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

Getting Started

In this project you'll use the CodeX display and buttons to make a *billboard* that shows others how you're feeling, a fun picture, or a short message. **During this lesson you will complete the first two goals:** Program the buttons to select an image, and make it easy to add lots more images.

Mission 7 : Personal Billboard Objectives 1-6

Complete Objective 1 Take notes in the space provided. Start a new file and complete the program. *Use CodeTrek if needed.*	Notes as needed
Complete Objective 2 Read all the information. What is a single = used for? What is a double == used for? Complete the code. *Use CodeTrek if needed.*	A single = is used for assignment, like choice = 0. A double == is used for comparing, like if choice == 0.
Complete Objective 3 Read ALL the information and take notes as needed. *Complete the code (use CodeTrek if needed). Then use the debugger to complete the goals.*	Notes as needed
Take the quiz. How did you do? Is there a concept you need to review?	Answers will vary
Complete Objective 4 Read ALL the information. Click on Comparison Operator. What are six comparison operators you can use in Python code? *You will fix an error in the code by adding two more if statements. These if statements are embedded inside if statements you already coded. Be careful with your indenting! When you embed an if statement inside another if statement, it is called* ***nesting****.*	
Complete Objective 5 Read ALL the instructions. Click on list and then answer these questions:	A list is a sequence of items that you can access with an index. A list is created with square brackets [ ].

Operator	Description	Operator	Description
>	Greater than	!=	Not equal to
<	Less than	>=	Greater than or equal to
==	Equal to	<=	Less than or equal to

What is a list? How do you create a list? Is the order of items in a list important? Why or why not? How do you access an item in a list? How do you get the number of items in a list? *Complete the code using CodeTrek.*	The order of items in a list is important because the item is accessed by its index, which is assigned in order. An item is accessed with its index: first = example_list[0] Use the len() function to get the number of items in a list: len(my_list)
Complete Objective 6 Read ALL the instructions. Click on upper case. What is a "magic number"? Why is LAST_INDEX in all caps? Why do you need to subtract 1 when assigning the last index? *Complete the code using CodeTrek.*	A magic number is a number "baked into" the code, or a literal. Magic numbers make it hard to read and maintain code. LAST_INDEX is in upper case because it is a constant, and its value doesn't change during program execution. It is a visual reminder that the variable is a constant. You need to subtract one from the list length because the index of the list starts at 0, not 1, so the last item is one less than the length.
Take the quiz. How did you do? Is there a concept you need to review?	Answers will vary
A list is a form of data abstraction. In unit 1 you learned about abstraction in general, and procedural abstraction specifically. Read the definition of data abstraction. Then explain how a list is a form of data abstraction.	Data abstraction: The process of hiding details and showing only essential information to the user. For example, giving a single name to a group of items and then referencing the items using the name or label. A list is a form of data abstraction because it gives a name or label to a sequence of items, and each item can be referenced by using the label (or name). You don't need to access each item individually with a separate variable.
Add more images to the list. Run the code and make sure there are no bugs.	
Submit the assignment to the teacher.	