

<b>AP CSP Python with CodeX</b> <b>Mission 6 Obj 1-7 Assignment</b>	<b>Name:</b>														
<b>Getting Started</b>															
In this project you will give CodeX a beating heart. Well, a digital one anyway. <b>During this lesson you will complete the first two goals:</b> Code an animated heartbeat, use a loop to repeat forever and break out of the loop.															
<b>Mission 6 : Heartbeat Objectives</b>															
Complete Objective 1 <i>Use CodeTrek if needed.</i>	Notes as needed														
Complete Objective 2 <i>Use CodeTrek if needed.</i>	Notes as needed														
Complete Objective 3 This objective uses a lot of repetition. Click on <u>Editor Shortcuts</u> to learn how to use them in CodeSpace.  Many editor shortcuts will come in handy as you work in CodeSpace. Fill in the shortcut for the tasks listed.	<table border="1"> <thead> <tr> <th>Task</th><th>Editor shortcut</th></tr> </thead> <tbody> <tr> <td>Copy text</td><td>CTRL-C</td></tr> <tr> <td>Paste text</td><td>CTRL-V</td></tr> <tr> <td>Undo</td><td>CTRL-Z</td></tr> <tr> <td>Replace text</td><td>CTRL-H</td></tr> <tr> <td>Indent or un-indent</td><td>TAB or shift-TAB</td></tr> <tr> <td>Comment out or un-comment code</td><td>CTRL-/ (comment toggle)</td></tr> </tbody> </table>	Task	Editor shortcut	Copy text	CTRL-C	Paste text	CTRL-V	Undo	CTRL-Z	Replace text	CTRL-H	Indent or un-indent	TAB or shift-TAB	Comment out or un-comment code	CTRL-/ (comment toggle)
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Complete Objective 4 Read ALL the information. Click on <u>LOOP</u> and read about the while loop and breaking out.  What do loops let you do? What part of code is repeated? What type of value is <b>True</b> ? What type of loop is <b>while True</b> ?  When coding: remember to delete all the extra lines of code not needed in the while True loop.	Loops let you change the flow of your code so it repeats a block of code again, subject to a condition you give.  The loop repeats the indented block of code (below while).  <b>True</b> is a literal value.  <b>While True:</b> is an infinite loop.														
Complete Objective 5 Read ALL the instructions. Take notes in the space provided.  How do you stop an infinite loop?	Click the STOP button to exit running code.														

<p>Complete Objective 6</p> <p>Read ALL the instructions. Take notes in the space provided.</p> <p>How do you program a “kill switch”?</p>	<p>Program one of the CodeX buttons to break the loop when pressed.</p> <pre>if buttons.was_pressed(BTN_A):     break</pre>
<p>Complete Objective 7</p> <p>Read ALL the information.</p> <p>Use the debugger to step through the code. Step over at least 8 times, and then press BTN-A to see the loop stop.</p>	<p>Notes as needed</p>
<p>Take the quiz. How did you do? Is there a concept you need to review?</p>	<p>Answers will vary</p>
<p>Go to <b>File</b> → <b>Save As</b> and rename your program <i><b>Heart2_functions</b></i></p>	
<p>Create a function for the beating heart. You can call it <b>heart_beat()</b>. Put the four lines of code that display an image and sleep inside the function, and call the function in the while True loop.</p>	
<p>Change the button press for the “kill switch” from BTN_A to BTN_U.</p> <p>Run the code and make sure there are no bugs before submitting.</p>	
<p>Submit the assignment to the teacher.</p>	