移动互联网开发（5）：高级UI

Atidote 已于 2023-12-09 20:23:52 修改

- 实验目的

深入学习 Fragment🔍 的用法，自定义列表视图的实现。

- 实验内容

实现一个班级名单的列表视图

1. 每个列表项包含：个人照片，学号和姓名，电话；

2. 可以删除列表项，添加列表项；

3. 可以从列表项拨打对应的电话号码。

三、具体实现

activity_main.xml

```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:id="@+id/fragment_list"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">



</androidx.constraintlayout.widget.ConstraintLayout>
```
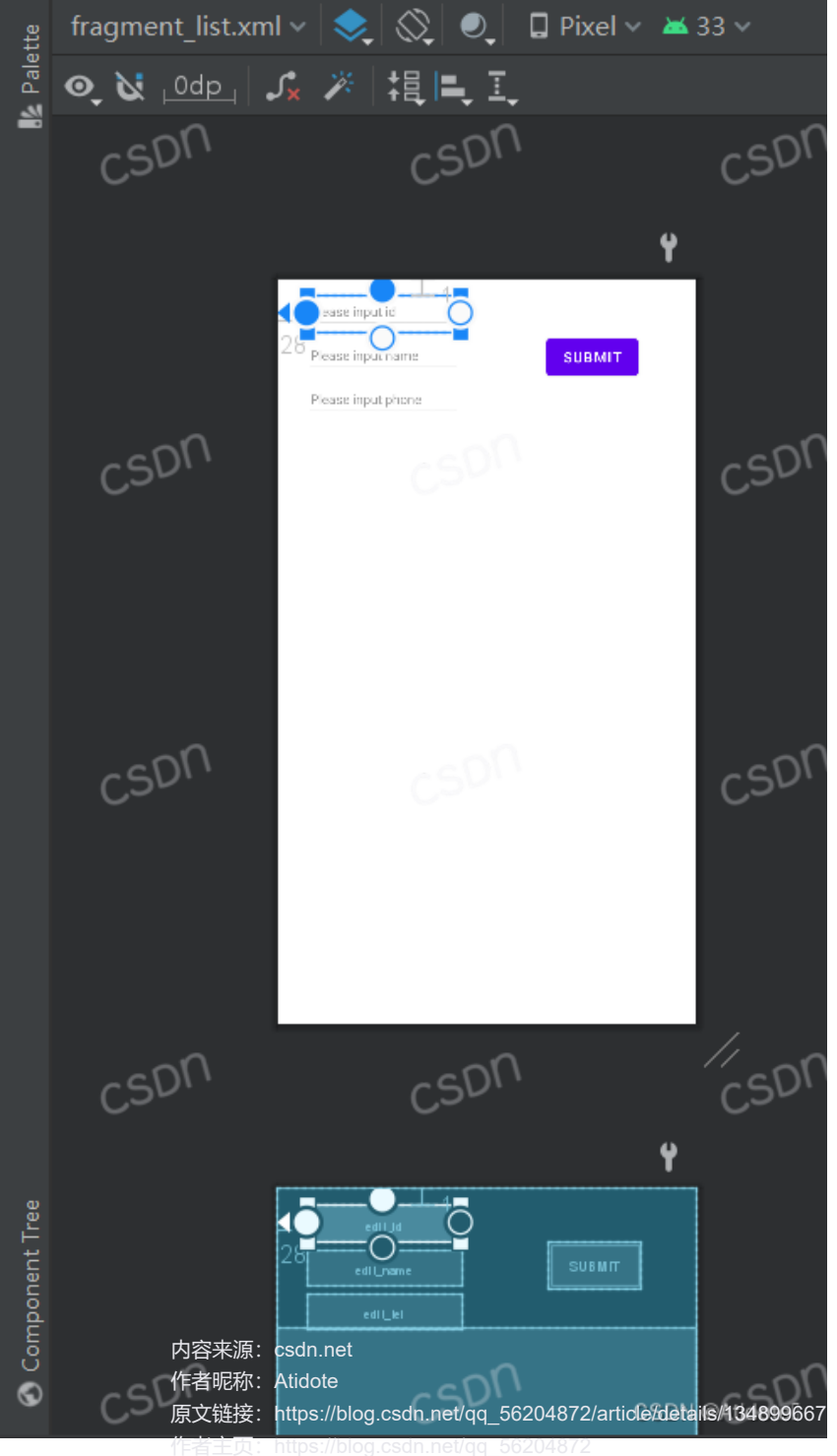
fragment_list.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://
    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=".ListFragment">

    <EditText
        android:id="@+id/edit_id"
        android:layout_width="wrap_content"
        android:layout_height="35dp"
        android:layout_marginStart="28dp"
        android:layout_marginTop="16dp"
        android:ems="10"
        android:hint="Please input id"
        android:inputType="text"
        android:textSize="13sp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/edit_name"
        android:layout_width="wrap_content"
        android:layout_height="35dp"
        android:layout_marginTop="8dp"
        android:ems="10"
        android:hint="Please input name"
        android:inputType="text"
        android:textSize="13sp"
```

list_item_layout.xml

