CS478: Software Development for Mobile Platforms

Project #5

Due time: 9:00 pm on 11/30/2016
Submit using Blackboard web site
Total points: 100
Instructor: Ugo Buy

TAs: Venkat Sathyanarayanan and Pranjal Desai

You are to code two Android apps. The first app, named *AudioServer* stores a number of audio clips, such as songs or other recordings. The clips are numbered 1 through *n*, where *n* is the total number of clips. The app contains a service intended to be bound (as opposed to started), which exposes an API for clients to use. The API supports such functionality as playing one of the audio clips, pausing the clip, resuming the clip and stopping the playing of the clip altogether. The application should include at least 3 audio clips of variable duration. However, the duration of Clip #1 should be at least 30 seconds but no more than 3 minutes.

The second app, *PlayerClient* consists of an activity that exposes functionality for using the *AudioServer* and binds to the service for playing desired audio clips. Your interface should mininally include appropriate *View* elements for the following functionality: (1) Playing a given clip (by number), (2) Pausing the playback, (3) Resuming the playback, and (4) Stopping the player. When the client activity is stopped, the service should continue playing; however, the service should be unbound and stopped if the activity is destroyed.

In addition the *PlayerClient* app keeps track of all requests that an interactive user made (e.g., play Clip 1, pause Clip 1, stop player, etc.). The requests are displayed in a scrollable list view maintained by the app.

Hints. You are at liberty to choose the audio clips from segments pictures publicly-available (and not copyrighted or otherwise protected) on the Internet. When testing your application, make sure to upload *AudioServer* app first, or else the client app may fail to initialize properly. Finally, use Android's built-in *MediaPlayerService* to play the music.

Implementation notes. As with the previous projects, use a Nexus 5 virtual device running the usual Android platform (API 23—Marshmallow). Design your client app layout in such a way that it will display best in portrait mode. You are not required to provide backward compatibility with previous Android versions or to support phone reconfigurations.

You must work alone on this project. Submit a zip archive containing two root directories; each directory contains the full Android Studio repository of the corresponding app. No late submissions will be accepted.