

# Android应用软件设计

## E3 Adapter View

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## 1.主题概述

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- 1.使用GridView重构主页导航 将MainScreen中的导航按钮使用GridView实现。
- 2.添加点餐页面，学会使用ListView实现点餐和退点功能。并添加订单页面和菜品详情页面。
- 3.在不同页面之间实现对象传值 通过Intent来实现相互跳转。并在其中插入自定义的对象。
- 4.打包签名生成软件版本2.0 在manifest文件中定义版本，使用AS的打包工具打包并签名。

## 2.假设

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用户需要进入点餐列表和菜品详情进行点餐，并从查看订单页面来进行结账。同时，我们要实现打折功能，对于老用户我们应该做到检测优惠。

## 3.实现或证明

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- 1.代码已上传至[GitHub](#)。
- 2.目前实现部分E3所述的功能，包括：1)界面是GridLayout布局，不是GridView布局，后期需要加入适配器重构代码。2)User类。3)实现了LoginOrRegister的注册登录验证功能。4)MainScreen接受LoingOrRegister数据判断功能。5)FoodView的ListView显示，还没有加入Fragment功能。6)FoodOrder没有加入Fragment功能。7)FoodDetialView没有加入Fragment功能。8)没有实现新老顾客优惠功能。
- 4.步骤：
  - ①在布局中使用GridLayout，后续需要改为GridView，并添加适配器。
  - ②添加User类。
  - ③添加注册与登录按键，正则表达式验证输入，传出数据与Intent，并使用Toast提示用户。
  - ④MainScreen使用User接收LoginOrRegister传回的数据，并显示其中两个按键。
  - ⑤添加了ListView和ListView适配器，仅仅显示静态的菜品视图，后期还需要编写代码实现Fragment和

Adapter的配合。⑥有些部分还没有实现。

## 5.关键代码

1.注册登录功能实现了注册登录验证功能，并Toast提示用户。

```
public class LoginOrRegister extends AppCompatActivity {
    EditText etName;
    EditText etPassword;
    private Button mButton_Enter;
    private Button mButton_Login;
    private Button mButton_Return;
    private ProgressDialog progressDialog;

    private static final Pattern pattern = Pattern.compile("^[A-Za-z1-9_-]+$");

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.loginorregister);
        mButton_Enter = (Button)findViewById(R.id.enterButton);
        mButton_Login = (Button)findViewById(R.id.loginButton);
        mButton_Return = (Button)findViewById(R.id.returnButton);
        etName = (EditText)findViewById(R.id.userName);
        etPassword = (EditText)findViewById(R.id.userPassword);
        setListeners();

    }

    private void setListeners(){
        OnClickListener onClick = new OnClickListener();
        mButton_Enter.setOnClickListener(onClick);
        mButton_Login.setOnClickListener(onClick);
        mButton_Return.setOnClickListener(onClick);

    }
    private class OnClickListener implements View.OnClickListener{

        @Override
        public void onClick(View view){
            Intent intent = null;
            User loginUser = new User();

            switch (view.getId()){
                case R.id.enterButton:

                    if(startValid()){
```

```

        loginUser.setOldUser(true);
        loginUser.setUserName(etName.getText().toString());
        loginUser.setPassword(etPassword.getText().toString());
        showProgress(R.string.logining);
        Handler handler = new Handler();
        handler.postDelayed(new Runnable() {
            @Override
            public void run() {
                dismissProgress();
            }
        }, 2000);
        Toast.makeText(LoginOrRegister.this, "已登录", Toast.LENGTH_S
HORT).show();

        intent = new Intent(LoginOrRegister.this, MainScreen.class)
;

        intent.putExtra("from", "LoginSuccess");

    }
    else{
        Toast.makeText(LoginOrRegister.this, "输入内容不符合规则", Toas
t.LENGTH_SHORT).show();
        intent = new Intent(LoginOrRegister.this, MainScreen.class)
;

        intent.putExtra("from", "LoginFail");
        dismissProgress();
    }

    break;

case R.id.loginButton:
    showProgress(R.string.registering);
    if(startValid()){
        loginUser.setOldUser(false);
        loginUser.setUserName(etName.getText().toString());
        loginUser.setPassword(etPassword.getText().toString());
        Toast.makeText(LoginOrRegister.this, "欢迎您成为 SCOS 新用户",
Toast.LENGTH_SHORT).show();
        intent = new Intent(LoginOrRegister.this, MainScreen.class)
;

        intent.putExtra("from", "RegisterSuccess");
    }
    else{
        Toast.makeText(LoginOrRegister.this, "输入内容不符合规则", Toas
t.LENGTH_SHORT).show();
        intent = new Intent(LoginOrRegister.this, MainScreen.class)
;

