CS478: Software Development for Mobile Platforms

Project #2

Due time: 9:00 pm on 3/2/2018
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 new activity containing a *WebView* is displayed instead. The web view shows a page with a publicly available video segment, such as a YouTube video, playing the song. By clicking a play button on the view, 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, e.g., when the video clip is complete.

In addition, your main activity should display also an options menu. The options menu supports 3 kinds of functionality. First, the options menu will allow a user to add a song to the list displayed in the main activity. When the user selects this option, a dialog window pops up that allows the user to enter (1) a song title, (2) the artist or band singing the song, (3) the URL of the wikipedia page describing the song and (4) the URL of the public video segment playing the song. Second, the options menu will allow a user to remove a song from the list. When this item is selected, a submenu is displayed that shows the current song titles. The user will select one of the current songs and remove it from the list. The activity's display will be immediately updated. The third item in the options menu allows a user to exit your app.

Finally, 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 the song's wikipedia page in the second activity; and (3) View the artist (or band) wikipedia page in the second activity.

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

1. Each item in the main list should display 2 items: (1) the title of the song and (2) the artist or band singing the song. The title of the song and artist (or band) should be left justified above the artist (or band) name, also left justified. The name of the the song should use a larger font than the artist's or band's name, which should be italicized.

2. Initially, your list should display at least 5 songs. Depending on user actions, that list could grow and shrink. Make sure that the list contains at list one item, that is, don't let a user remove all items.

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=_cPxKq-gMDo. Here is an artist's song: (1) Misirlou, (2) Dick Dale, (3) https://www.youtube.com/watch?v=lRH_70_Foow.

Implementation notes. For this project use a Pixel XL device running the usual Android platform (API 25—Nougat 7.1). 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.