DBHelper Class Code

```java
package com.example.database_400;

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

public class DBHelper extends SQLiteOpenHelper {

    public DBHelper(Context context) {
        super(context, "Userdata.db", null, 1);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("CREATE TABLE Userdetails (name TEXT PRIMARY KEY, contact TEXT, age TEXT)");
    }

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

    public boolean insertData(String name, String contact, String age) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put("name", name);
        contentValues.put("contact", contact);
        contentValues.put("age", age);
        long result = db.insert("Userdetails", null, contentValues);
        return result != -1;
    }

    public boolean updateData(String name, String contact, String age) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put("contact", contact);
        contentValues.put("age", age);
        Cursor cursor = db.rawQuery("SELECT * FROM Userdetails WHERE name=?", new String[]{name});
        if (cursor.getCount() > 0) {
            long result = db.update("Userdetails", contentValues, "name=?", new String[]{name});
            return result != -1;
        } else {
            return false;
        }
    }

    public boolean deleteData(String name) {
        SQLiteDatabase db = this.getWritableDatabase();
        Cursor cursor = db.rawQuery("SELECT * FROM Userdetails WHERE name=?", new String[]{name});
        if (cursor.getCount() > 0) {
```

```java
            long result = db.delete("Userdetails", "name=?", new String[]{name});
            return result != -1;
        } else {
            return false;
        }
    }

    public Cursor viewData() {
        SQLiteDatabase db = this.getWritableDatabase();
        return db.rawQuery("SELECT * FROM Userdetails", null);
    }
}
```

MainActivity.java Class

```java
package com.example.database_400;

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

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    EditText name, contact, age;
    Button insert, update, delete, view;
    DBHelper DB;

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

        name = findViewById(R.id.editTextTextPersonName2);
        contact = findViewById(R.id.editTextTextPersonName3);
        age = findViewById(R.id.editTextTextPersonName);

        insert = findViewById(R.id.insert);
        update = findViewById(R.id.update);
        delete = findViewById(R.id.delete);
        view = findViewById(R.id.view);

        DB = new DBHelper(this);

        insert.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String nameTXT = name.getText().toString();
                String contactTXT = contact.getText().toString();
                String ageTXT = age.getText().toString();
                boolean qryStatus = DB.insertData(nameTXT, contactTXT, ageTXT);
                if (qryStatus)
                    Toast.makeText(MainActivity.this, "New Record Created",
Toast.LENGTH_SHORT).show();
                else
```

```java
                    Toast.makeText(MainActivity.this, "New Record Creation Failed",
Toast.LENGTH_SHORT).show();
                }
        });

        update.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String nameTXT = name.getText().toString();
                String contactTXT = contact.getText().toString();
                String ageTXT = age.getText().toString();
                boolean qryStatus = DB.updateData(nameTXT, contactTXT, ageTXT);
                if (qryStatus)
                    Toast.makeText(MainActivity.this, "Record Updated",
Toast.LENGTH_SHORT).show();
                else
                    Toast.makeText(MainActivity.this, "Record Updation Failed",
Toast.LENGTH_SHORT).show();
                }
        });

        delete.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String nameTXT = name.getText().toString();
                boolean qryStatus = DB.deleteData(nameTXT);
                if (qryStatus)
                    Toast.makeText(MainActivity.this, "Record Deleted", Toast.LENGTH_SHORT).show();
                else
                    Toast.makeText(MainActivity.this, "Record Deletion Failed",
Toast.LENGTH_SHORT).show();
                }
        });

        view.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Cursor res = DB.viewData();
                if (res.getCount() == 0)
                    Toast.makeText(MainActivity.this, "No Record Exist", Toast.LENGTH_SHORT).show();
                else {
                    StringBuffer buffer = new StringBuffer();
                    while (res.moveToNext()) {
                        buffer.append("Name: " + res.getString(0) + "\n");
                        buffer.append("Contact: " + res.getString(1) + "\n");
                        buffer.append("Age: " + res.getString(2) + "\n");
                    }
                    AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this);
                    builder.setCancelable(true);
                    builder.setTitle("User Data");
                    builder.setMessage(buffer.toString());
                    builder.show();
                }
            }
        });
    }
}
```

Activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Enter the details below"
        android:textAlignment="center"
        android:textSize="24sp"
        android:textStyle="bold" />

    <EditText
        android:id="@+id/editTextTextPersonName2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Name"
        android:inputType="textPersonName"
        android:minHeight="48dp" />

    <EditText
        android:id="@+id/editTextTextPersonName3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Contact"
        android:inputType="textPersonName"
        android:minHeight="48dp" />

    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Age"
        android:inputType="textPersonName"
        android:minHeight="48dp" />

    <Button
        android:id="@+id/insert"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Insert" />

    <Button
        android:id="@+id/update"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Update" />

    <Button
```

```xml
        android:id="@+id/delete"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Delete" />

    <Button
        android:id="@+id/view"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="View" />
</LinearLayout>
```
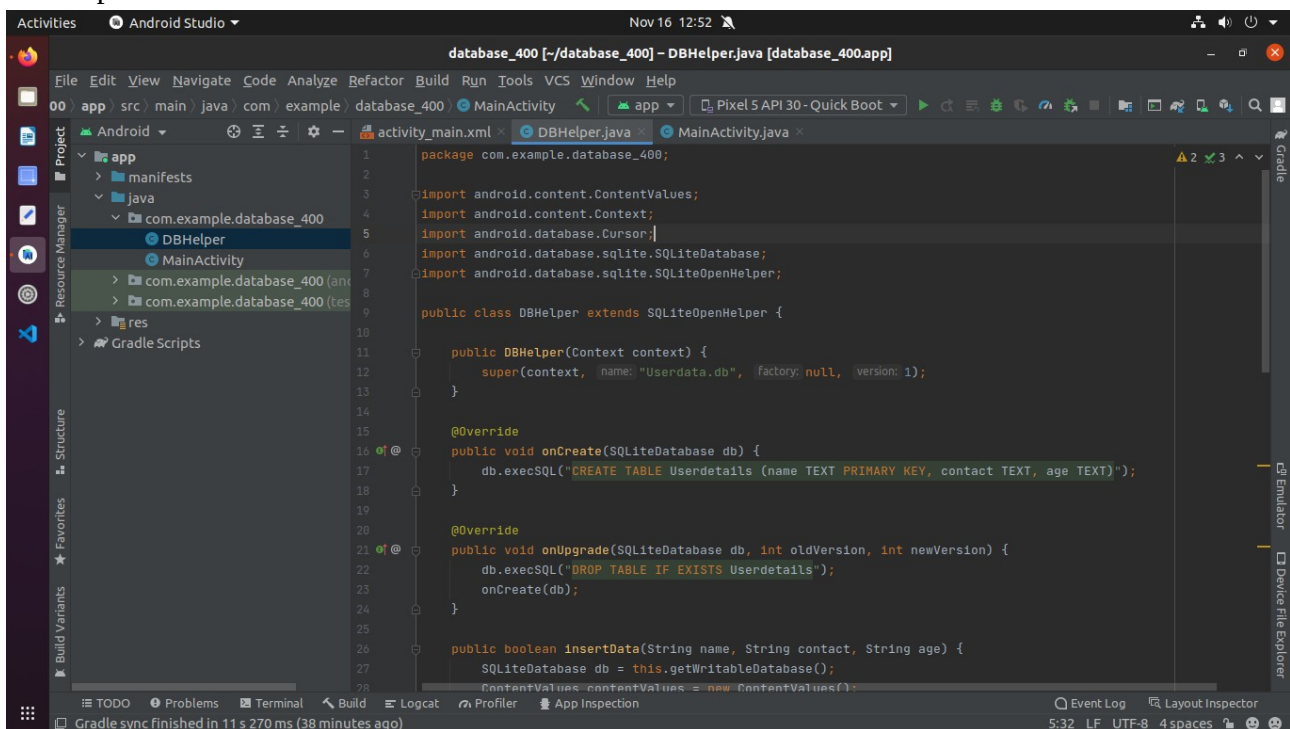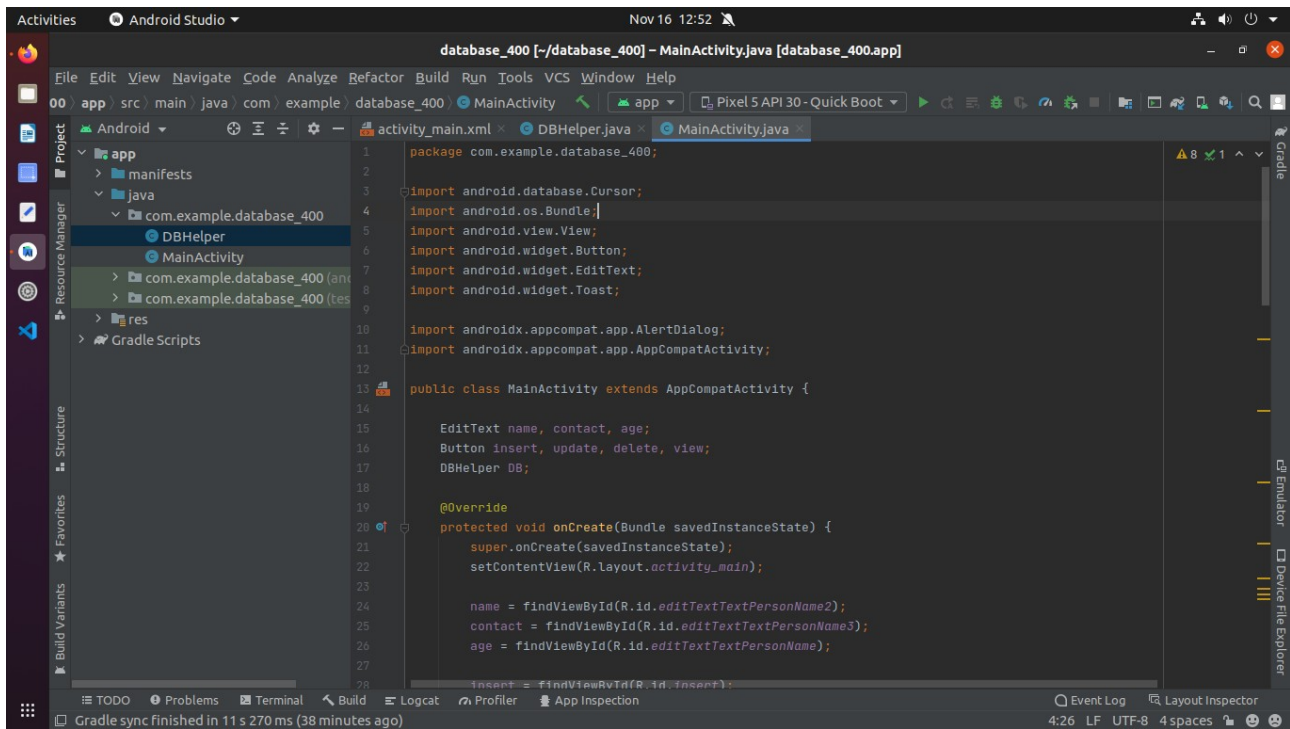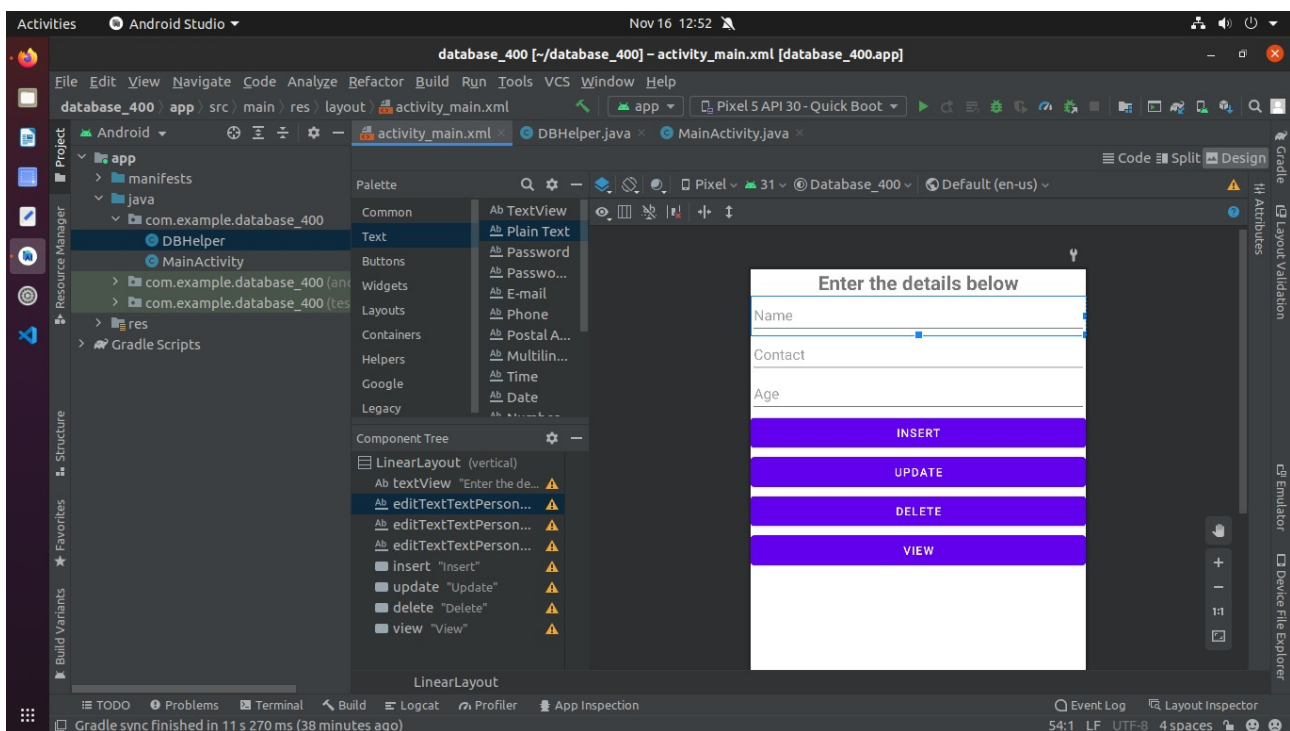
Output Snapshots:

DBHelper Class

MainActivity.java

activity_main .xml

Start Page:

Inserting Data 1:

View Data 1:

Inserting Data 2:

View Data 1 & 2:

Deleting Record :

Screen 1 (left):

12:56

database_400

Enter the details below

Rajesh

1234567890

23

INSERT

UPDATE

DELETE

VIEW

Record Deleted

Screen 2 (right):

12:56

database_400

Enter the details below

Rajesh

1234567890

23

User Data

Name: Dinesh
Contact: 1234567890
Age: 22

VIEW