

**AP CSP Python with CodeX
Mission 4 Obj 1-7 Assignment**

Name:

Getting Started

From car dashboards to giant stadium scoreboards, you see LED displays everywhere, and most of them are controlled by software. The CodeX display is small, but with *your code*, it can do a lot! Learn some CodeX display basics. Use CodeX's NeoPixels and push-buttons to create your first game. We're jumping in head-first with some real Python coding. **During this lesson you will complete the first goal:** Display and print text message strings.

Mission 4 : Display Games Objectives 1-7

Complete Objective 1
Read ALL the information. Click on argument to add it to your toolbox.
What does "argument" mean?

An argument is passing data to functions.

Complete Objective 2
Read ALL the information. Click on type and string to add them to your toolbox.
Give a fact about variable types:
What are the three variable types discussed?
What is a "string"?

The toolbox mentions four data types and None. It is the kind of information stored in a variable. You can use `type()` to read a variable's type name.

The three variable types discussed in CodeSpace are CodeX image, integer and string.

A string is a sequence of characters, like words or sentences. They are surrounded in single or double quotes.

Complete Objective 3
Follow CodeTrek to add code. Read the Hint.
What error occurs?

A `TypeError` occurs.

Complete Objective 4
Read ALL the information.
What built-in function will convert any value to a string?
What built-in function will convert any value to an integer (if possible)?

`str()` converts anything to a string
`int()` converts the argument to an integer

Complete Objective 5
Follow CodeTrek to add code.
What happens when you run the code?

Only the second line of text shows on the screen.

Complete Objective 6
Take notes in the space provided.
How did you change the code?

Changed the `display.show()` to `display.print()` so that both lines of text show on the screen.

Take the quiz. How did you do? Is there a concept you need to review?

Answers will vary.

<p>Complete Objective 7</p> <p>Read ALL the information. Click on <u>branching</u> and <u>boolean</u> and <u>indented</u> to add them to your toolbox.</p> <p>Give a fact about branching:</p> <p>Give a fact about boolean:</p> <p>Give a fact about indenting:</p>	<p>Branches are decision points in code. Code takes a different branch depending on a condition. The if statement tells Python to only run the block of code indented beneath it if condition_A is True.</p> <p>A boolean is True or False. Boolean values are named for a famous mathematician George Boole. True and False are keywords. A boolean is often a result of a condition.</p> <p>Indenting is structuring blocks of Python code. Indented code is offset to the right by 4 spaces and follows a statement ending in a colon (:). Indentation needs to be consistent! It is used to define a block of code instead of { }</p>
<p>What is the algorithm for the game?</p>	<p>If a specific button was pressed then:</p> <ul style="list-style-type: none">• A pixel turns GREEN <p>Otherwise:</p> <ul style="list-style-type: none">• A pixel turns RED
<p>Submit the assignment to the teacher.</p>	