AP CSP Python with CodeX **Mission 6 Obj 8-11 Assignment**	**Name:**
Getting Started	
In this project you will give CodeX animate the beating heart by using a variable to adjust the speed. **During this lesson you will complete the last goal:** Make the heartbeat speed adjustable using two buttons.	
Mission 6 : Heartbeat Objectives 8-11	
Open the ***Heart2_functions*** program from the last lesson.	
Complete Objective 8 Read ALL the instructions. Click on float to add it to your toolbox. What is a "float"? Give an example of a float, other than pi:	Adjust the sleep() functions that are in your heart_beat() function. A float is a real number with a decimal point. 0.5 is a float.
Complete Objective 9 *Use CodeTrek if needed.* *Review:* What is a variable?	Answers could be: • A box with a label • A named storage location • Something you use instead of a literal value
Complete Objective 10 Read ALL the information. Adding a value, like 0.2, to a variable is called "increment". Give an example of incrementing a variable: You will NOT remove the break, because it is in a different if statement. Instead, add the code for BTN_A just above the kill switch.	Incrementing: delay = delay + 0.2 Or count = count + 1
Complete Objective 11 Read ALL the instructions. Subtracting a value, like 0.2, to a variable is called "decrement". Give an example of decrementing a variable: When the program runs and you press BTN_B several times, you will get an error. What is the error? Why do you get this error?	Decrementing: delay = delay - 0.2 Or count = count - 1 The error is: ValueError: sleep length must be non-negative It is caused by the value of delay going less than 0.
Take the quiz. How did you do? Is there a concept you need to review?	Answers will vary.

Go to the Sandbox. Keep the Heart2_functions program open.

Create a function for adjusting the speed of the heartbeat. You can call it **adjust_speed()**.

- Put the two **if** statements for BTN_A and BTN_B in the function.
- Add another if statement to fix the error. If delay is less than 0.2, set it to 0.2.
- Add this line of code at the top of the function, just below the function definitions. We will talk about what it does in a later mission:
    - **global delay**

Call the adjust_speed() function in the main program, under heart_beat().

Run the code and make sure there are no bugs before submitting.

Submit the ***Heart2_functions*** program to the teacher.