```xml
<TextView
    android:id="@+id/tv_id"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="36dp"
    android:text="TextView"
    app:layout_constraintStart_toEndOf="@+id/imageView"
    app:layout_constraintTop_toTopOf="@+id/imageView" />

<TextView
    android:id="@+id/tv_name"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="8dp"
    android:text="TextView"
    app:layout_constraintStart_toStartOf="@+id/tv_id"
    app:layout_constraintTop_toBottomOf="@+id/tv_id" />

<ImageView
    android:id="@+id/imageView"
    android:layout_width="49dp"
    android:layout_height="48dp"
    android:layout_marginStart="16dp"
    android:layout_marginTop="12dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    android:src="@drawable/person" />

<TextView
    android:id="@+id/tv_tel"
```

MainActivity

```java
package com.example.fragmentstudent;

import ...

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        FragmentManager fm = getSupportFragmentManager();
        Fragment fragment = fm.findFragmentById(R.id.fragment_list
        if (fragment == null) {
            fragment = new ListFragment();
            fm.beginTransaction()
                    .add(R.id.fragment_list, fragment)
                    .commit();
        }
    }
}
```

ListFragment

```java
package com.example.fragmentstudent;

import ...

public class ListFragment extends Fragment {
    private List<Student> list_stu = new ArrayList<>();
    private StudentAdapter adapter;
    private EditText editId;
    private EditText editName;
    private EditText editTel;
    private Button btnCommit;
    private ListView lvStu;


    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setRetainInstance(true);
    }


    @Nullable
    @Override
    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable ViewGroup container, @Nullable Bundle savedInstanceStat
        View view = inflater.inflate(R.layout.fragment_list, container, attachToRoot: false);
        initView(view);
        initData();
        return view;
    }
}
```

Student

```java
package com.example.fragmentstudent;

public class Student {
    private String Sno;
    private String Sname;
    private String Stele;

    public Student(String sno, String sname, String stele) {
        Sno = sno;
        Sname = sname;
        Stele = stele;
    }

