

Recording in Progress

This class is being recorded

Please turn off your video and/or video if you do not wish to be recorded

CMSC436: Programming Handheld Systems

Multimedia

Today's Topics

Multimedia Support Classes

Playing Audio

Watching Video

Recording Audio

Multimedia

Android provides support for encoding and decoding a variety of common media formats

Allows you to play & record audio, still images & video

Some Multimedia Classes

AudioManager & SoundPool

RingtoneManager & Ringtone

MediaPlayer

MediaRecorder

AudioManager

Manages volume, system sound effects, and ringer mode control

Acquire AudioManager instance via

```
Context.getSystemService(Context.AUDIO_SERVICE)
```

AudioManager

Load & play sound effects

Manage volume

Manage peripherals

SoundPool

Represents a collection of audio samples
(streams)

Can mix and play multiple streams simultaneously

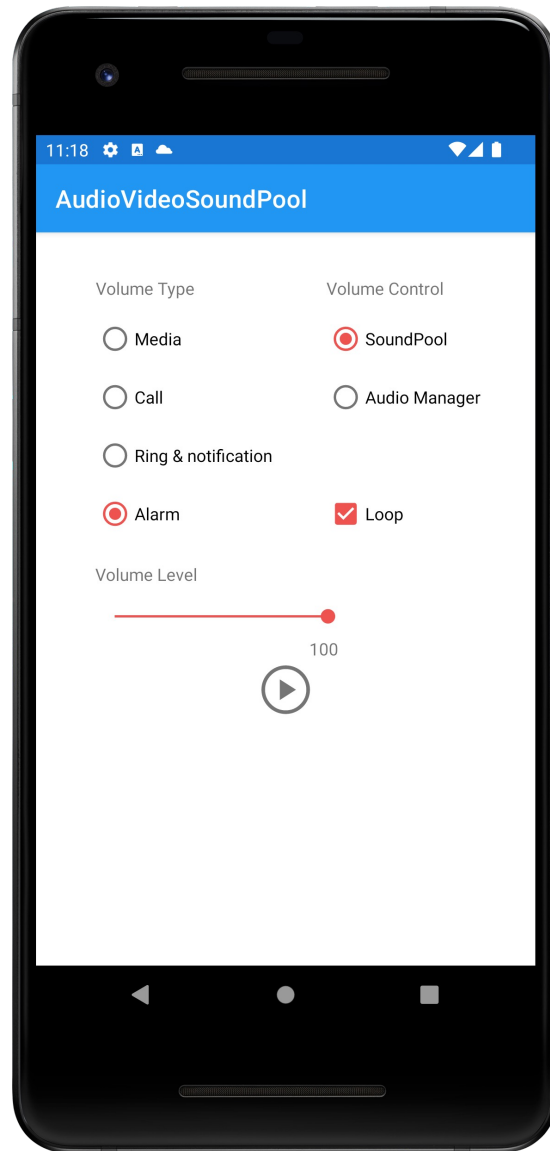
Volume settings are relative to global settings

AudioVideoSoundPool

Presents multiple widgets that adjust the audio playback characteristics

Presents a play button that, when pressed, plays an audio stream at the determined volume level

AudioVideo SoundPool



Ringtone and RingtoneManager

RingtoneManager provides access to

Audio clips used for incoming phone calls, notifications, alarms, etc.

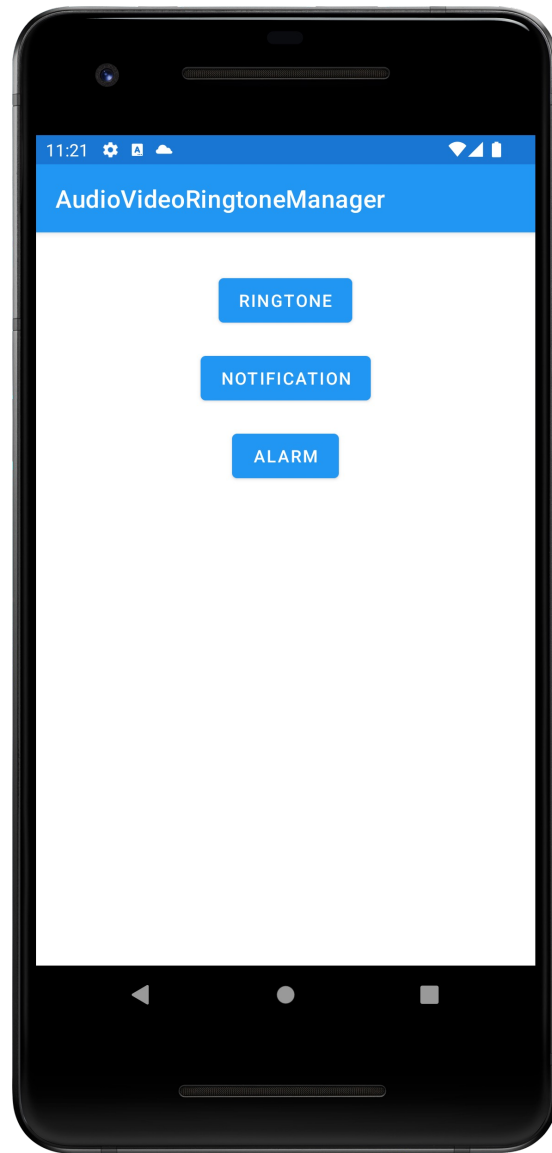
Allows applications to get and set ringtones and to play and stop playing them

