

# Tying It All Together

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# Navigation



**Activity Navigation**

**Fragment Navigation**

**Alert Dialogs**

**Navigation Views**

**Tabs**

**Navigation Drawers**



# Bonus Content

**Packed with value**

**Come back and learn more later**



# Dependencies

**RecyclerView support library**

**Design support library**

**CardViews**

**Circular ImageView library**

**LikeButton library**

**Glide library**

**BottomNavigationViewEx library**



# Activities



**Simplest, but most limited**

**Create an intent object**

**“startActivity” and pass the intent**

**Only one activity can be open at once**



```
AlertDialog.Builder alertDialogBuilder = new AlertDialog.Builder(this);
alertDialogBuilder.setMessage(getString(R.string.first_time_user_message));
alertDialogBuilder.setPositiveButton("OK", new DialogInterface.OnClickListener() {
    @Override
    public void onClick(DialogInterface dialogInterface, int i) {
        Log.d(TAG, "onClick: closing dialog");

        dialogInterface.dismiss();
    }
});
alertDialogBuilder.setTitle(" ");
alertDialogBuilder.setIcon(R.drawable.tabian_dating);
AlertDialog alertDialog = alertDialogBuilder.create();
alertDialog.show();
```

---

# Alert Dialogs

Declare an `AlertDialog.Builder` object

Set some properties

Then set then builder to an `AlertDialog` object and show it



# Fragments



**Must have a container and host activity**



# FrameLayout

```
<FrameLayout  
    android:id="@+id/main_content_frame"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:layout_above="@+id/bottom_nav_view"/>
```





# Fragment Transactions

```
HomeFragment homeFragment = new HomeFragment();
FragmentManager transaction =
    getSupportFragmentManager().beginTransaction();
transaction.replace(R.id.main_content_frame, homeFragment,
    getString(R.string.tag_fragment_home));
transaction.addToBackStack(getString(R.string.tag_fragment_home
));
transaction.commit();
```



```
Bundle args = new Bundle();  
args.putParcelable(getString(R.string.intent_user), user);  
mViewProfileFragment.setArguments(args);
```

---

## Sending Data to Fragments

**Create a bundle object and set the arguments**



# IMainActivity

```
public interface IMainActivity {  
  
    void inflateViewProfileFragment(User user);  
  
    void onMessageSelected(Message message);  
  
    void onBackPressed();  
}
```



# NavigationView



**BottomNavigationViewEX**

**Easy customization**



# Bottom NavigationView

```
<com.ittianyu.bottomnavigationviewex.BottomNavigationViewEx  
    android:id="@+id/bottom_nav_view"  
    android:layout_width="match_parent"  
    android:layout_height="?attr/actionBarSize">  
  
</com.ittianyu.bottomnavigationviewex.BottomNavigationViewEx>
```



# Bottom NavigationView

```
<menu xmlns:tools="http://schemas.android.com/tools"
      xmlns:android="http://schemas.android.com/apk/res/android"
      xmlns:app="http://schemas.android.com/apk/res-auto">
  <item
    android:id="@+id/bottom_nav_home"
    android:icon="@drawable/ic_home_grey"
    android:layout_centerVertical="true"
    android:title=""/>
  <item
    android:id="@+id/bottom_nav_connections"
    android:icon="@drawable/vector_heart_grey"
    android:layout_centerVertical="true"
    android:title=""/>
  <item
    android:id="@+id/bottom_nav_messages"
    android:icon="@drawable/ic_messages"
    android:layout_centerVertical="true"
    android:title=""/>
</menu>
```



# Bottom NavigationView

```
<com.ittianyu.bottomnavigationviewex.BottomNavigationViewEx  
    android:id="@+id/bottom_nav_view"  
    android:layout_width="match_parent"  
    android:layout_height="?attr/actionBarSize"  
    app:menu="@menu/bottom_navigation_menu"  
    android:layout_alignParentBottom="true">  
  
</com.ittianyu.bottomnavigationviewex.BottomNavigationViewEx>
```



# OnNavigationItemSelectedListener

Bottom  
NavigationViewEX

```
switch (item.getItemId()) {  
  
    case R.id.bottom_nav_home: {  
        break;  
    }  
    case R.id.bottom_nav_connections: {  
        break;  
    }  
    case R.id.bottom_nav_messages: {  
        break;  
    }  
}
```





