

**MMI505/606**  
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*Assignment 2: Introduction to Audio Programming*

1. Install portaudio and/or rtaudio on your computer. Read through the documentation and compile the example programs.
  2. Portaudio users: Compile and run `patest_maxsines`. What method is being used to synthesize sine waves with portaudio? How are sine waves synthesized in the rtaudio examples?
  3. How many sine waves can you generate with 80% CPU load? What are the specifications of the computer on which you are running your application?
  4. How many sine waves can you generate with 100% CPU load?
  5. What happens at 110% CPU load?
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6. Write a standalone app that can read an AIFF or WAV sound file, attenuate each sample 50%, and write the result to a new sound file. You can use SndLib, LibSndFile, or anything else you wish. Prove that the app works as expected.
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7. Optional, for the more adventurous using Xcode:
    - a. Watch this: <http://www.youtube.com/watch?v=y2MSvZT3zWU>
    - b. Do it.