AudioVideoRingtoneManager

Application presents three buttons labeled ringtone, notification and alarm

Pressing one of these buttons causes the associated default ringtone to play

AudioVideo RingtoneManager



MediaPlayer

Controls playback of audio and video streams and files

Allows applications to control playback

Operates according to a complex state machine

See: [http://developer.android.com/
reference/android/media/MediaPlayer.html](http://developer.android.com/reference/android/media/MediaPlayer.html)

Some MediaPlayer Methods

setDataSource()

prepare()

start()

pause()

seekTo()

stop()

release()

VideoView

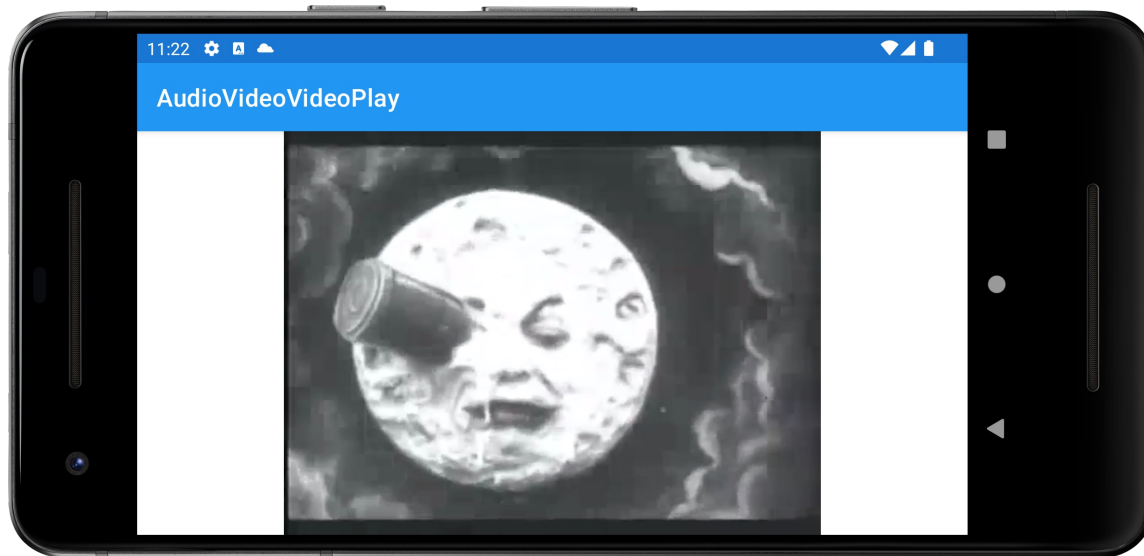
SurfaceView for displaying video files

Can load video from multiple sources

Provides various display options & convenience functions

AudioVideoVideoPlay

Application plays a movie in a VideoView



AudioVideo
VideoPlay

MediaRecorder

Used to record audio and video

Operates in accordance with a state machine

See:

[http://developer.android.com/reference/android/
media/MediaRecorder.html](http://developer.android.com/reference/android/media/MediaRecorder.html)

Some MediaRecorder Methods

`setAudioSource()`

`setVideoSource()`

`setOutputFormat()`

`prepare()`

`start()`

`stop()`

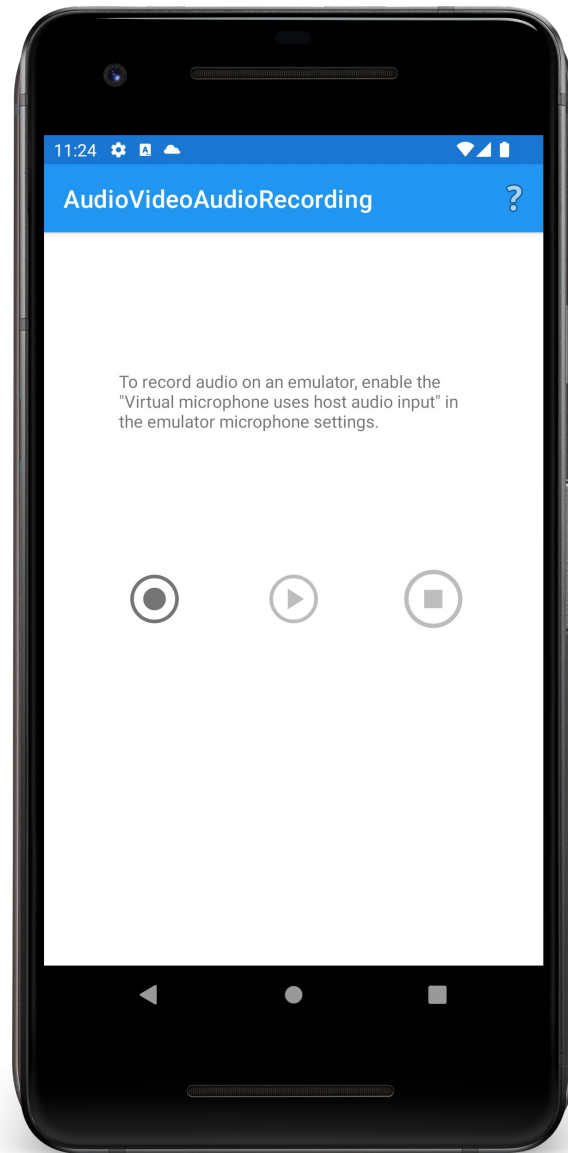
`release()`

AudioVideoAudioRecording

Can record audio from the user

Can then play back recorded audio

AudioVideo AudioRecording



Next Time

Sensors

Example Applications

AudioVideoSoundPool

AudioVideoRingtoneManager

AudioVideoVideoPlay

AudioVideoAudioRecording