

Today we'll have a hands-on lab to further familiarize you with using for-loops to loop over partial sound samples, so **pairs of students** should get a laptop from the cart.

Download to the Desktop and extract the files needed for the lab from:

<http://www.cs.uni.edu/~fienu/cs1120s15/sessions/s21/lec21.zip>

Part A. In JES run the downloaded `lec21/soundClip.py` that we wrote last class and use it to clip “plane” from “airplane” (airplane.wav file). Split off the word “plane” from index 5100 to 12000 into its own *sound clip*.

You don't need to show me that you did this, but you might want to refer to the `soundClip.py` code given below to complete Part B.

```
""" Creates sound clip from a selected sound from a specified starting and ending index """
def main():
    print "Select the Media Folder"
    setMediaFolder()
    print "Select the sound (.wav) file to CLIP from"
    fileName = pickAFile()
    sound = makeSound(fileName)

    blockingPlay(sound)

    start = requestIntegerInRange("Enter starting index of clip", 0, getLength(sound)-1)
    end = requestIntegerInRange("Enter ending index of clip", start, getLength(sound)-1)
    soundClip = clip(sound, start, end)
    blockingPlay(soundClip)

    writeSoundTo(soundClip, getMediaPath("soundClip.wav"))
    print "Open Sound Tool to 'view' sound"
    openSoundTool(soundClip)

def clip(source, start, end):
    """ Returns a sound clip of source from start to end indexes """
    target = makeEmptySound(end-start+1)

    targetIndex = 0
    for sourceIndex in range(start, end+1):
        sourceValue = getSampleValueAt(source, sourceIndex)
        setSampleValueAt(target, targetIndex, sourceValue)
        targetIndex += 1

    return target

main() # starts the program
```

Part B. In JES, open the downloaded `lec21/spliceSound.py` partial program. Complete the code for the `splice` function. It should *splice* together two sounds to get a single sound. For example “Mark” (mark.wav) and “Guzdial” (guzdial.wav) to form a single sound “Mark Guzdial”.

After you complete Part B, raise your hand and demonstrate your program.

EXTRA CREDIT PART C. Copy your `splice` function from Part B and paste it into `lec21/sentenceToSpeech.py`. Run the `sentenceToSpeech` program in JES by typing “Mark Guzdial made me President” into the “Enter sentence to say” stringRequest box. Re-run the program with a different sentence composed of words matching 3 or 5 .wav files.

After you complete Part C, raise your hand and demonstrate your program.