

Inft1004 Visual Programming – Lab for week 10

1. Do the quiz for week 10. (Under the “Assessment/Quizzes” folder on blackboard)

NOTE: E – Easy, M – Medium, H – Hard, T – Tricky

2. (M) Write a function that takes a sound as an argument and makes a copy of that sound. It then reverses the sound and returns it. Make sure you test the function works as required.

HINT: There is code to do this in this weeks lecture/module code – so you can check what you do (but don’t cheat). Oh we also discussed this problem in the lecture.

3. (H) Write a function that takes a sound as an argument and makes a mirror copy of that sound and returns it. This problem was also discussed in the lecture.

HINT: Again there is code to do this in this weeks lecture/module code – so you can check what you do (but don’t cheat).

4. (H) Write a function that has the following definition line:

```
def shiftForward(sound, numberSamples):
```

The function is required to make and return a new sound that is the original sound shifted forward by the specified number of samples (`numberSamples`).

For example, if the sound is shifted forward by 1000 samples, the 1000th sample of the new sound will be same as the first sample of the original sound.

Once the shifting reaches the end, it should start again at the beginning. For example, if the sound is shifted forward by 1000 samples, the first 1000 samples of the new sound will be the same as the last 1000 samples of the original sound.

Write the function so that it performs the shift as described, and returns the new sound.

Write a test function that reads in a sound and performs the shifting as well as saves the new sound to a new file. Make sure the function works as expected.

5. Write a function that has the following definition line:

```
def shiftBack(sound, numberSamples):
```

The function is required to make and return a new sound that is the original sound shifted backward by the specified number of samples (`numberSamples`).

For example, if the sound is shifted backward by 1000 samples, the first sample of the new sound will be same as the 1000th sample of the original sound.

Once the shifting reaches the end, it should start again at the beginning. For example, if the sound is shifted backward by 1000 samples, the last 1000 samples of the new sound will be the same as the first 1000 samples of the original sound.

Write the function so that it performs the shift as described, and returns the new sound.

Write a test function that reads in a sound and performs the shifting as well as saves the new sound to a new file. Make sure the function works as expected.