

# Lab 4: Volume

Write a program to modify the volume of an audio file.

```
$ ./volume INPUT.wav OUTPUT.wav 2.0
```

- INPUT.wav is the name of an original audio file
- OUTPUT.wav is the name of a modified output audio file
- Volume factor (e.g., 2.0 or 0.5)

## WAV Files

- One 44-byte header
- Many 2-byte samples



44 bytes - Header



2 bytes each - samples

## Types

- `uint8_t` is a type that stores an 8-bit unsigned (not negative) integer
- `int16_t` is a type that stores a 16-bit signed (positive or negative) integer
- Header file for above-mentioned types is `stdint.h`

## TODO

- Read the header from the input file
- Write the header to the output file
- Repeat for each sample:
  - Read the sample from the input file
  - Multiply the sample value by the volume factor
  - Write the new sample to the output file