

AP CSP Python with CodeX Mission 8 Assignment	Name:
Getting Started	
<p>In this project you will create a random number generator. Instead of selecting messages, the computer will decide for you! During this lesson you will complete all the goals.</p>	
Mission 8 : Answer Bot Objectives	
<p>Complete Objective 1 Look at the code in CodeTrek. Can you predict the error? <i>Write your predicted error in the space provided.</i> Create the file and run the code. <i>What is the error? Was your prediction correct?</i></p>	<p>The possible errors are found in the toolbox under “exception”, which students put in the toolbox when they clicked on <u>error</u>. A student’s prediction should be one of the following.</p> <ul style="list-style-type: none"> ● TypeError ● ValueError ● NameError ● KeyError <p>The error is TypeError.</p>
<p>Complete Objective 2 Read ALL the information and take notes as needed. <i>Two ways are given to fix the TypeError. What are they?</i> <i>Change the code. Use CodeTrek if needed.</i></p>	<p>Use the <code>str()</code> conversion function.</p> <p>Use <code>display.print()</code>, which automatically converts the argument to a string.</p>
<p>Complete Objective 3 Click on <u>random</u> to add it to your toolbox. <i>Give several functions available in the random module.</i> <i>What is the range of numbers for randrange(10)?</i> <i>How do you scale up the size of text?</i> <i>Complete the code. Use CodeTrek if needed.</i></p>	<p>Functions in the random module include:</p> <ul style="list-style-type: none"> ● <code>random.seed()</code> ● <code>random.randrange()</code> ● <code>random.random()</code> ● <code>random.choice()</code> <p><code>Randrange(10)</code> has the range of values from 0 to 9.</p> <p>Scale up the size of text using: <code>scale=3</code> <code>display.print(number, scale=3)</code></p>
<p>Complete Objective 4 <i>Complete the code. You should be able to do this objective on your own. Use CodeTrek if needed.</i></p>	<p>Notes as needed</p>
<p>Complete Objective 5 <i>Complete the code. How much can you do on your own without using CodeTrek?</i></p>	<p><i>The example in the Objective Panel is for a list of lunch items. Choose a different question, and create a list of answers. Each item in the list is a string, so use quotation marks.</i></p>

<p>Take the quiz. How did you do? Is there a concept you need to review?</p>	<p>Answers will vary</p>
<p>Complete Objective 6</p> <p>Read ALL the information, and take notes as needed.</p> <p><i>Complete the code. NOTE: You do NOT need to type in COLOR_LIST!</i></p>	<p>Notes as needed</p>
<p>Complete Objective 7</p> <p>Read ALL the information and take notes as needed.</p> <p>What does random.choice() do?</p> <p><i>Complete the code. NOTE: Remember to use random.choice() for the item in your answers lists as well as COLOR_LIST.</i></p>	<p>Random.choice() selects a random item from the list, which is an argument for the function.</p>
<p>Go to the Sandbox. Go to File → Save As.. and rename the program Answer_Bot_functions.</p> <p>Then add the following to your program:</p> <ul style="list-style-type: none"> • Clear the screen before each new answer. • Create a function for the code that selects random colors for each pixel. • Add another if statement for a button press (other than A) to stop the loop and end the program (a kill switch). • Clear the display screen and turn off pixels when the program ends. <p>Challenge: Use a while loop in the function for pixel colors, instead of repeating the same line of code 4 times.</p> <p>Run the program and make sure there are no bugs before submitting.</p>	
<p>Submit the Answer_Bot_functions program to the teacher.</p>	