

## Task 1 – Audio Processing

Please find the *task1\_code.py* file in the folder *Task1\_Practice*. Modify the *task1\_code.py* to accomplish the following:

### Given:

A set of test audio files, each containing

- Notes separated by silence as shown in Figure 1.(notes and silence can have random duration).
- A minimum of 12 and maximum of 33 notes.
- Only C6 to B8 notes will be given in audio file.

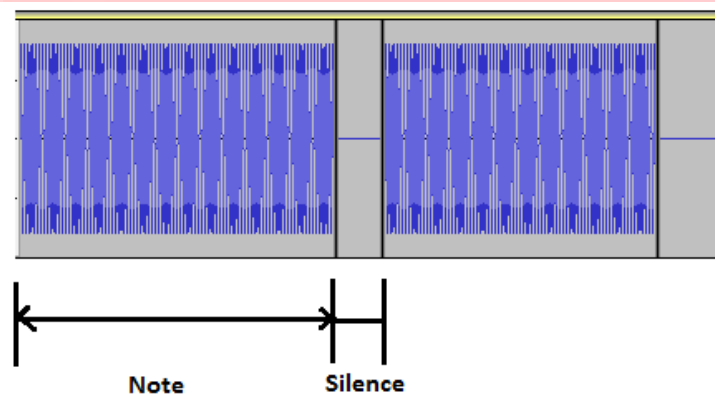


Figure 1: Part of Audio File showing Note and Silence

A set of five test files is given at: *Practice/test\_audio\_files*. An example test audio file is shown in Figure 2.

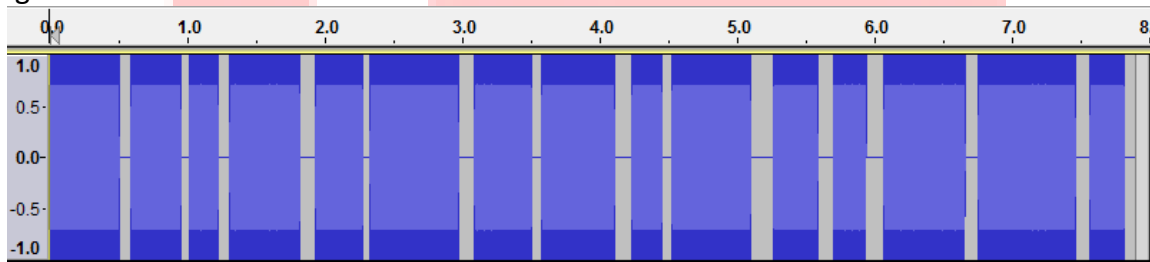


Figure 2: Example Test Audio File

For each audio file, output text file is given at: *Practice/test\_output\_files* which contains the notes that are used in audio file. An example output text file for above audio file is shown in Figure 3.

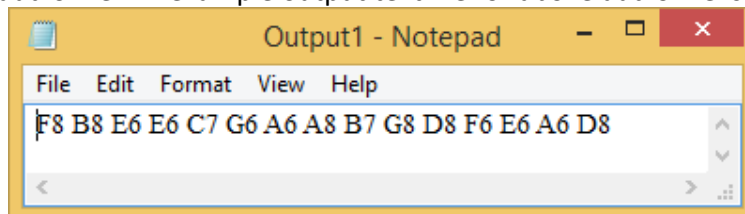
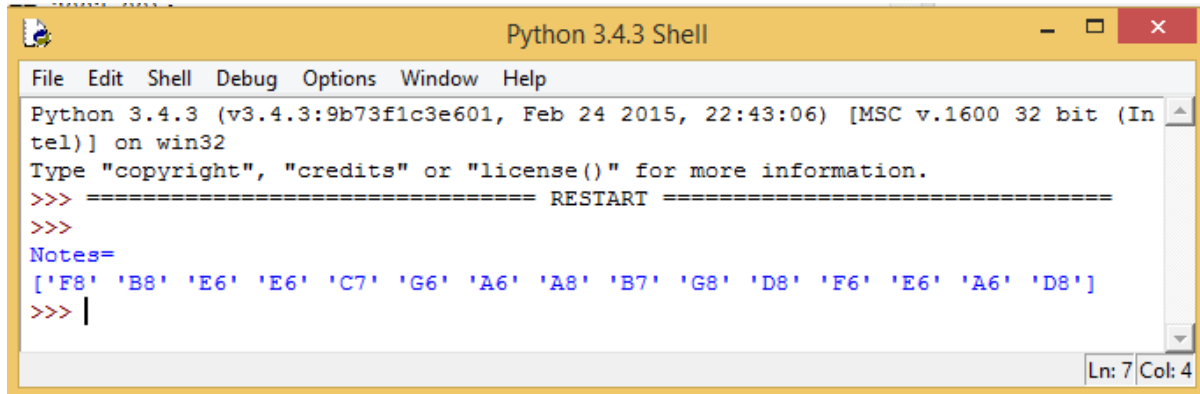


Figure 3: Example Output Text File

## Problem Statement:

A “snippet” of outline code is given in *task1\_code.py* file.

- Teams modify the ***play (file)*** function in the *task1\_code.py* file to take a test audio file as input and return identified notes on Python IDLE console.
- For example, given the test file in Figure 2 as input, the output on the Python IDLE console will look like:



```
Python 3.4.3 Shell
File Edit Shell Debug Options Window Help
Python 3.4.3 (v3.4.3:9b73f1c3e601, Feb 24 2015, 22:43:06) [MSC v.1600 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ===== RESTART =====
>>>
Notes=
['F8' 'B8' 'E6' 'E6' 'C7' 'G6' 'A6' 'A8' 'B7' 'G8' 'D8' 'F6' 'E6' 'A6' 'D8']
>>> |
```

Figure 4: Output on Python IDLE Console

Teams can verify the output with the help of output text files given in the folder Practice/test\_output\_files.