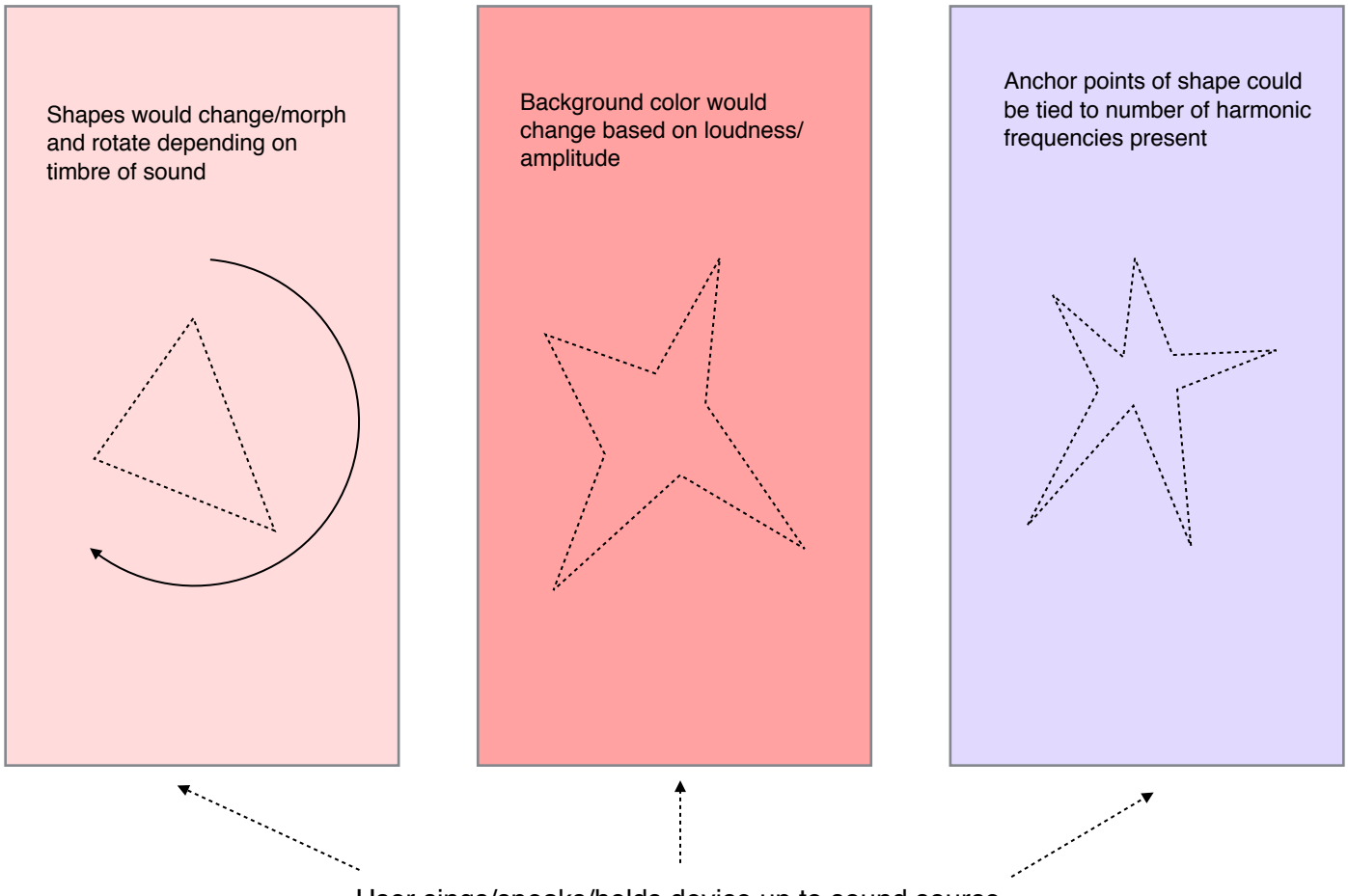
Project 2 Proposal

I know this seems like a bit of a cop out, but I'd really like to try and accomplish the project I proposed for project 1- the voice activated animation controller. At the time, I had no idea what was required to accomplish this, but now, having worked much more with frameworks and having become more comfortable with Swift, I think I can reasonable accomplish what I was working towards. I've reposted the basic concept, with some tweaks, below.

The concept of the app is the conversion of sound waves into visual imagery. Ideally, this would mean a shift in color and a changing shape relating directly to the amplitude and frequency being captured by the microphone, and then displayed on screen in an aesthetically pleasing way. Orientation of the device could also play a part in the shape or color displayed. Sketch for more detail:



Sprites subject to change- rather than using geometric object, I may animate an image instead. Maybe a dancing piece of bacon?

Code concept:

First, a listening object (AVAudioRecorder) is created that is listening to the user via the microphone. Variables for loudness, frequency and harmonic resonance, listed as available in the reference library for metering, are assigned values that output floats which will be mapped as the input variables for the HSV values of the background, the CGPoints of the shape on screen, and the multiplier for rotation speed of the shape.

With these monitored values, a number of interesting results should be available by feeding them into the attributes of the on screen objects. If the core app can be completed before the deadline, additional user inputs (like buttons or switches) could be created that modify the multipliers or remap the values to create different effects.