Assignment 2   Help

Assignment 2: "Apps App-lenty"

On this page:

Overview   Guidelines for App #1   Guidelines for App #2   Rules for Both Apps

Submission Checklists   Grading   FAQ

Overview

For this second assignment you will also create **2** apps. The first app is carefully specified. The second app allows for more flexibility and creativity. After the deadline for submitting these apps has passed, you will be asked to evaluate the apps created by some of your peers using the grading rubric provided. Some of your peers will also be evaluating your apps at that time. When the peer evaluation period is over, you will be able to see the feedback provided by your peers.

Even if you do not have time to complete both apps, you can and should submit 1 of the apps to earn partial credit and to gain some valuable feedback from your peers.

- Due: See the Week 5 Overview page for details.
- Grading: This activity is worth 20 points or 20% of your final course grade. It is calculated based upon the scores awarded by your peers.
- Have questions about this assignment? Need some help? Want to offer a helping hand to others? Discuss this assignment here!

Guidelines for App #1: "I turned your webpage into an app"

The goal of the first part is to create a web app that displays web content that is stored locally as part of the app.

Step 1: Prepare Your App Materials

Download the provided app materials, assignment2-webcontent.zip (725KB)and extract the contents of the zip file. If you are using a zip extraction tool make sure you preserve the directory structure.

The zip file contains 4 items:

- An extract of *War of the Worlds* by H.G. Wells
- *Jabberwocky* by Lewis Carroll

- "U of I at NASA" by Lawrence Angrave
- Roundball, a javascript game from limejs.com

You will also need to perform a web search to find or create a short (e.g. 30 second) mp3 file and a picture (gif, jpg or png format). The picture will be used in the Jabberwocky activity. The audio file will be played repeatedly using Android's MediaPlayer while the user views *Jabberwocky* activity to add some sound effects or ambiance or background music to the scary poem.

Step 2: Create Your App

Requirements:

- For privacy, the package name should not include your real name. Remember to use the format abc.def (lowercase words, separated with periods).
- The app icon and name is up to you but should represent the contents of the app in some simple way.
- The minimum SDK value should be 10.
- Create 4 activities; one for each of the 4 items listed above. Each activity will use a WebView to display the locally-stored files.
  - Hint: One of these items may need Javascript and DomStorage enabled to function correctly. Some Internet sleuthing may be required to learn how to enable these settings.
- You will also need to add the INTERNET permission to your app.
- Each activity will have a relevant name and will also appear in the Launcher (HOME) window.
- Constrain each activity to run in portrait orientation only.
- Play your mp3 file only when the user is viewing Jabberwocky otherwise the app should be silent.
- The Jabberwocky activity will also include two buttons beneath the web view:
- The first button will use an Intent to open the Jabberwocky Wikipedia page in an external browser. The second button will use WebView's 'loadURL' method to change the web view to display a picture of your choice. For example, the picture could be a drawing of the frumious beast. Hint: web views can display jpg files directly or you can create a html page that includes an 'img' element.

Step 3: Refine and Test Your App

Check for the following:

- Find one page in your app that requires INTERNET permission to function correctly.

Step 4: Capture Screenshots to Submit

Use the screenshot functionality in the Eclipse Devices view to take 4 screen capture pictures directly from the running device or emulator. Do not use your Windows/Mac/Linux screen capture tool.

- Take 1 screen capture of each of the 4 activities running in portrait mode on a [1024 x 600 mdpi] screen.
  - Note: The screenshot of the Jabberwocky activity should show the poem, not the image.

Step 5: Export Your App

Export your app as a signed apk file. The apk file should be valid for at least 50 years.
Hint: You will need to create a key and keystore if you have not already done so.

Guidelines for App #2: Build Something Creative and Interactive!

App #2 must be interactive and can be about anything that is interesting to you but cannot be the same app you created for App #1 in this assignment. Be sure to test your app in an API level 10 emulator. Other than that, the content and functionality of the app is entirely up to you to decide! You will need 1 screenshot, some snippets of Java code from your activity file(s) and a signed apk file for submission.

Rules for Both Apps

- These apps must be brand new, created from scratch, and created purely for this assignment for this particular instance of this course. You may not reuse layouts or text from existing Android projects. The purpose here is to prove to yourself that you really can create a new app from nothing that satisfies the above requirements.
- The app's manifest file can only specify the INTERNET permission.
- The app may only perform its stated or specified purpose. The app must not perform anything malicious or hide any devious actions.
- The app should meet reasonable expectations of decency to a worldwide audience. To use a movie analogy, in the United States, Australia, New Zealand, and possibly others, this would be a "G" or "PG" rating; in the United Kingdom, a "U" or "PG" rating; in India, a "U" rating. We're not stopping you from making other kinds of apps—just don't submit them as an assignment!
- Your apps must at least work on emulator level 10. To have confidence in your expected score, check to make sure that your app works on an emulator API level 10 and other higher-level emulators or devices if you have them.

Submission Checklists

Check that you've completed all of the above steps and then gather the following materials to have ready to upload at the link below:

App #1 Submission Checklist

- The signed apk file
- The Android Manifest file
- The layout xml you used for the Jabberwocky activity
- The activity Java file for the Jabberwocky activity
- The activity Java file for the Roundball activity
- The 4 screenshot png files
- A few notes about your development experience. For example, what was the hardest part of this assignment or the part that required the most time?

