

<b>AP CSP Python with CodeX Mission 7 Obj 7-9 Assignment</b>	<b>Name:</b>
<b>Getting Started</b>	
<p>In this project you will add to your <i>billboard</i> by including text and color. <b>During this lesson you will complete the last goal:</b> Add the ability to mix text messages with image selection.</p>	
<b>Mission 7 : Personal Billboard Objectives 7-9</b>	
<p>Open the <i>Billboard</i> program from the last lesson.</p>	
<p>Complete Objective 7</p> <p>Click on <u>string</u> to add it to your toolbox.</p> <p>What is a string?</p> <p>What characters are used to create a string?</p> <p>What function converts other types to a string?</p> <p><i>Add text to your list. You can add more than one text, and it can be anywhere in your list. Use CodeTrek if needed.</i></p>	<p>A string is a sequence (or list) of characters. It can include any character, including numbers, spaces and special characters.</p> <p>A string is inside double quotes (" ") or single quotes ( ' ' )</p> <p>The str() function converts other types to a string.</p>
<p>Complete Objective 8</p> <p>Click on <u>error</u> to add it to your toolbox.</p> <p>Read about the different types of errors found in Python programs.</p> <p>This objective will cause an error in the code. Make a prediction on what error you think it will cause.</p> <p><i>Complete the code by adding at least one color to your list. You can add more than one color, and it can be anywhere in the list. Use CodeTrek if needed.</i></p>	<p>The different errors are:</p> <ul style="list-style-type: none"> <li>• TypeError</li> <li>• ValueError</li> <li>• NameError</li> <li>• KeyError</li> </ul> <p>A good prediction is for a TypeError to happen.</p>
<p>Complete Objective 9</p> <p>Read ALL the information and take notes as needed.</p> <p>What data type is a color in the codex library?</p> <p>What function fills the whole screen with a color?</p> <p>What function will check the type of data?</p> <p><i>Complete the code by checking the type of the item and then using an if statement. Use CodeTrek if needed.</i></p>	<p>Notes as needed</p> <p>The data type of a color is a tuple.</p> <p>The function that fills the whole screen is display.fill(color)</p> <p>The function is type()</p>

Turn in the program after Objective 9, if required. Then go to **File → Save As** and rename your program ***Billboard\_functions***.

Go to the Sandbox. Then add the following to your program:

- Add at least one more color to your list using a tuple.
- Create a function for displaying the item in the list. Call the function in the main program's while True loop.
- Create a function for changing the choice. Remember to use global choice at the top of the function block. Call the function in the main program's while True loop.
- Add another if statement for a button press (other than R or L) to stop the loop and end the program (a kill switch).
- Clear the display screen when the program ends.

Challenge: Add a function that introduces the program and explains how to scroll the list. Wait until a button is pressed to clear the screen and start the main program.

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

Submit the ***Billboard\_functions*** program to the teacher.