import io
import os
from subprocess import Popen, PIPE
import tempfile

import numpy as np

from database import Database

def parse_stdout(stdout):
info = {}
lines = [i for i in stdout.splitlines() if i != '']
for i in lines:
key, value = [i.strip() for i in i.split(':', 1)]
info[key] = value
return info

def info(audio_file, encoding='UTF-8'):
if isinstance(audio_file, str):
infile = audio_file
input_data = None
stdin = None
else:
infile = '–'
input_data = audio_file.getvalue()
stdin=PIPE

```
cmd = f'sox --info {infile}'
proc = Popen(cmd, stdout=PIPE, stdin=stdin)
stdout, err = proc.communicate(input=input_data)
info = stdout.decode(encoding=encoding)
return parse_stdout(info)
```

def silence(infile, duration, threshold, tmp_dir=None, output='letter.wav',
verbosity=2):

```
print(os.listdir(tmp_dir))

threshold = str(threshold) + '%'
input_data = None
stdin = None
```

```
    if isinstance(infile, io._io.BytesIO):
        input_data = infile.getvalue()
        infile = '-'
        stdin = PIPE


    cmd = f'sox -V2 -t wav {infile} letter.wav silence 1 {duration} {threshold} 1 {dura
    print(cmd)
    proc = Popen(cmd, stdin=stdin, cwd=tmp_dir, shell=True)
    out, err = proc.communicate(input=input_data)
    print(os.listdir(tmp_dir))
    return proc.returncode
```

db = Database()
captcha = db.get_captcha(2)
data = captcha.fetchall()[0][1]
audio = io.BytesIO(data)

for t in np.arange(6, 13, 0.25):
for d in np.arange(0, 0.175, 0.025):
with tempfile.TemporaryDirectory() as tmp:
output = os.path.join(tmp, 'letter.wav')
silence(audio, duration=d, threshold=t, tmp_dir=tmp, output=output, verbosity=2)
count_files = len(os.listdir(tmp))
if count_files >= 6:
print(d, t, count_files)