CS116 – Activity 5

Consider the following code which changes the volume of a sound by a given factor:

```
def changeVolume(sound,factor):
  for index in range(0,getLength(sound)):
    value = getSampleValueAt(sound,index)
    setSampleValueAt(sound,index,value*factor)
```

Try this function and make sure you understand how it is working.

Now, modify this function so that it creates and returns a new sound with the changed volume and does not modify the given sound.

Suppose that we want to create a sound whose volume is a fraction of the largest possible volume:

```
def normalize(sound):
  largest = 0
  for index in range(0,getLength(sound)):
    value = getSampleValueAt(sound,index)
    if (value > largest):
      largest = value

  factor = 32767.0 / largest
  return changeVolume(sound,factor)
```

Pay close attention to the first part of normalize since this is an often use pattern in programming. We look through all the samples and search for the largest one.

Write a function that searches for the first sample location that contains the value 0. Your function should return the index location where the zero is found or return -1 if no location containing zero was found.

```
def findFirstZero(sound):
  #return the first index in sound containing the value 0
```