```

```

        intent.putExtra("from","RegisterFail");
    }

    break;
    case R.id.returnButton:
        intent = new Intent(LoginOrRegister.this,MainScreen.class);
        intent.putExtra("from","Return");
        break;

    }
    Intent intent_User = new Intent(LoginOrRegister.this,MainScreen.class)
;

    Bundle bundle = new Bundle();
    bundle.putSerializable("loginuser",loginUser);
    intent.putExtras(bundle);
    if(intent_User!=null) startActivity(intent_User);

    if(intent!=null) startActivity(intent);

}

}

private boolean startValid() {
    return pattern.matcher(etName.getText().toString().trim()).matches() && pattern.matcher(etPassword.getText().toString().trim()).matches();
}

protected void showProgress(int messageRes) {
    progressDialog = new ProgressDialog(this);
    progressDialog.setTitle(getResources().getString(R.string.app_name));
    progressDialog.setMessage(getResources().getString(messageRes));
    progressDialog.setCancelable(false);
    progressDialog.show();
}

protected void dismissProgress() {
    if (progressDialog.isShowing()) {
        progressDialog.dismiss();
    }
}

}

```

## 2.MainScreen接受LoingOrRegister数据判断功能。

```
public class MainScreen extends AppCompatActivity {
    private Button mLoginButton;
    private Button mOrderButton;
    private Button mMenuButton;
    private Button mHelpButton;
    private ImageView mHomeImage;
    public User user;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.mainscreen);
        mLoginButton = (Button) findViewById(R.id.HomeLoginButton);
        mOrderButton = (Button) findViewById(R.id.HomeOrderButton);
        mMenuButton = (Button) findViewById(R.id.HomeMenuButton);
        mHelpButton = (Button) findViewById(R.id.HomeHelpButton);
        mHomeImage = (ImageView) findViewById(R.id.HomeLogo);

        Intent intent = getIntent();
        String string = intent.getStringExtra("from");

        if(string.isEmpty()){

        }

        if(string.equals("FromEntry")){

        }
        else{
            mOrderButton.setVisibility(View.INVISIBLE);
            mMenuButton.setVisibility(View.INVISIBLE);
        }
        if(string.equals("LoginSuccess")){
            if(mOrderButton.getVisibility()==View.INVISIBLE){
                mOrderButton.setVisibility(View.VISIBLE);
            }
            if(mMenuButton.getVisibility()==View.INVISIBLE){
                mMenuButton.setVisibility(View.VISIBLE);
            }
            user=(User)intent.getSerializableExtra("loginuser");
        }
        else if(string.equals("RegisterSuccess")) {
            if (mOrderButton.getVisibility() == View.INVISIBLE) {
                mOrderButton.setVisibility(View.VISIBLE);
            }
            if (mMenuButton.getVisibility() == View.INVISIBLE) {
```

```

        mMenuButton.setVisibility(View.VISIBLE);
    }
    user=(User)intent.getSerializableExtra("loginuser");
}
else{
    user = null;
}

setListeners();

}

private void setListeners(){
    OnClick onClick = new OnClick();
    mLoginButton.setOnClickListener(onClick);
    mOrderButton.setOnClickListener(onClick);
    mMenuButton.setOnClickListener(onClick);
    mHelpButton.setOnClickListener(onClick);
    mHomeImage.setOnClickListener(onClick);
}

private class OnClick implements View.OnClickListener{

    @Override
    public void onClick(View view){
        Intent intent = null;
        switch (view.getId()){
            case R.id.HomeLoginButton:
                intent = new Intent(MainScreen.this,LoginOrRegister.class);
                intent.putExtra("from","FromMain");
                break;
            case R.id.HomeOrderButton:
                intent = new Intent(MainScreen.this,FoodView.class);
                intent.putExtra("from","FromMain");
                break;
            case R.id.HomeMenuButton:
                intent = new Intent(MainScreen.this,FoodOrderView.class);
                intent.putExtra("from","FromMain");
                break;
            case R.id.HomeHelpButton:
                intent = new Intent(MainScreen.this,Help.class);
                intent.putExtra("from","FromMain");
                break;
            case R.id.HomeLogo:
                intent = new Intent(MainScreen.this,SCOSEntry.class);
                intent.putExtra("from","FromMain");
                break;

