?

RYTHM BOX with

CSCI 4661

9/9/15

Major Screen Activities (?)

ALWAYS LANDSCAPE

- Homescreen / Initial app screen / Landing Screen
  - Buttons
    - New
      - Create new recording
    - Load
      - Load existing recording
    - Export(?)
- After-New-Press Screen / NewScreen
  - BPM Select button (allows clock-style numslider upon clicking #s)
  - Create Button
    - Create new track w/ selected BPM

- After-Load-Press / Load Screen
  - Loads list of sessions saved to app directory
  - OK button
    - loads session if there is a session highlighted

- Session/Recording Screen (Pullout not engaged)

Classes for Rithum: High Level Overview

main activity
- onCreate(), other startup methods
- buttons for the app view, on click listeners
- specifically buttons for new track, volume control and muting track
- ~~also~~ handles getting input from user for file name ~~and~~
- handles dialog boxes

audio~~handler~~record
- this is where mediarecorder object is initialized for use with a single audio track
- track will have a uniform initialization and naming convention ~~(after overall file is named, tracks~~
- after file is named, tracks will each be named filename1, filename2, filename3, filename4, ...

TrackHandler
- this is where individual tracks are built
- audiorecord objects will be created
- provides methods to sync audio tracks

VisualizerView
- Attach a visualizer view to each track ~~so you~~
- will be a waveform created as a track is recorded
- waveform will be the primary way to analyze the track

Sync Handler
- Syncs audio tracks ~~and also~~ when multiple have been recorded
- called from TrackHandler object
- also handles calibration of ~~system~~ ~~as~~ audio track to compensate for inherent lag

Low Level Overview: Visualizer View

A Visualizer View class is where we control everything associated with the functionality of the drawn waveform view. This design choice allows us to handle the attachment of the visualizer to the audio track. It can be done by a method call in this class. We set the stream of audio being recorded to route through some methods to query the amplitude. We use this to get the values used to draw the waveforms.

Low Level Overview: Track Handler

Track Handler provides a way to create entire audio record objects. There are up to 4 total tracks present at any given time, ~~so this is the class where~~ The track handler also ~~allows~~ syncs the current tracks via a sync handler.

Low Level Overview: Audio Recorder

AudioRecorder class is where the main audio recording takes place. Media recorder will be used to do audio recording, immediately recording to a user ~~pre~~named file. This class will ~~keep~~ convert the audio stream to the ~~de~~designated filetype ~~upon~~ per the media record specifications.

Low Level Overview: Main Activity

Synopsis: Main Activity is the "main" ~~startup method~~ of the application.

All startup activity for the app is called or ~~contained~~ created from ~~from~~ here. Containing all ~~acti~~ of our main method calls here allows us to have a central point of control for the application.

Also contained here are all buttons and actions tied to them.

Low Level Overview: Sync Handler

Sync handler has two main functions: to sync up the audio tracks and to run the initial calibration upon the app's first start. The reason the calibration occurs is due to the varying audio latency issues of different android devices. Calibration uses the device mic to and speakers to emit a loud, brief noise and adjust based on how quickly the audio is picked up.