App #2 Submission Checklist

- The signed apk file.
- A screenshot of your app.
- Include some Java code that demonstrates the interactivity of your app. Unlike the first assignment this is a required part of the submission. No need to post an entire file.
- Briefly answer the following 4 questions:
  - What does your app do?
  - Why did you decide to build the app?
  - What do you remember most about your development experience? For example, what was the hardest part of this assignment or the part that required the most time?
  - What would you like to do next to your app?

Note, your second app will only be graded on completion (is it interactive and properly submitted or not) and not on significant functionality or design. You will, however, get comments back from your peers, so this is a chance to say "Hello World" in your own creative and interactive way.

Submit Apps for Peer Evaluation

Grading

Your peers will grade your apps against each of the following criteria:

App #1 Grading Questions:

- Does the app require anything other than INTERNET permission to install? If yes: Do not continue. The review stops immediately and the project is awarded 0 points.
- Does the app include 4 activities that can be launched from the HOME screen?
- Do each of the 4 content items work correctly? You may test this app directly or review the Java code.
- Does the manifest constrain the activity to be in a vertical orientation?
- Did the user upload signed apk and answer the development question?
- Does the app play music during Jabberwocky? Does the music stop when the user stops reading these items? You can test the app directly or review the Java code.
- Do the 2 buttons for the Jabberwocky app function correctly? You can test the app directly or review the Java code.

App #2 Grading Questions:

- Does the app require any permissions other than INTERNET to install? If yes: Do not continue. The review stops immediately and the project is awarded 0 points.
- Did the user upload a screenshot?
- Does the app Java code demonstrate some interactivity of the app?
- Was an apk included?

- Did the participant answer the 4 questions?

Rubric

You can earn up to 10 points for each of your apps. Each app will be evaluated independently of the other. Your peers will award points based upon the following scale:

- **10 out of 10 points—Excellent**: The assignment is fully completed and correct. No more than 1 error or omission was found.
- **8 out of 10 points—Sufficient**: The assignment is almost complete. At least 2 errors were found, but these were simple oversights and could be fixed fairly quickly.
- **5 out of 10 points—Partial**: The assignment was partially completed but had significant errors and would still require significant time to finish.
- **0 out of 10 points—Poor**: The assignment fell far short of being complete.

Feedback

When reviewing the work submitted by a fellow peer, install and play with the apps they provide. Give the app developer some constructive advice and some helpful feedback on their efforts. If they also included some code, please congratulate them and give them some feedback or comments about it.

FAQ

Q. What if I have more questions?
A. Use the forum. Don't Panic! This assignment is meant to be fun, to give you a sense of accomplishment (by having you create a specific app using everything you learned), and to allow you to be creative (in that you made your own app!).

Q. Can my first app do more than what is specified?
A. Yes but review the grading rubric. Be sure to test your app carefully.

Q. Can I publish my completed app (e.g., on a website or in the Google Play Store)?
A. Yes, but we ask that you wait until after this assignment is over.

Q. Can I include text, images, or audio from site XYZ?
A. Yes, provided you are complying with the license and copyright information of the materials. For example, you may need to include any attribution information in your text (e.g., "Text from Wikipedia"). Here is a list of many Creative Commons-licensed and Public Domain images and sound files that often can be used if given proper attribution.

Q. What if my image's dimensions are too large?
A. Use Angrave's image reducer Java program or some other tool to make them smaller.

Q. Can I submit my existing app?
A. No. You need to write it from scratch.

Q. Must I export my app as an apk using a real key in a key store, or can I use the one I found inside my project's bin/directory?

A. The bin/apk file is signed with your local debug key—you cannot upload that one. You need to follow the instructions and export your project as a signed Android apk file and use your own key.

Q. Help! My emulator(s) is (are) just not working, so I can't generate the screenshots from the device view.

A. Here's a sneaky trick: You can also generate screenshots from the graphical layout view by right clicking on the image, but don't do this until you admit defeat with the emulator.

Q. Can my second app use XYZ android component/feature?

A. Yes, as long as your app runs in the emulator API level 10 and does not specify any permissions besides the INTERNET permission. We strongly suggest you build something simple first—get your assignment finished and then try harder stuff!

Q. Can my second app use libGDL/web framework/XYZ non-Android technology?

A. No. The purpose of this assignment is to work with Android directly, not a framework that hides or wraps Android.

Q. But what about XYZ? I'm scared to start.

A. Just jump in—it's time to get your hands dirty! Try building these apps and see how far you can get before you get stuck. Enjoy the process. Expect to get stuck. Expect to help each other in the forums. Expect to celebrate when your app works!

Q. Can I get help on the forums/on website XYZ?

A. You can get help when things go wrong, but the app development must be yours. Show the world that you can create a new app from scratch.

Q. Can I pair-program/work with someone else?

A. Feel free to give help and get help but this app should be your own work.

Created Wed 15 Jan 2014 12:32 PM PST

Last Modified Sat 18 Jan 2014 7:08 AM PST