# SinusoidalTone

Script Documentation

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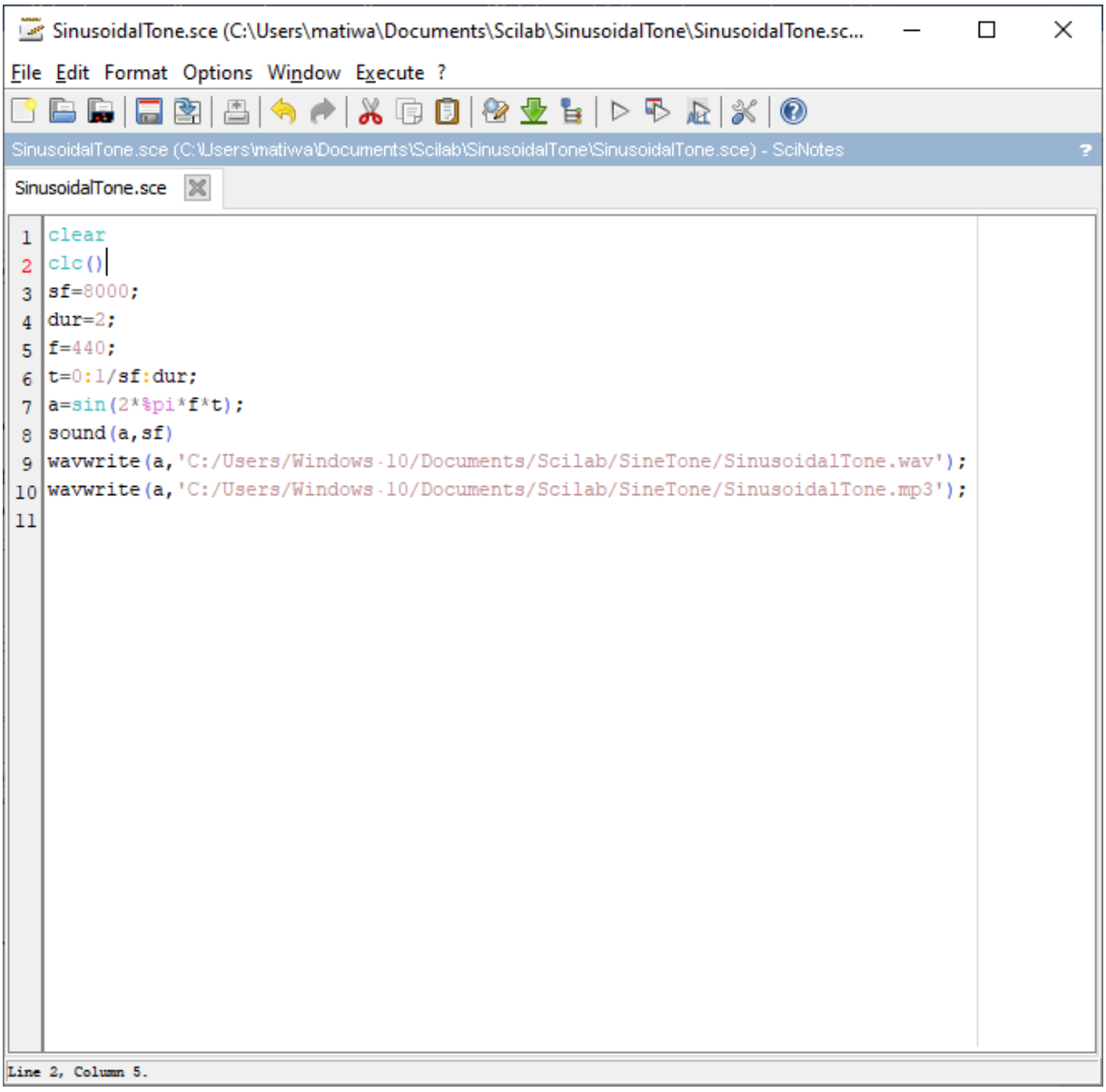
Introduction

This Scilab script file documentation includes: description of the script operation, what is needed for use, used algorithms, description of the source code. This script is used to generate a sinusoidal tone with a sampling frequency of 8000 Hz, a tone frequency of 440 Hz and an amplitude of 2.

Describing of the script's operation




Drawing 1: Script content [own study]

```
 at line   228 of function savewave ( C:\Program Files\scilab-6.0.2\modules\sound\macros\savewave.sci line 245 )
at line    20 of function wavwrite ( C:\Program Files\scilab-6.0.2\modules\sound\macros\wavwrite.sci line 33 )
at line     9 of executed file C:\Users\matiwa\Documents\Scilab\SinusoidalTone\SinusoidalTone.sce

savewave: Cannot open file C:/Users/Windows 10/Documents/Scilab/SineTone/SinusoidalTone.wav.
--> |
```

Drawing 2: The contents of the Scilab console window [own study]

Running a script starts Scilab, then Applications and Scinotes, which is used to edit scripts. Then select on the menu bar, select Execute and Save and Execute (shortcut F5) or Save and Execute all files (shortcut Ctrl + F5). A sine tone is generated and saved to * .wav and * .mp3 files.

