

Mobile Application Development

MyRent ViewPager

Waterford Institute of Technology

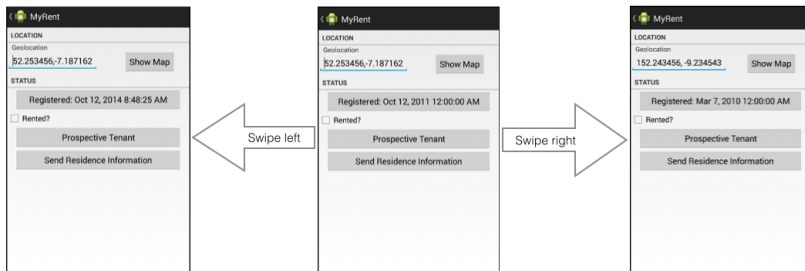
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ViewPager

Layout Manager

- User allowed swipe views or pages left and right
- Convenient to use with fragments



ViewPager

Modify Manifest

- ResidencePagerActivity replaces ResidenceActivity
- Nominate the parent activity in manifest

```
<activity
    android:name=".activities.ResidencePagerActivity"
    android:label="@string/app_name">

    <meta-data
        android:name="android.support.PARENT_ACTIVITY"
        android:value=".activities.ResidenceListActivity"/>
</activity>
```

ViewPager

Replace ResidenceActivity

- ResidencePagerActivity skeleton

```
public class ResidencePagerActivity extends FragmentActivity
{
    private ViewPager viewPager;

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

ViewPager

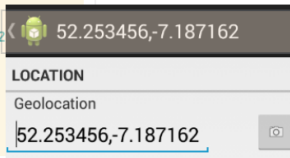
ViewPager.OnPageChangeListener

- Purpose to obtain the current residence id
- This used to obtain current geolocation

```
public class ResidencePagerActivity extends FragmentActivity implements ViewPager.OnPageChangeListener
```

```
viewPager.setOnPageChangeListener(this);
```

```
@Override  
public void onPageScrolled(int arg0, float arg1, int arg2)  
{  
    info(this, "onPageScrolled: arg0 "+arg0+" arg1 "+arg1+" arg2 "+arg2);  
    Residence residence = residences.get(arg0);  
    if (residence.geolocation != null)  
    {  
        setTitle(residence.geolocation);  
    }  
}
```



ViewPager

PagerAdapter: A *standalone listener* implementation

Populates pages insided ViewPager

- Appropriate when large number pages
- Invisible pages may be destroyed
- Thus more memory efficient than some alternative approaches
- Must implement *getItem* and *getCount*
- These invoked on creation new residence and swipe
 - **getCount** returns number residences in list
 - **getItem** returns fragment + args

ViewPager

PagerAdapter

```
pagerAdapter = new PagerAdapter(getSupportFragmentManager(), residences);  
viewPager.setAdapter(pagerAdapter);
```

```
private PagerAdapter pagerAdapter;
```

```
class PagerAdapter extends FragmentStatePagerAdapter  
{  
    private ArrayList<Residence> residences;  
    ...  
    @Override  
    public int getCount() {  
        return residences.size();  
    }  
    @Override  
    public Fragment getItem(int pos) {  
        ....  
    }  
}
```

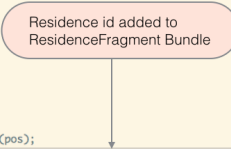
ViewPager

PagerAdapter

```
private PagerAdapter pagerAdapter;
```

```
pagerAdapter = new PagerAdapter(getSupportFragmentManager(), residences);  
viewPager.setAdapter(pagerAdapter);
```

```
class PagerAdapter extends FragmentStatePagerAdapter  
{  
    private ArrayList<Residence> residences;  
    public PagerAdapter(FragmentManager fm, ArrayList<Residence> residences) {  
        super(fm);  
        this.residences = residences;  
    }  
  
    @Override  
    public int getCount() {  
        return residences.size();  
    }  
  
    @Override  
    public Fragment getItem(int pos) {  
        Residence residence = residences.get(pos);  
        Bundle args = new Bundle();  
        args.putSerializable(ResidenceFragment.EXTRA_RESIDENCE_ID, residence.id);  
        ResidenceFragment fragment = new ResidenceFragment();  
        fragment.setArguments(args);  
        return fragment;  
    }  
}
```



Residence id added to ResidenceFragment Bundle

ViewPager

Integration in MyRent

In ResidenceListFragment change the Intent used in switch to ResidentPagerActivity

```
Intent i = new Intent(getActivity(), ResidencePagerActivity.class);
```

In ResidenceFragment change how the residence id is obtained: use fragment argument

```
UUID resId = (UUID)getArguments().getSerializable(EXTRA_RESIDENCE_ID);
```

Referenced Material

1. Android Documentation: ViewPager

`http://developer.android.com/reference/android/
support/v4/view/ViewPager.html`

[Accessed 2014-10-22]