

Android Application Programming

Tutorial 2: Joke List

Introduction

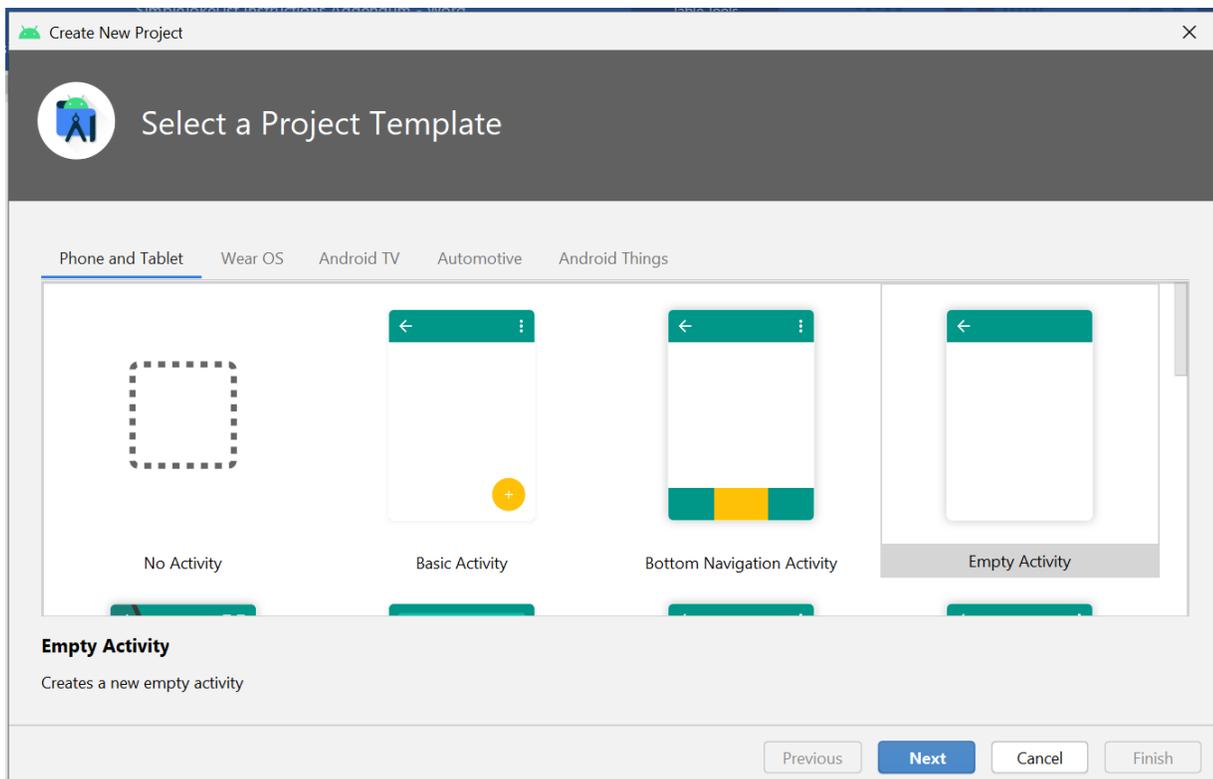
The goal of this assignment is to create a simple App introducing you to the following concepts:

- How to declare layouts at runtime (not generally done, but you should know it is possible)
- What are Views, View Groups, Layouts, and Widgets.
- How to use the resource files in a project
- How to Debug programs using LogCat
- Events and Event Listeners
- Introduction to Unit Tests

