Normalize Sounds

- Make the whole sound as loud as possible
  - How loud can it be?
    - The max positive value is 32767
    - The max negative value is -32768
  - First we need to find the largest value (positive or negative) in the current sound
    - Create a variable to hold the max
      - What should it be when we start looping?
    - And loop through the list and if the absolute value of the current value is greater
      - Store that one instead

Creating a Sound Clip

- To clip the “This” out of “This is a test”.
  - Determine where it starts and stops
  - How?

Splicing Sounds Together

- Originally meant cutting the sound tape into segments and then assembling them in the right order
- Easy to do digitally
- Copy more then one sound into a target sound
  - Track the source index and target index

Recipe for halving the frequency of a sound

```python
def half(filename):
    source = makeSound(filename)
    target = makeSound(filename)
    sourceIndex = 1
    for targetIndex in range(1, getLength(target)+1):
        setSampleValueAt(target, targetIndex,
                          getSampleValueAt(source, int(sourceIndex)))
        sourceIndex = sourceIndex + 0.5
    return target
```

What about doubling the frequency?