AP CSP Python with CodeX **PT Practice #4 Activity Guide**	**Name:**

Introduction

During this assignment, you will create a practice Performance Task project.

Warm-Up

This program will be a remix of PT_Practice2. Open the program in CodeSpace. Describe the play_game() function.	Answers will vary. Possible answer: The function has one parameter: level. At the beginning of the function, an if statement is used. It sets the value of delay and tries, depending on the value of level. Then a for loop starts and goes tries times. A random item is selected from the lest and a message tells the user what button to press, If the button is pressed, the pixels turn GREEN. Otherwise the pixels turn RED.
This program will also be a remix of PT_Practice3. Open the program in CodeSpace. Describe the pick_student function.	Answers will vary. Possible answer: The function has two parameters: period and count. The function initializes delay to 0. Then it uses an if statement to set the student list to use and the name of the list. Then the for loop starts and goes count times. It selects a random student from the list until the loop ends. The delay is incremented in the loop.

PT Practice #4

What are the requirements for the Create PT Project?	Answer should include: ● A list is created ● Information in the list is used ● A function with a parameter ● The parameter is used in an if statement ● The function has a loop and an if statement
Use this space to take notes as you create a remix program.	Notes as needed
What other remix ideas can you think of for a Create PT program?	Answers will vary. Independent or group brainstorming.

Wrap-Up

Explain how PT_Practice4 meets the requirements for the Create PT.	Answers will vary. Possible answers include: ● The program creates a list: letter_list. ● The program selects a random element from the list. ● The function play_game() has a parameter: speed. ● The parameter is used in an if statement to set the value of delay. ● The function has an if statement using the parameter. ● The function has a loop for selecting random elements from the list.

Explain how you used or could have used feedback, testing or reflection in the development of your program.	Possible answer: This program was improved through reflection and feedback. I started the program with a list and two suggested speeds for the game. After testing, I changed the speed for the age of the user, and the colors of the text. After other students played the game, it was suggested that the program needs a menu, so I added a menu. Then, after reflecting on the program, I decided to make it more readable and easier to modify by creating two smaller functions from the play_game() function.
Identify an expected user of your program. Describe one way your program's design meets the needs of this user.	Possible answer: The program was created for senior adults who want to improve their hand-eye coordination. This game gives a letter to stop on, and then flashes different letters until the one they need to stop on appears. It gives the player a chance to test their skills and improve through repeated use.
Programs accept input to achieve their intended functionality. Describe at least one valid input to your program and what your program does with that input.	Possible answer: The input for the program is through CodeX button presses. A valid input is pressing Button A, which will set the delay of the game to a fast time. Another input is pressing Button B, which will set the delay of the game to a slow time. Pressing Button D will stop the loop and end the program.
During this lesson you created a new program: PT_Practice4. Copy and paste a link to your code: *Student goes to File-Share File and then pastes the link here.*	