);  buffer.append(**"Mobile:"**+ res.getString(3)+**"\n\n"**);  }   *// Show all data* showMessage(**"Data"**,buffer.toString());  }  }  );  }   **public void** showMessage(String title,String Message){  AlertDialog.Builder builder = **new** AlertDialog.Builder(**this**);  builder.setCancelable(**true**);  builder.setTitle(title);  builder.setMessage(Message);  builder.show();  }    @Override  **public boolean** onCreateOptionsMenu(Menu menu) {  *// Inflate the menu; this adds items to the action bar if it is present.  // getMenuInflater().inflate(R.menu.menu\_main, menu);* **return true**;  }   @Override  **public boolean** onOptionsItemSelected(MenuItem item) {  *// Handle action bar item clicks here. The action bar will  // automatically handle clicks on the Home/Up button, so long  // as you specify a parent activity in AndroidManifest.xml.* **int** id = item.getItemId();   *//noinspection SimplifiableIfStatement* **if** (id == R.id.***packed***) {  **return true**;  }   **return super**.onOptionsItemSelected(item);  } } |

Outputs:

