

1. Grid view

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <GridView
        android:id="@+id/gv"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:columnWidth="100dp"
        android:minHeight="100dp"
        android:numColumns="auto_fit"
        android:stretchMode="columnWidth"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
```

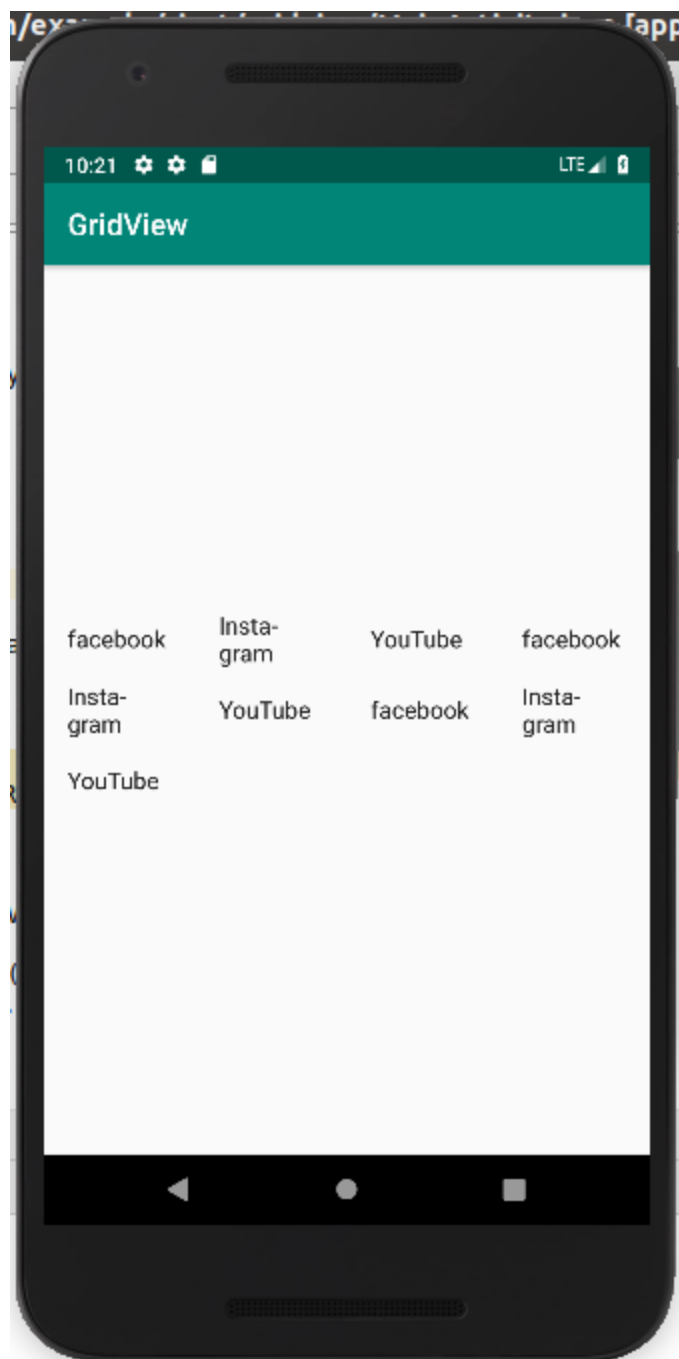
```
package com.example.sjcet.gridview;
```

```
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity implements
    AdapterView.OnItemClickListener {
    GridView gridView;
    static final String[] gridViewvalue={
        "facebook", "Instagram", "YouTube",
        "facebook", "Instagram", "YouTube",
        "facebook", "Instagram", "YouTube"
    };
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        gridView=findViewById(R.id.gv);
        ArrayAdapter adapter = new
```

```
        ArrayAdapter(this,android.R.layout.simple_list_item_1,gridviewvalue);
        gridView.setAdapter(adapter);
        gridView.setOnItemClickListener(this);
    }
    public void onItemClickListener(AdapterView<?> adapterView, View view, int i, long l) {

        String itemname=gridView.getItemAtPosition(i).toString();
        Toast.makeText(this,itemname,Toast.LENGTH_SHORT).show();
    }
}
```



1. Database

Mainactivity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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">
    <EditText
        android:id="@+id/ed1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="8dp"
        android:ems="10"
        android:hint="name"
        android:inputType="textPersonName"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <EditText
        android:id="@+id/ed2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="36dp"
        android:ems="10"
        android:hint="Surname"
        android:inputType="textPersonName"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/ed1" />
    <EditText
        android:id="@+id/ed3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginTop="28dp"
        android:ems="10"
        android:hint="marks"
        android:inputType="textPersonName"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/ed2" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```

        android:layout_marginTop="19dp"
        android:onClick="SaveDat"
        android:text="Insert"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/ed3"
        tools:ignore="OnClick" />
<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="96dp"
    android:layout_marginLeft="96dp"
    android:layout_marginTop="19dp"
    android:onClick="read"
    android:text="Read"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/ed3"
    tools:ignore="OnClick" />
<TextView
    android:id="@+id/textView"
    android:layout_width="match_parent"
    android:layout_height="207dp"
    android:layout_marginTop="20dp"
    android:hint="data"
    app:layout_constraintTop_toBottomOf="@+id/button" />
<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="192dp"
    android:layout_marginLeft="192dp"
    android:layout_marginTop="19dp"
    android:onClick="update"
    android:text="update"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/ed3"
    tools:ignore="OnClick" />
<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="288dp"
    android:layout_marginLeft="288dp"
    android:layout_marginTop="19dp"
    android:onClick="delete"
    android:text="delete"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/ed3"
    tools:ignore="OnClick" />
</android.support.constraint.ConstraintLayout>

```

Mainactivity.java

```
package com.example.sjcet.database;

import android.content.ContentValues;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    EditText Name,Mark,Surname;
    TextView DataV;
    MyDatabase database = new MyDatabase(this);
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Name = findViewById(R.id.ed1);
        Surname = findViewById(R.id.ed2);
        Mark = findViewById(R.id.ed3);
        DataV = findViewById(R.id.textView);
    }
    public void SaveDat(View view) {
        String UserVal = Name.getText().toString();
        String SurnameVal = Surname.getText().toString();
        Integer PassVal = Integer.parseInt(Mark.getText().toString());
        Boolean result = database.insertdata(UserVal, PassVal,SurnameVal);
        if (result == true) {
            Toast.makeText(getApplicationContext(), "Data inserted Sucessfully",
                Toast.LENGTH_SHORT).show();
        } else {
            Toast.makeText(getApplicationContext(), "Data inserted failed",
                Toast.LENGTH_SHORT).show();
        }
    }
    public void read(View view) {
        Cursor res = database.getAllData();
        StringBuffer stringBuffer = new StringBuffer();
        if (res != null && res.getCount() > 0) {
            while (res.moveToNext()) {
                stringBuffer.append("Id: " + res.getString(0) + "\n");
                stringBuffer.append("Name: " + res.getString(1) + "\n");
                stringBuffer.append("Surname: " + res.getString(2) + "\n");
                stringBuffer.append("marks: " + res.getString(3) + "\n");
            }
            DataV.setText(stringBuffer.toString());
        }
    }
}
```

```

    } else {
        Toast.makeText(getApplicationContext(), "Data Retrieved Successfully",
            Toast.LENGTH_SHORT).show();
    }
    Toast.makeText(getApplicationContext(), "Data Retrieved Successfully",
        Toast.LENGTH_SHORT).show();
}
public void update(View view) {
    String UserVal = Name.getText().toString();
    String SurnameVal = Surname.getText().toString();
    Integer PassVal = Integer.parseInt(Mark.getText().toString());
    Boolean result = database.updateData(UserVal, PassVal, SurnameVal);
    if (result==true){
        Toast.makeText(getApplicationContext(), "Data updated Successfully",
            Toast.LENGTH_SHORT).show();
    }
    else {
        Toast.makeText(getApplicationContext(), "No Rows Affected",
            Toast.LENGTH_SHORT).show();
    }
}
public void delete(View view) {
    String UserVal = Name.getText().toString();
    int result=database.deletedata(UserVal);
    Toast.makeText(getApplicationContext(), "Rows Affected",
        Toast.LENGTH_SHORT).show();
}
}
}

```

MyDatabase.java

```

package com.example.sjcet.database;

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

class MyDatabase extends SQLiteOpenHelper {
    public MyDatabase(Context context) {
        super(context, "Login.db", null, 1);
    }
    @Override
    public void onCreate(SQLiteDatabase db) {

```

```

        db.execSQL("Create table USERS(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 USERS");
    }
    public Cursor getAllData() {
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor res = db.rawQuery("Select * from USERS",null);
        return res;
    }
    public Boolean insertdata(String userVal, Integer passVal, String surnameVal) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put("NAME", userVal);
        contentValues.put("SURNAME", surnameVal);
        contentValues.put("MARKS", passVal);
        long result = db.insert("USERS", null, contentValues);
        db.close();
        if (result == -1) {
            return false;
        } else {
            return true;
        }
    }
    public int deletedata(String userVal) {
        SQLiteDatabase db=this.getWritableDatabase();
        int i =db.delete("USERS","NAME=?",new String[]{userVal});
        return i;
    }
    public Boolean updateData(String userVal, Integer passVal, String surnameVal) {
        SQLiteDatabase db=this.getWritableDatabase();
        ContentValues contentValues=new ContentValues();
        contentValues.put("NAME",userVal);
        contentValues.put("SURNAME",surnameVal);
        contentValues.put("MARKS",passVal);
        int result=db.update("USERS",contentValues,"NAME=?",new String[]{userVal});
        if (result>0) {
            return true;
        }
        else
        {
            return false;
        }
    }
}

```