```

```

        }
        startActivity(intent);

    }

}

}

```

### 3. FoodView的ListView显示，还没有加入Fragment功能。

```

public class FoodView extends AppCompatActivity {
    private static final int MIN_DISTANCE = 50; // 最小滑动距离
    private static final int MIN_VELOCITY = 20; // 最小滑动速度
    User user;
    private FoodViewFragment foodViewFragment;
    public static int mPosition = 0;
    private FoodViewAdapter foodViewAdapter;
    private ListView mListView;
    GestureDetector mGestureDetector;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.food_view);
        mGestureDetector = new GestureDetector(this, mGestureListener);
        //适配器与回收视图暂时不用
        /*getFragmentManager().addOnBackStackChangedListener(new FragmentManager.O
nBackStackChangedListener() {
            @Override
            public void onBackStackChanged() {
                if(fragment instanceof FoodViewFragment){
                    currentPosition = 1;
                }
            }
        });*/

        //适配器与列表视图
        mListView = (ListView)findViewById(R.id.food_view_lv_1);
        mListView.setAdapter(new ListViewAdapter(FoodView.this));
        mListView.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view, int position
, long id) {
                Toast.makeText(FoodView.this, "短pos:"+position, Toast.LENGTH_SHORT);
            }
        });
        mListView.setOnItemLongClickListener(new AdapterView.OnItemLongClickListen
er() {

```

```

        @Override
        public boolean onItemClick(AdapterView<?> parent, View view, int position, long id) {
            Toast.makeText(FoodView.this, "pos:" + position, Toast.LENGTH_LONG);
            return true;
        }
    });

}

private void selectItem(int position){
    mPosition = position;
    Fragment fragment;
    switch (position){
        case 1:
            fragment = new FoodViewFragment();
            break;

    }
    FragmentTransaction ft = getFragmentManager().beginTransaction();
    ft.commitAllowingStateLoss();

}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.menu_food_view, menu);
    return super.onCreateOptionsMenu(menu);
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    Intent intent = null;
    switch(item.getItemId()){
        case R.id.orderedfood:
            //
            intent = new Intent(FoodView.this, FoodOrderView.class);
            startActivity(intent);

            break;
        case R.id.listmenu:
            //
            intent = new Intent(FoodView.this, FoodOrderView.class);
            startActivity(intent);

            break;
        case R.id.service:

```



```

        intent = new Intent(Intent.ACTION_DIAL, Uri.parse("tel:"+120));
        startActivity(intent);
    default:
        //
        intent = new Intent(FoodView.this, MainScreen.class);
        intent.putExtra("from", "FromFoodView");
        startActivity(intent);
        //return super.onOptionsItemSelected(item);

    }
    return true;

}

@Override
public boolean onTouchEvent(MotionEvent event) {
    return mGestureDetector.onTouchEvent(event);
}

GestureDetector.SimpleOnGestureListener mGestureListener = new GestureDetector
.SimpleOnGestureListener() {
    public boolean onFling(MotionEvent e1, MotionEvent e2, float velocityX, fl
oat velocityY) {
        float x = e1.getX() - e2.getX();

        if (x>0&&x > MIN_DISTANCE && Math.abs(velocityX) > MIN_VELOCITY) {
            Intent intent = new Intent(FoodView.this, FoodDetailed.class);
            intent.putExtra("from", "FromFoodView");
            startActivity(intent);
        }
        else if (x<0&& -x > MIN_DISTANCE && Math.abs(velocityX) > MIN_VELOCITY
) {

            Intent intent = new Intent(FoodView.this, MainScreen.class);
            intent.putExtra("from", "FromFoodView");
            startActivity(intent);

        }
        finish();
        return false;
    }
};//

}