    public String getSno() { return Sno; }

    public void setSno(String sno) { Sno = sno; }

    public String getSname() { return Sname; }

    public void setSname(String sname) { Sname = sname; }

    public String getStele() { return Stele; }

    public void setStele(String stele) { Stele = stele; }
}
```
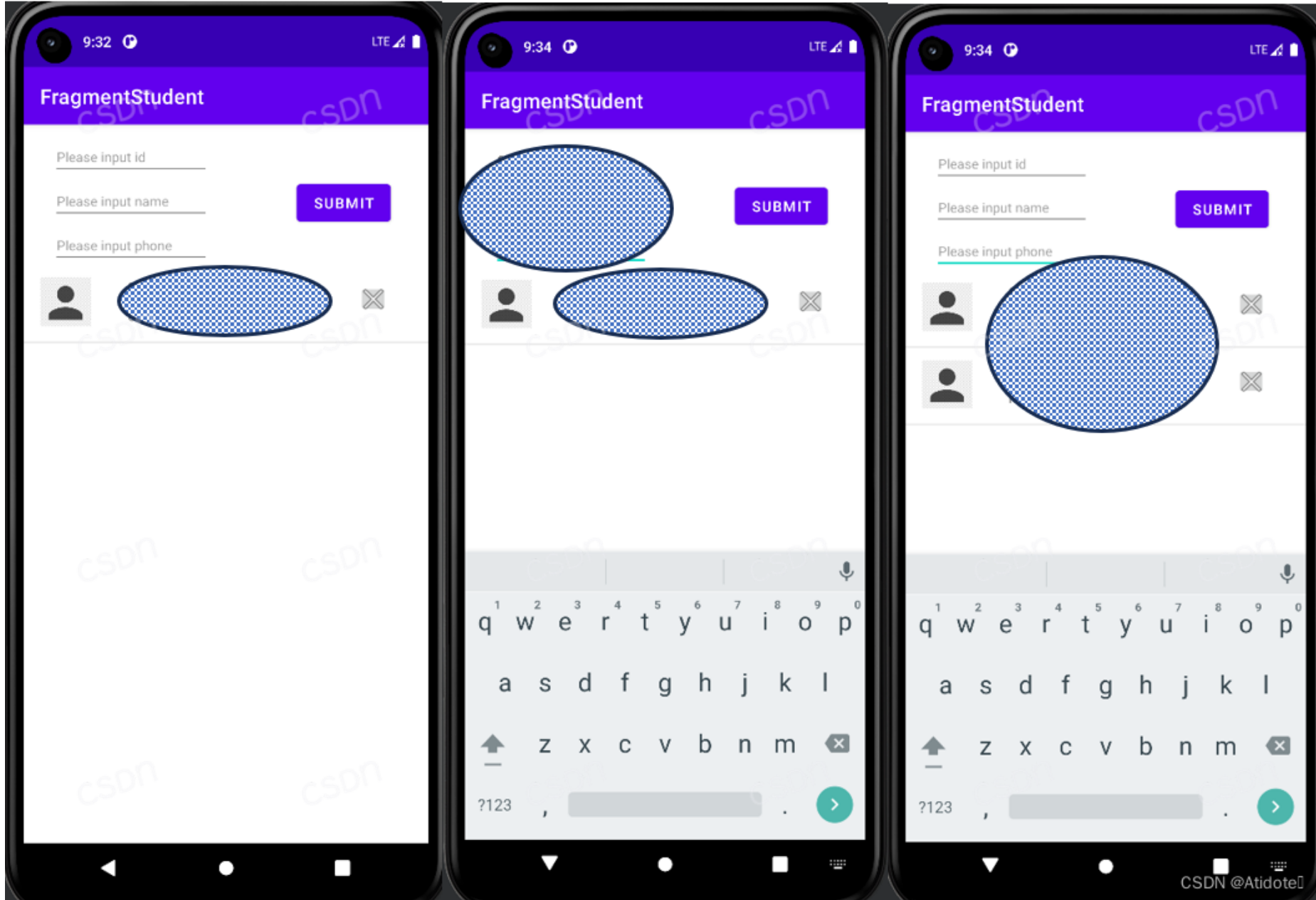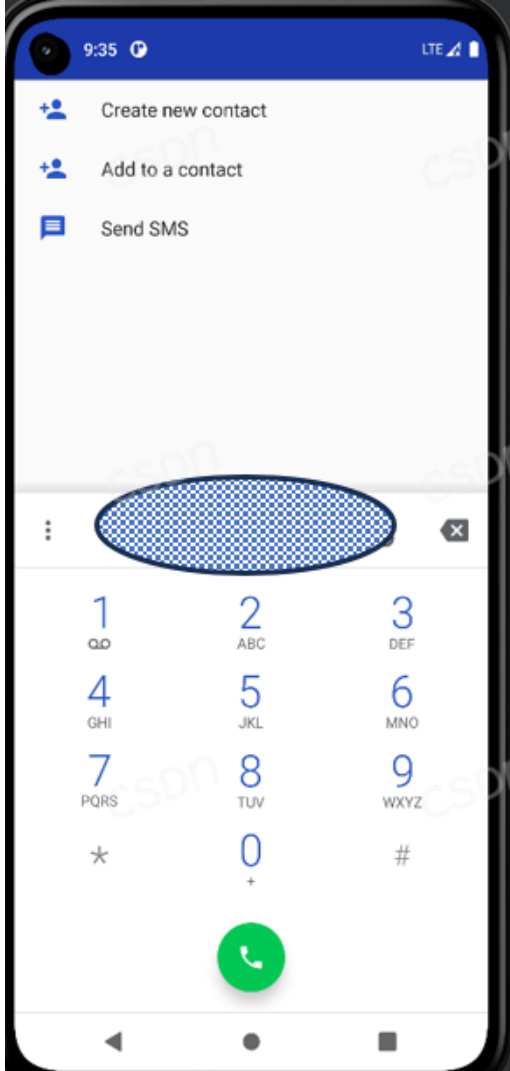
四、运行结果

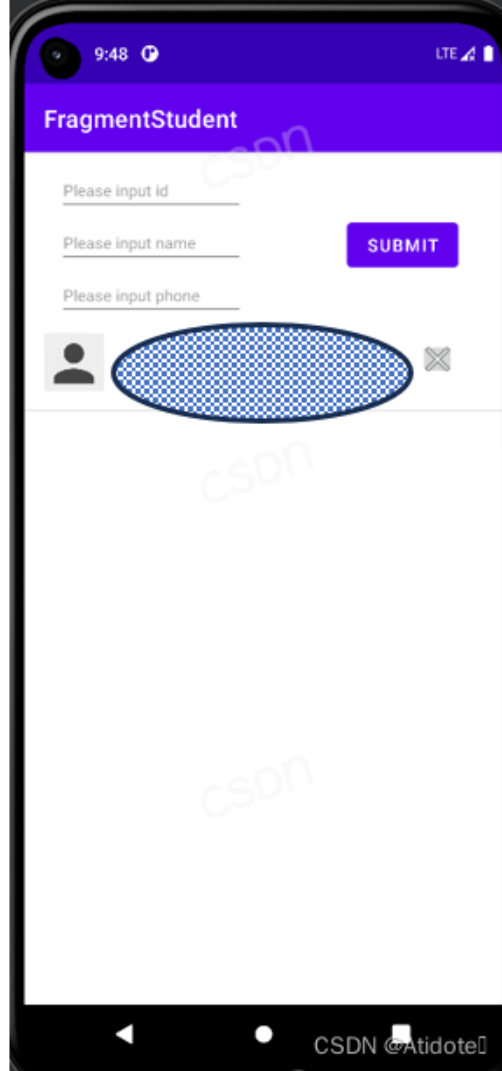初始列表 🔍   添加班级成员   添加成功

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作者主页：https://blog.csdn.net/qq_56204872

拨打电话 　　　　　　　　　　 删除成员

五、总结与反思

　　数据采用的是临时存储填充，下一步将引入 数据库🔍，同时用户头像采用默认图片，可进一步新增头像选择上传功能。