

AP CSP Python with CodeX Mission 6 Obj 1-7 Assignment	Name:
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Getting Started

In this project you will give CodeX a beating heart. Well, a digital one anyway. **During this lesson you will complete the first two goals:** Code an animated heartbeat, use a loop to repeat forever and break out of the loop.

Mission 6 : Heartbeat Objectives

Complete Objective 1 <i>Use CodeTrek if needed.</i>	Notes as needed
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Complete Objective 2 <i>Use CodeTrek if needed.</i>	Notes as needed
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Complete Objective 3 This objective uses a lot of repetition. Click on Editor Shortcuts 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" style="width: 100%;"> <thead> <tr> <th style="width: 60%;">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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Comment out or un-comment code	CTRL-/ (comment toggle)														

Complete Objective 4 Read ALL the information. Click on LOOP 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 True ? What type of loop is while True ? When coding: remember to delete all the extra lines of code not needed in the while True loop.	<p>Loops let you change the flow of your code so it repeats a block of code again, subject to a condition you give.</p> <p>The loop repeats the indented block of code (below while).</p> <p>True is a literal value.</p> <p>While True: is an infinite loop.</p>
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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.
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<p>Complete Objective 6 Read ALL the instructions. Take notes in the space provided. How do you program a “kill switch”?</p>	<p>Program one of the CodeX buttons to break the loop when pressed. if buttons.was_pressed(BTN_A): break</p>
<p>Complete Objective 7 Read ALL the information. 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 File → Save As and rename your program <i>Heart2_functions</i></p>	
<p>Create a function for the beating heart. You can call it heart_beat(). 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. Run the code and make sure there are no bugs before submitting.</p>	
<p>Submit the assignment to the teacher.</p>	