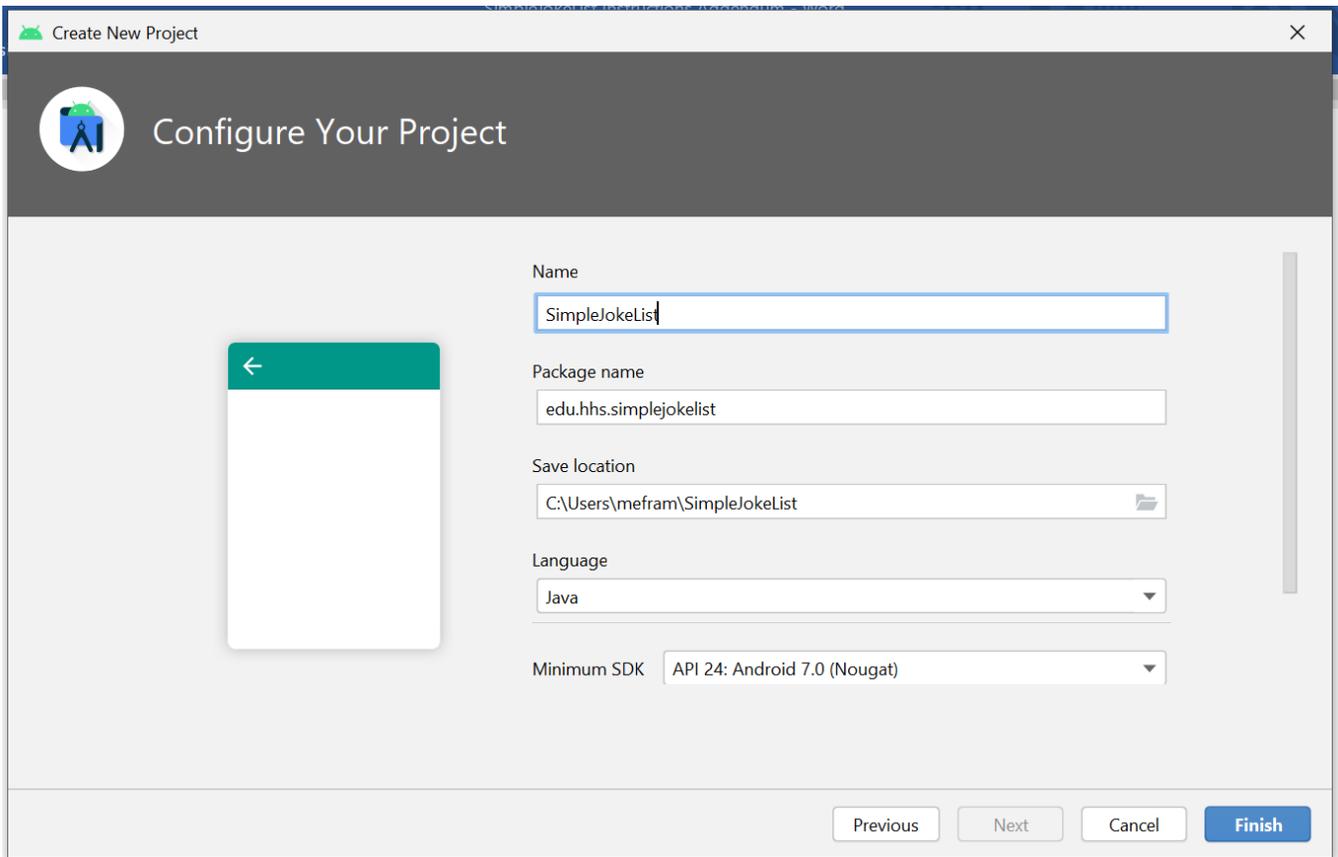
Creating the Android Project

Originally, there was a Skeleton Project associated with this Lab but it no longer exists, and since it was an Eclipse Project anyhow, it is best if we start from scratch.

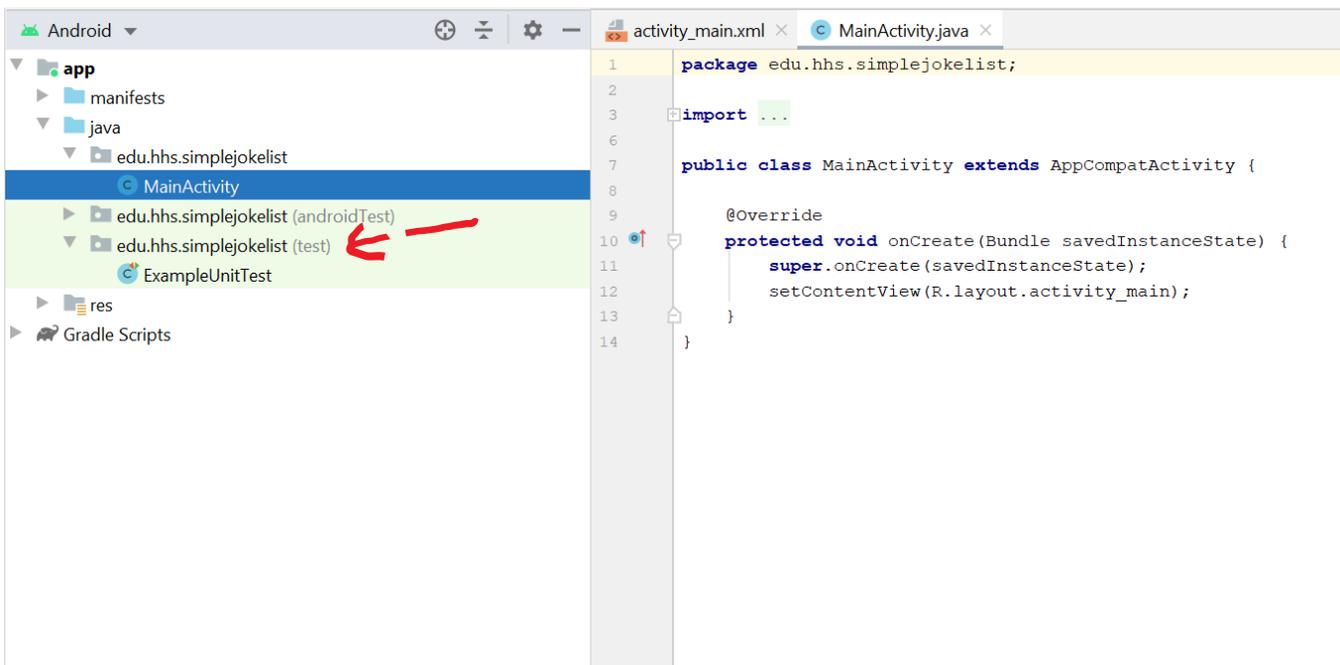
Create a New Project. Select Empty Activity.



