

Mini-Project #1 Shepard Music Scale

Assigned on Saturday, September 14, 2024, 4:00pm
 Due on Friday, September 20, 2024, by 11:59pm pm via Canvas submission

Late submission is subject to a penalty of two points per minute late.

Reading: McClellan, Schafer and Yoder, *Signal Processing First*, 2003, Chapter 3.
 Companion Web site with demos and other supplemental information: <http://dspfirst.gatech.edu/>

E-mail address for Mr. Elyes Balti (TA) is ebalti@utexas.edu. Please consider posting questions on [Ed Discussion](#), which can be answered by anyone in the class. You may post anonymously.

Office hours for Mr. Balti and Prof. Evans follow:

<i>Time Slot</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
11:00 am		Evans (ECJ 1.204)		Evans (ECJ 1.204)	
11:30 am		Evans (ECJ 1.204)		Evans (ECJ 1.204)	
12:00 pm		Evans (ECJ 1.204)		Evans (ECJ 1.204)	
12:30 pm					
1:00 pm			Balti (EER 5.652)		
1:30 pm			Balti (EER 5.652)		
2:00 pm	Evans (Zoom only)		Balti (EER 5.652)		Balti (EER 4.650)
2:30 pm	Evans (Zoom only)		Balti (EER 5.652)		Balti (EER 4.650)
3:00 pm	Evans (Zoom only)				Balti (EER 4.650)
3:30 pm			Evans (EER 6.882 or Zoom)		Balti (EER 4.650)
4:00 pm			Evans (EER 6.882 or Zoom)		
4:30 pm			Evans (EER 6.882 or Zoom)		
5:00 pm				Balti (EER 4.702)	
5:30 pm				Balti (EER 4.702)	
6:00 pm				Balti (EER 4.702)	
6:30 pm				Balti (EER 4.702)	

The assignment is to design, analyze, and play back a Shepard Musical Scale:

[Lab P-6: Synthesis of Sinusoidal Signals—A Music Illusion](#)

You may work individually or with one partner. If you work with a partner, then create one report together. Each of you would submit the same report on Gradescope. Be sure that the mini-project report represents the independent work of the author(s) on the report.

Please submit a narrative report whose sections follow the same sections as in the assigned lab exercise. The audience for your report is other students in the course. Here are several examples of narrative reports for previous mini-project #1 assignments for this course:

- Fall 2018 FM Synthesis for Musical Instruments: [Assignment](#) and [Report](#)
- Fall 2021 Sinusoidal Speech Synthesis: [Assignment](#) and [Report](#)
- Fall 2023 Music Synthesis: [Assignment](#) and [Report](#)

This mini-project report is something that you could bring with you on interviews to show as an example of your work.

Please see the [homework page](#) for additional guidance on what to include in the mini-project report.