

<b>Mission 6 Assignment</b>	<b>Name:</b>
<b>Pre-Mission Preparation</b>	
This mission will create a loop that goes continuously. Give an example in your daily life that uses a continuous loop:	<p>Answers will vary.</p> <p>A possible body is the human body. Our senses are in a constant feedback loop.</p> <p>A radar or satellite can also be an example. There are many.</p>
<b>Mission 6 Checks</b>	
Objective #1 Write the code to delay for one tenth of a second:	<code>sleep(0.1)</code>
Objective #2 Write the code to hear a tone from the speaker:	<code>spkr.pitch(freq) –or– spkr.pitch(784)</code>
Write the code to turn off the speaker:	<code>spkr.off()</code>
Objective #3 What is an infinite loop?	A loop that doesn't stop because the condition is always true.
Objective #4 What is the calculation for the pause?	<code>pause = 60 / tempo - beat_duration</code>
Objective #5 What is a "state" variable used for?	Keeps track of what state the program is in. This program has two states: mute and unmute. A Boolean variable can keep track of which state it is currently in.
Objective #6 What data type is returned by <code>buttons.was_pressed(n)</code> ?	A True or False Boolean value or data type
Write the code that will update the <code>sound_on</code> to False if the button was pressed:	<code>if buttons.was_pressed(0):     sound_on = False</code>
Objective #7 What is the last value of <code>sound_on</code> ?	<code>sound_on = False</code>
<code>sound_on = True</code> <code>sound_on = not sound_on</code>	

Objective #8 What is the first index of a list?	The first index is always 0
How do you access an item in a list?	Use the index in square brackets: <code>item = sensors[index]</code>
Objective #9 Inside a loop, how do you go to the next item in a list when a button is pressed?	Update, or increment the index variable: <code>if buttons.was_pressed(1):</code> <code>tempo_select = tempo_select + 1</code>
What error do you encounter at the end of this objective?	<code>ValueError</code>
Objective #10 How do you prevent the error?	Reset the index variable to 0 when the last index is reached: <code>if tempo_select == len(tempo_list):</code> <code>tempo_select = 0</code>
How can you prevent using a magic number in your if statement?	Use a function for the length of the list: <code>len(tempo_list)</code>
<b>Post-Mission Reflection</b>	
What is something you learned about yourself during this mission?	Answers will vary
This mission uses a “toggle” to go between two states. Give an example in your daily life that uses a toggle:	Answers will vary. Anything with two states that can go back and forth: <ul style="list-style-type: none"> <li>• A TV power button turns the device on/off</li> <li>• You are asleep or awake</li> <li>• The pet wants in and out</li> </ul>