```

## 4.结论

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本次实验继续E2的需求，在E2基础上需要添加Adapter和Fragment实现功能,现在还没有弄懂，所以编写代码有点困难。后面需要参考一下其他人代码，有时候对于复杂的逻辑应该找人讨论下比较好。本次实验学会了ListView的初步实现，本来想用的RecyclerView因为初学不大会用，所以需要后面重点研究一下。对UI没有重点修改，还需要把UI重新设置一下。

## 5.参考

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### 参考书籍

【1】《Head First Android开发》

【2】《Android第一行代码》

【3】《Head First Java》

【4】《Java编程思想》

### 参考链接

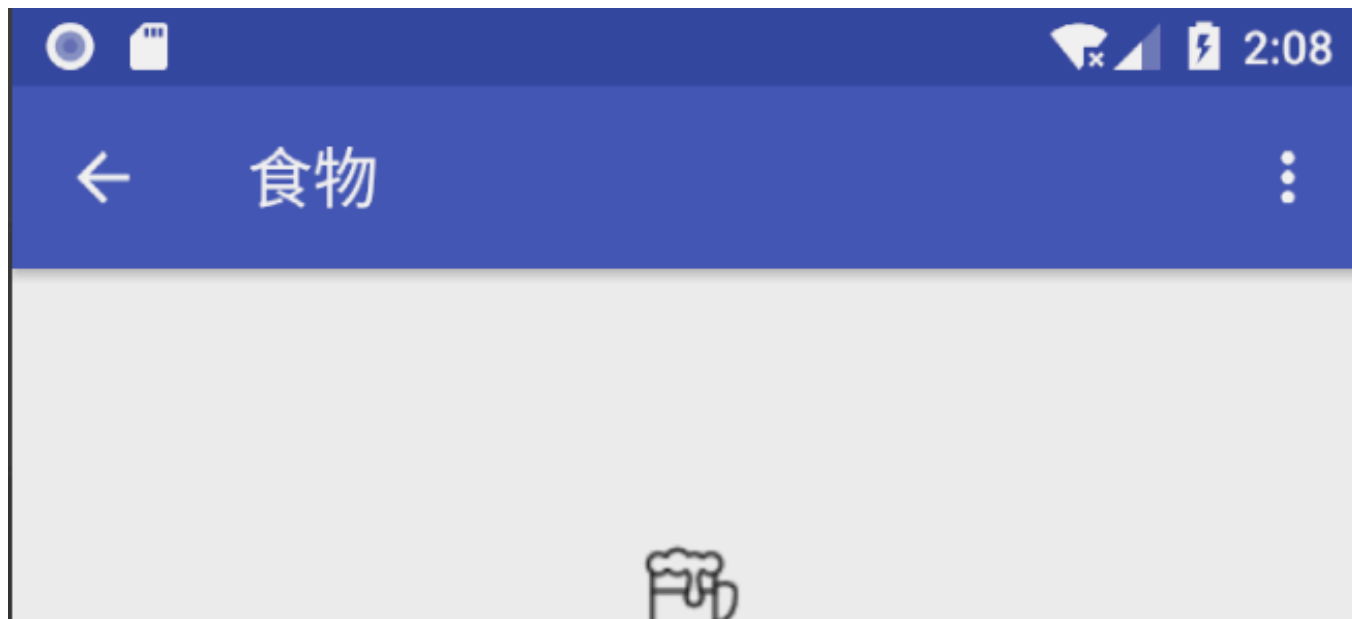
【1】[Android的视频教程](#)

【2】[提供帮助的社区](#)

【3】[技术博客CSDN](#)

【4】[技术博客开源中国](#)

### 附图



菜名

价格

点菜



菜名

价格

点菜

冷菜

热菜

海鲜

酒水



2:08

订单

订单

未下单菜

已下单菜



- 已点菜品
- 查看订单
- 呼叫服务



菜名	价格	点菜
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菜名		价格	点菜
冷菜	热菜	海鲜	酒水