

UI Element – Gallery

1. Create a new Android Application Project with the following attributes:
 - a. Application Name: UIGallery
 - b. Uncheck Create Activity option
 - c. Icon: default image
2. Resources:
 - a. Go to res/layout folder, create a new Android XML file with the filename: main and Gallery as the Root Element. Check out the code for this file:

```
<Gallery xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/gallery"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
/>
```

- b. Drag 8 image files (png or jpg) to res/drawable folder. Rename the image files as sample_0 to sample_7 by right-clicking the image then Refactor>Rename. Do not delete the extension name.
 - c. Go to res/values folder, create a new Android XML file with the filename: attrs and Resources as the Root Element. Check out the code for this file:

```
<resources>
    <declare-styleable name="GalleryActivity">
        <attr name="android:galleryItemBackground" />
    </declare-styleable>
</resources>
```

3. Create a java class file by right-clicking src folder and name it: GalleryActivity. If there are no packages present, create a com.example.uigallery package by right-clicking src folder then New>Package. Drag GalleryActivity inside the package. Write the following java source code inside the onCreate() method of the GalleryActivity class:

```
Gallery g = (Gallery) findViewById(R.id.gallery);
g.setAdapter(new ImageAdapter(this));

g.setOnItemClickListener(new OnItemClickListener() {
    public void onItemClick(AdapterView<?> parent, View v, int position, long id) {
        Toast.makeText(GalleryActivity.this, "" + position, Toast.LENGTH_SHORT).show();
    }
});
```

4. Outside the onCreate() method, write an inner java class that handles image events. The inner class: ImageAdapter accesses each image as an array of background images. Check out the code for this class:

```
public class ImageAdapter extends BaseAdapter {
    int mGalleryItemBackground;
    private Context mContext;

    private Integer[] mImageIds = {
        R.drawable.sample_1,
        R.drawable.sample_2,
        R.drawable.sample_3,
        R.drawable.sample_4,
        R.drawable.sample_5,
        R.drawable.sample_6,
        R.drawable.sample_7
    };

    public ImageAdapter(Context c) {
        mContext = c;
        TypedArray a = obtainStyledAttributes(R.styleable.GalleryActivity);
        mGalleryItemBackground = a.getResourceId(
            R.styleable.GalleryActivity_android_galleryItemBackground, 0);
        a.recycle();
    }

    public int getCount() {
        return mImageIds.length;
    }

    public Object getItem(int position) {}

    public long getItemId(int position) {
        return position;
    }

    public View getView(int position, View convertView, ViewGroup parent) {
        ImageView i = new ImageView(mContext);

        i.setImageResource(mImageIds[position]);
        i.setLayoutParams(new Gallery.LayoutParams(800, 800));
        i.setScaleType(ImageView.ScaleType.FIT_XY);
        i.setBackgroundResource(mGalleryItemBackground);

        return i;
    }
}
```

5. Save and run the program.