

CS478: Software Development for Mobile Platforms

Project #2

Due time: 9:00 pm on 2/21/2016

Submit using Blackboard web site

Total points: 100

Instructor: Ugo Buy

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For this project you will design and code a new Android app that implements the following functionality. The main activity in the app displays a list of songs from various artists. When the user clicks on a list item, the main activity is stopped, and a browser window is displayed instead. The browser window shows a page with a publicly available video segment playing the song. By clicking a play button on the page, the device user can watch the video and listen to the song. A user would return to the main activity by pressing the device's "back" soft key when the video clip is complete.

In addition, each list item should support "long click" functionality. A long click on any list item will bring up a "context menu" showing the following three options for the song under consideration: (1) View the video clip (similar to a simple click); (2) View a browser's page with the song's wikipedia page; and (3) View a browser's page with the artist (or band) wikipedia page.

The design of your project is subject to the following main constraints.

1. Each item in the list should display 3 items: (1) a thumbnail image of the video clip associated with the item, (2) the title of the song, and (3) the artist or band singing the song. The image should appear on the right-hand side of the item, be centered vertically and have roughly a square shape. The title of the song and artist (or band) should appear to the left of the thumbnail, with the title of the song above the artist (or band) name. The name of the the song should use a larger font than the artist's or band's name.
2. When launching the browser activity, your app should use the OS to find an appropriate browser, rather than choosing a specific browser hard-wired in your app.
3. Use a publicly available web site to play the song. Here is an example of a song by a band: (1) Comfortably numb, (2) Pink Floyd, (3) <https://www.youtube.com/watch?v=gBUTbHHH3I8>. Here is an artist's song: (1) Misirlou, (2) Dick Dale, (3) https://www.youtube.com/watch?v=IRH_70_Foow.
4. You should open the wikipedia pages in a way similar to the video clip, that is, using any available browser on your device, rather than a specific browser.
5. The list view should contain no less than six items. Also, the list should be long enough to exceed the height of a Nexus 5 display, thereby requiring the use of a vertical scrollbar in order for the user to view all the items.

Hints. You may enable long clicks on the list view programmatically by sending the message *setLongClickable()* with an appropriate argument to the list item object. Create an anonymous class implementing the static interface *OnItemLongClickListener* and a class instance to specify actions in response to long clicks on list items.

Implementation notes. For this project use a Nexus 5 device running the usual Android platform (API 19—Kitkat). Design your list view in such a way that it will display optimally in portrait mode, and reasonably well also in landscape mode. You are not required to provide backward compatibility with previous Android versions.

You must work alone on this project. Submit the entire Studio project as a zip archive using the submission link in the assignment's page on Blackboard. No late submissions will be accepted.