Pitch Perfect - iOS
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DOCUMENTATION

1. Aim

Build an iOS app to modulate input voice.

2. Working

Uses a button interface to acticate and deactivate the microphone for recording and playing voice in both views. And each modulated voice, alters the pitch and frequency in order to produce the desired effects.

3. Code

Record Sounds View Control:

```
//
//  RecordSoundsViewController.swift
//  PitchPerfect
//
//  Created by Abhinav Goel on 19/06/16.
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//

import UIKit
import AVFoundation

class RecordSoundsViewController: UIViewController, AVAudioRecorderDelegate {

    @IBOutlet weak var stopRecordingButton: UIButton!
    @IBOutlet weak var recordButton: UIButton!
    @IBOutlet weak var recordingLabel: UILabel!

    var audioRecorder: AVAudioRecorder!

    override func viewDidLoad() {
        super.viewDidLoad()
        // Do any additional setup after loading the view, typically from a nib.
    }

    override func didReceiveMemoryWarning() {
        super.didReceiveMemoryWarning()
        // Dispose of any resources that can be recreated.
    }


    @IBAction func RecordAudio(sender: AnyObject) {
        print("Pressed")
        recordButton.enabled = false
        stopRecordingButton.enabled = true
        recordingLabel.text = "Recording in progress"
        let dirPath = NSSearchPathForDirectoriesInDo-
mains(.DocumentDirectory,.UserDomainMask, true)[0] as String
        let recordingName = "recordedVoice.wav"
        let pathArray = [dirPath, recordingName]
        let filePath = NSURL.fileURLWithPathComponents(pathArray)
        print(filePath)

        let session = AVAudioSession.sharedInstance()
        try! session.setCategory(AVAudioSessionCategoryPlayAndRecord)

        try! audioRecorder = AVAudioRecorder(URL: filePath!, settings: [:])
        audioRecorder.delegate = self
```
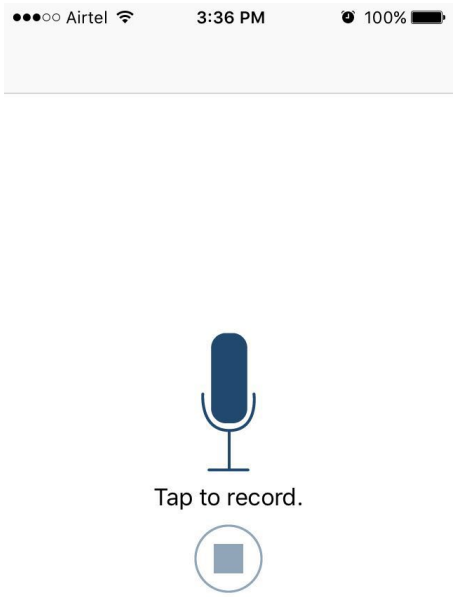

```
        audioRecorder.meteringEnabled = true
        audioRecorder.prepareToRecord()
        audioRecorder.record()

    }

    @IBAction func stopRecording(sender: AnyObject) {
        print("Stopped")
        recordButton.enabled = true
        stopRecordingButton.enabled = false
        recordingLabel.text = "Tap to record."

        audioRecorder.stop();
        let audioSession = AVAudioSession.sharedInstance()
        try! audioSession.setActive(false)
    }
    override func viewWillAppear(animated: Bool) {
        stopRecordingButton.enabled = false

    }
    func audioRecorderDidFinishRecording(recorder: AVAudioRecorder, successfully
flag: Bool){
        print("done")
        if(flag)
        {

self.performSegueWithIdentifier("stopRecording",sender:audioRecorder.url)
        }
        else
        {
            print("Recording failed")
        }
    }
    override func prepareForSegue(segue: UIStoryboardSegue, sender: AnyObject?) {
        if (segue.identifier == "stopRecording") {
            let playSoundsVC = segue.destinationViewController as! PlaySoundsView-
Controller
            let recordedAudioURL = sender as! NSURL
            playSoundsVC.recordedAudioURL = recordedAudioURL
        }
    }
}
```

Play Sounds View Control:

```
//
//  PlaySoundViewController.swift
//  PitchPerfect
//
//  Created by Abhinav Goel on 19/06/16.
//  Copyright © 2016 Abhinav Goel. All rights reserved.
//

import UIKit
import AVFoundation

class PlaySoundsViewController: UIViewController {


    @IBOutlet weak var reverbButton: UIButton!
    @IBOutlet weak var echoButton: UIButton!
    @IBOutlet weak var chipmunkButton: UIButton!
    @IBOutlet weak var vaderButton: UIButton!
    @IBOutlet weak var rabbitButton: UIButton!
    @IBOutlet weak var snailButton: UIButton!
    @IBOutlet weak var stopButton: UIButton!
    var recordedAudioURL : NSURL!
```

```
    var audioFile: AVAudioFile!
    var audioEngine:AVAudioEngine!
    var audioPlayerNode: AVAudioPlayerNode!
    var stopTimer: NSTimer!

    enum ButtonType: Int{case Slow = 0, Fast, Chimpmunk, Vader, Echo, Reverb }

    @IBAction func playSoundForButton(sender: UIButton)
    {
        print("play")
        switch(ButtonType(rawValue: sender.tag)!)
        {
            case .Slow:
                playSound(rate : 0.5)
            case .Fast:
                playSound(rate : 1.5)
            case .Chimpmunk:
                playSound(pitch : 1000)
            case .Vader:
                playSound(pitch : -1000)
            case .Echo:
                playSound(echo : true)
            case .Reverb:
                playSound(reverb : true)
        }
        configureUI(.Playing)
    }
    @IBAction func stopButtonPressed(sender: AnyObject)
    {
        print("stop")
        stopAudio()
    }

    override func viewDidLoad() {
        super.viewDidLoad()
        print("PSVC loaded")
        setupAudio()

        // Do any additional setup after loading the view.
    }
    override func viewWillAppear(animated: Bool) {
        configureUI(.NotPlaying)
    }

    override func didReceiveMemoryWarning() {
        super.didReceiveMemoryWarning()
        // Dispose of any resources that can be recreated.
    }
}
```

4. **Images**



Record Sounds View Control

Play Sounds View Control