# NavigationDrawer



```
<android.support.v4.widget.DrawerLayout
    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="codingwithmitch.com.tabiandating.MainActivity"
    android:id="@+id/drawer_layout">
```

```
<FrameLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent">
    <include layout="@layout/layout_main_content"/>
</FrameLayout>
```

```
<android.support.design.widget.NavigationView
    android:id="@+id/navigation_view"
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:layout_gravity="start"
    android:background="@color/White"
    app:menu="@menu/navigation_drawer_items"
    app:headerLayout="@layout/layout_nav_header"/>
</android.support.v4.widget.DrawerLayout>
```



# OnNavigationItemSelectedListener

NavigationView

```
case R.id.home: {  
  
    break;  
}  
case R.id.settings: {  
  
    break;  
}  
case R.id.agreement: {  
  
    break;  
}
```



# Custom BackStack



**Fragments have some short-comings**  
**Default back-stack is far from perfect**



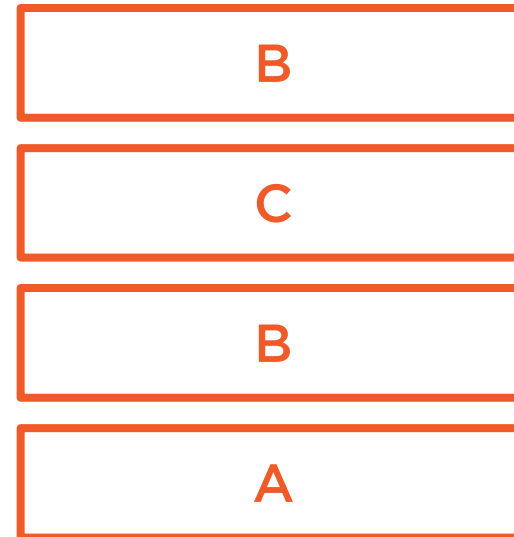
# Fragment State

```
private ArrayList<FragmentTag> mFragments ;
```



# Back Navigation

---



# Back Navigation

---

B

C

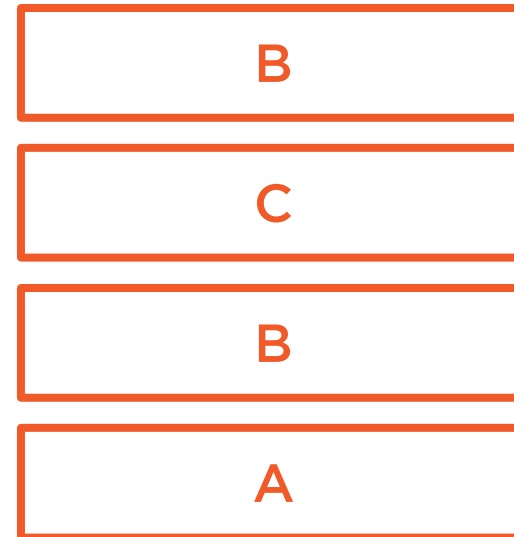
B

A



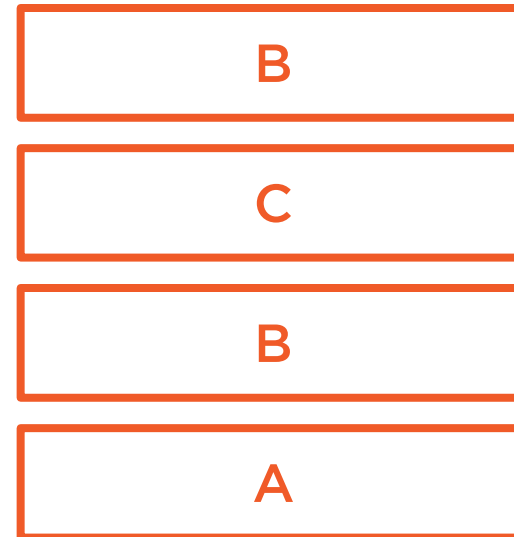
# Back Navigation

---



# Back Navigation

---





```
mFragmentsTags.remove(getString(R.string.tag_fragment_home));  
mFragmentsTags.add(getString(R.string.tag_fragment_home));
```

