demo 05

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Question 01

1.1

Single program for mono and stereo. Write a single Python program to play both mono and stereo wave files. The program should determine the number of channels by reading the wave file information.

Answer:

Modification in code is following:

```
while len(input_bytes) > 0:

  if num_channels==1:

    input_tuple = struct.unpack('h', input_bytes)

    input_value = input_tuple[0]

    output_value = int(clip16(gain * input_value))

  else:

    input_tuple = struct.unpack('hh', input_bytes)

    output_value0 = int(clip16(gain * input_tuple[0]))

    output_value1 = int(clip16(gain * input_tuple[1]))
```

1.2

Verify that your program can play both mono and stereo wave files encoded with 16-bits per sample.

Answer:

By default, the wave file loaded is a stereo wave, `sin01_stereo.wav`. In addition to that, the script inputs one argument from the command line.

The parameter can take the value 'mono' which plays the mono channel wave, `author.wav`. The same argument can take the name of any file referenced by the path.

So basically, the two possible ways of implementing the output are:

- `python3 demo5-q1.py` will compile the stereo wav file `sin01_stereo.wav`
- `python3 mono` will execute the mono wav file