

AP CSP Unit 2 CodeX Python Code By Mission

Mission 6 - Heartbeat	
Infinite while loop	<pre>while True: # Indent code to loop display.show(pics.HEART) sleep(delay)</pre>
Break out of a loop <i>Can be any button</i>	<pre>if buttons.was_pressed(BTN_A): break</pre>
Increment <i>With if statement</i>	<pre>if buttons.was_pressed(BTN_A): delay = delay + 0.2</pre>
Decrement <i>With if statement</i>	<pre>if buttons.was_pressed(BTN_B): delay = delay - 0.2</pre>
Mission 7 - Personal Billboard	
Compare a variable to a specific value	<pre>if choice == 0: # do something</pre>
Last index of a list	<pre>LAST_INDEX = len(my_list) - 1</pre>
List index wrap around (end back to beginning)	<pre>if buttons.was_pressed(BTN_L): choice = choice - 1 if choice < 0: choice = LAST_INDEX</pre>
List index wrap around (beginning back to end)	<pre>if buttons.was_pressed(BTN_R): choice = choice + 1 if choice > LAST_INDEX: choice = 0</pre>
Define (create) a list	<pre>my_list = [pics.HAPPY, pics.SAD, pics.SURPRISED, pics.ASLEEP] my_list = [pics.HAPPY, pics.SAD, pics.SURPRISED, pics.ASLEEP]</pre>

Access an item from the list	<pre>index = 3 my_item = my_list[index]</pre> <pre>my_item = my_list[2]</pre>
Get the data type of a variable (can also use console panel)	<pre>>>> type(7) <class 'int'> >>> type(1.15) <class 'float'></pre> <pre>my_type = type(7) if type(my_item) == tuple:</pre>
Fill screen with a color	<pre>display.fill(RED) display.fill(my_color)</pre>

Lists

Length of list	<pre>len(my_list)</pre> number of elements in the list
Create an empty list	<pre>my_list = []</pre>
Create a list of integers	<pre>my_list = [1, 5, 10, 2, 7]</pre>
Create a list of strings	<pre>my_list = ["hello", "hi", "'sup"]</pre>
Create a list of colors	<pre>my_list = [RED, GREEN, BLUE, WHITE]</pre>
Update an element in a list	<pre>my_list[2] = my_list[2] + 5</pre>
Add an item to the end of a list	<pre>my_list.append(5)</pre> adds the value 5 to the end of the list
Add an item at a specified index	<pre>my_list.insert(1, 13)</pre> adds the value 13 at index 1
Remove an item at a specified index	<pre>my_list.pop(3)</pre> deletes whatever element is at index 3

Mission 8 - Answer Bot

Import random module	<pre>import random</pre>
Generate a random integer	<pre>number = random.randrange(10)</pre> gives a number between 0 and 9 <pre>number = random.randrange(1, 6)</pre> gives a number between 1 and 5 ** default starting value is 0 unless specifically stated. Integers will go from the starting value to one less than the ending value.

Change the size of text	<pre>display.print(number, scale=3)</pre> scale adjusts the size of the text. If the scale is too big, the text will appear as gibberish or shapes on the display screen. scale=1 is the default size.
Select a random number from a list	<pre>color = random.choice(COLOR_LIST)</pre> <pre>my_choice = random.choice(answers)</pre>
Lists with JPG images - Optional Lesson - Adding JPG images	
Displaying a JPG image	<pre>display.draw_jpg("pics/goldfish.jpg")</pre> <pre>display.draw_jpg(my_images[index])</pre> <pre>display.draw_jpg(random.choice(my_images))</pre>