---

## Fixing the Navigation

If the fragment was already in the back-stack, we removed the old one and added the new one to the top



# Back Navigation

```
int backStackCount = mFragmentsTags.size();
if(backStackCount > 1){
    String topFragmentTag =
        mFragmentsTags.get(backStackCount - 1);

    String newTopFragmentTag =
        mFragmentsTags.get(backStackCount - 2);

    setFragmentVisibilities(newTopFragmentTag);

    mFragmentsTags.remove(topFragmentTag);

    mExitCount = 0;
}
else if( backStackCount == 1){
    mExitCount++;
    Toast.makeText(
        this, "1 more click to exit", Toast.LENGTH_SHORT).show();
}
if(mExitCount >= 2){
    super.onBackPressed();
}
```



```
for(int i = 0; i < mFragments.size(); i++){  
    if(tagname.equals(mFragments.get(i).getTag())){  
        FragmentTransaction transaction = getSupportFragmentManager().beginTransaction();  
        transaction.show((mFragments.get(i).getFragment()));  
        transaction.commit();  
    }  
    else{  
        FragmentTransaction transaction = getSupportFragmentManager().beginTransaction();  
        transaction.hide((mFragments.get(i).getFragment()));  
        transaction.commit();  
    }  
}
```

---

# setFragmentVisibilities

Loops through fragments

Hides fragments NOT at the top of the stack

Shows fragment at the top



# Implementing Tabs



```
<android.support.v4.view.ViewPager  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:id="@+id/viewpager_container">
```

```
</android.support.v4.view.ViewPager>
```

```
<android.support.design.widget.TabLayout  
    android:layout_width="match_parent"  
    android:layout_height="?attr/actionBarSize"  
    android:id="@+id/tabs_bottom"  
    android:background="#fff">
```

```
</android.support.design.widget.TabLayout>
```



# MyPagerAdapter

```
public class MyPagerAdapter extends FragmentPagerAdapter {  
  
    private final List<Fragment> mFragmentList = new  
    ArrayList<>();  
  
    public MyPagerAdapter(FragmentManager fm) {  
        super(fm);  
    }  
    @Override  
    public Fragment getItem(int position) {  
        return mFragmentList.get(position);  
    }  
    @Override  
    public int getCount() {  
        return mFragmentList.size();  
    }  
    public void addFragment(Fragment fragment){  
        mFragmentList.add(fragment);  
    }  
}
```



```
MyPagerAdapter adapter = new MyPagerAdapter(getSupportFragmentManager());  
mGalleryFragment = new GalleryFragment();  
mPhotoFragment = new PhotoFragment();  
adapter.addFragment(mGalleryFragment);  
adapter.addFragment(mPhotoFragment);  
  
mViewPager.setAdapter(adapter);  
  
TabLayout tabLayout = (TabLayout) findViewById(R.id.tabs_bottom);  
tabLayout.setupWithViewPager(mViewPager);  
tabLayout.getTabAt(GALLERY_FRAGMENT).setText(getString(R.string.tag_fragment_gallery));  
tabLayout.getTabAt(PHOTO_FRAGMENT).setText(getString(R.string.tag_fragment_photo));
```

---

# setupViewPager

## Add GalleryFragment and PhotoFragment to the PagerAdapter

## Setup the TabLayout



```
if(requestCode == NEW_PHOTO_REQUEST) {  
    if (data != null) {  
        if (data.hasExtra(getString(R.string.intent_new_gallery_photo))) {  
            // NEW INCOMING IMAGE FROM GALLERY  
  
            // Set the image with Glide and save pointer to Shared Preferences  
        }  
        else if (data.hasExtra(getString(R.string.intent_new_camera_photo))) {  
            // NEW INCOMING IMAGE FROM CAMERA  
  
            // Set the image with Glide and save pointer to Shared Preferences  
        }  
    }  
}
```

---

## OnActivityResult

Retrieving the images from GalleryFragment or PhotoFragment



# Final Thoughts



**Effective navigation is fundamental**

**Back-navigation is difficult**

**Leave a rating on Pluralsight!**

**Send me a Tweet**





# Thanks for Watching!

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