What is needed for use?

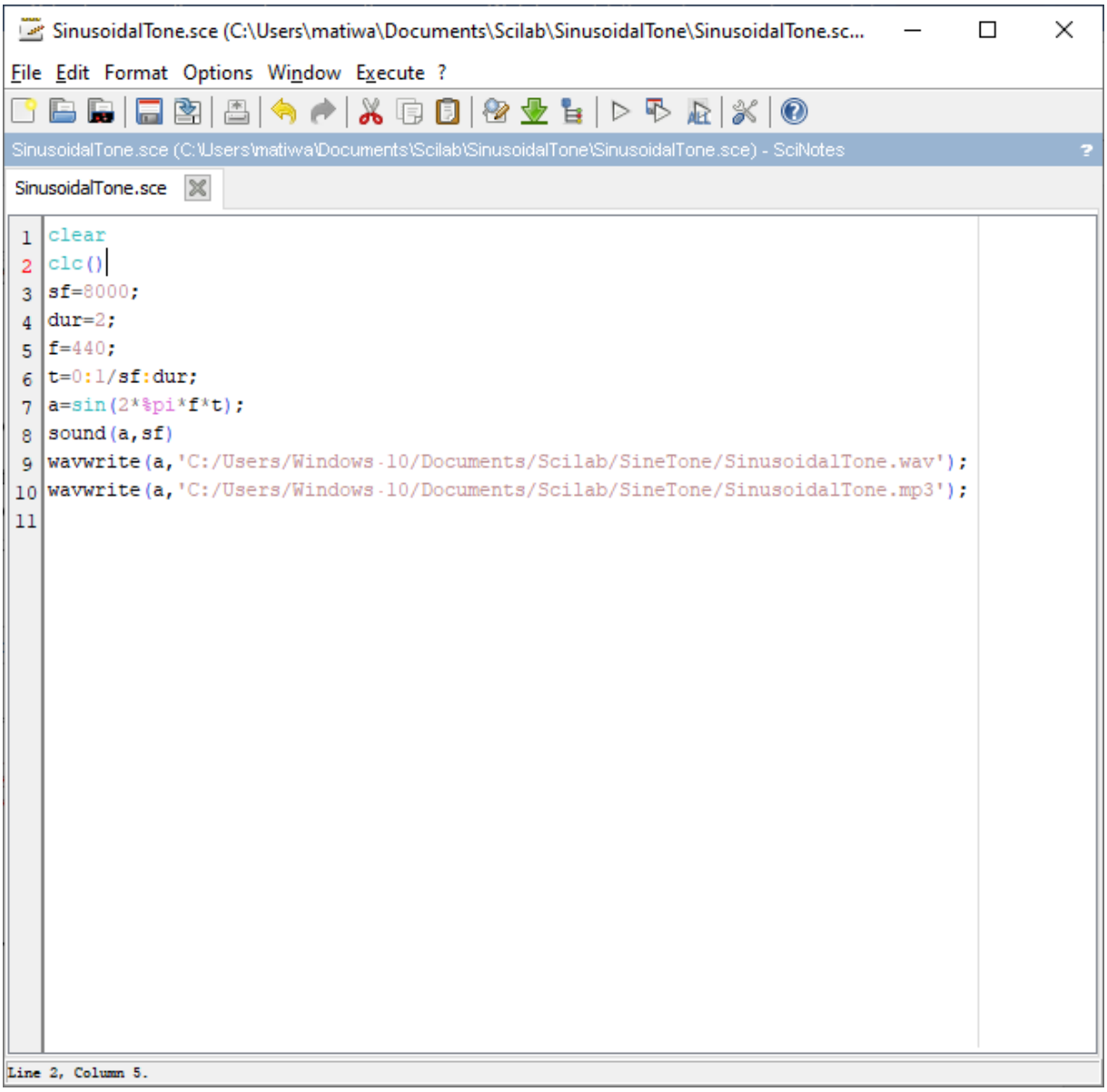
The script requires Scilab and a Windows operating system.

Algorithm used

The basic form of the algorithm can be deduced from the previous section. All in all, the application is applicable in generating sine tone and WAV and MP3 files.

Interface description

Running the code requires Scilab.




Drawing 3: Scilab graphical interface [own study]

Source code description

The script was made in the Scilab script language, in the Scilab 6.0.2 programming environment. All work was done on the Windows 10 operating system. The script's source code looks like this.

```
clear
clc()
sf=8000;
dur=2;
f=440;
t=0:1/sf:dur;
a=sin(2*%pi*f*t);
sound(a,sf)
wavwrite(a,'C:/Users/Windows 10/Documents/Scilab/SineTone/SinusoidalTone.wav');
wavwrite(a,'C:/Users/Windows 10/Documents/Scilab/SineTone/SinusoidalTone.mp3');
```

Listing 1: Source code [own study]

**List of drawings**



**List of listings**