Give it a name of SimpleJokeList and with a Minimum SDK of API 24: Android 7



Initially, your project will look like this:



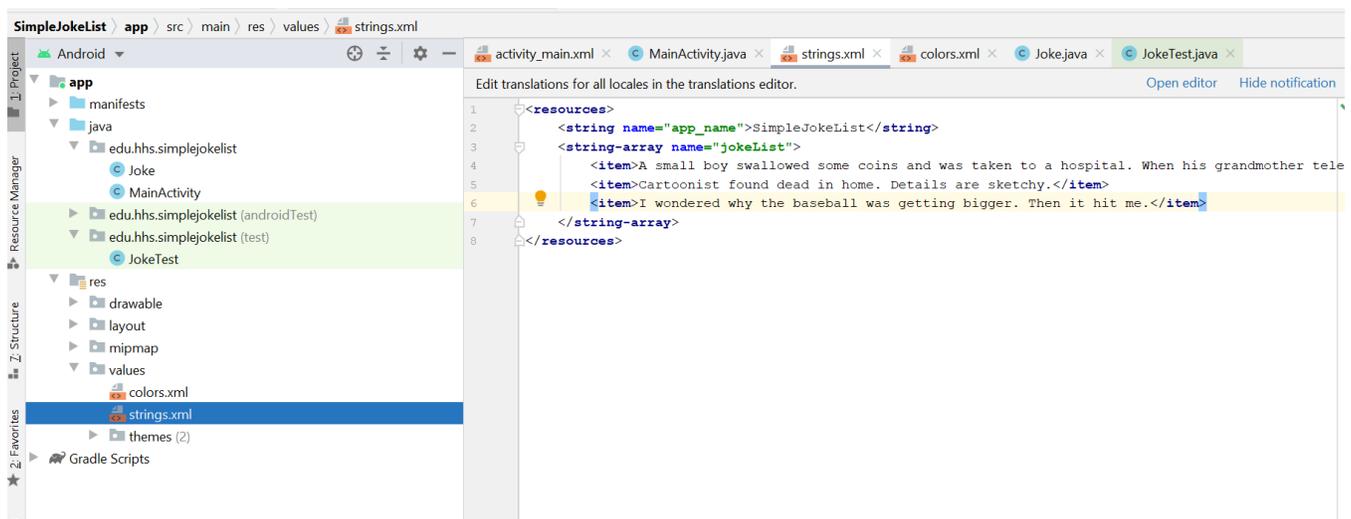
Populating the Android Project

1. Navigate to my [website](#) so you can replace the [MainActivity.java](#) with the one from my website. MAKE SURE THAT YOU DO NOT CHANGE THE FIRST LINE OF CODE ABOUT THE PACKAGE. That is unique to your project.
2. Create a new Java class named Joke. Replace your empty Joke.java with the [Joke.java](#) from my website. Once again, leave the line of code about the package intact.
3. Now you will add a “Unit Test” java file to your project. This will test your Joke.java after you complete it. To do this, right click on the “test” folder in your project and create a Java class named JokeTest. Look for the red arrow in the above image for the location of the “test” folder. Replace your empty JokeTest.java with the [JokeTest.java](#) from my website. Once again, leave the line of code about the package intact.
4. Finally, add the following to the strings.xml file in your project. This will provide some jokes for your App!!

```
<string-array name="jokeList">
  <item>A small boy swallowed some coins and was taken to a hospital. When his grandmother telephoned
to ask how he was a nurse said, \'No change yet\'.</item>
  <item>Cartoonist found dead in home. Details are sketchy.</item>
  <item>I wondered why the baseball was getting bigger. Then it hit me.</item>
</string-array>
```

strings.xml is a resource file located in the res folder and the values subfolder in your project. See below.

When you are finished, it should look like this:



From here, you will do the following from [Dr. Janzen's lab](#):

- Section 1.2 – Complete the Joke.java
- Section 1.3 – Run the JokeTest to test your Joke.java (right-click on the test folder and run)
- Section 1.4 – Retrieving the Joke Resource Strings
- Section 2 – Learn how you can use LogCat for debugging purposes
- Section 3 – Background info on View classes
- Section 4 – This will take some time and you may have questions along the way!! Where most of the programming is done.