

A Unit 4 Vocabulary (Review and Exam)

1	Dictionary	<ul style="list-style-type: none"> a. Result when a key is given that is not in a dictionary b. A sequence of items accessed with an index c. A container that holds keys and values d. Making major changes to code to improve it
2	KeyError	<ul style="list-style-type: none"> a. Result when a key is given that is not in a dictionary b. A sequence of items accessed with an index c. A container that holds keys and values d. Making major changes to code to improve it
3	Refactor	<ul style="list-style-type: none"> a. Result when a key is given that is not in a dictionary b. A sequence of items accessed with an index c. A container that holds keys and values d. Making major changes to code to improve it
4	Increment	<ul style="list-style-type: none"> a. A shorter way to write common expressions b. Adding 1 to a variable to up c. Multiplying a variable by 2 d. Subtracting 1 from a variable to count down
5	Decrement	<ul style="list-style-type: none"> a. A shorter way to write common expressions b. Adding 1 to a variable to up c. Multiplying a variable by 2 d. Subtracting 1 from a variable to count down
6	Augmented assignment	<ul style="list-style-type: none"> a. A shorter way to write common expressions b. Adding 1 to a variable to up c. Multiplying a variable by 2 d. Subtracting 1 from a variable to count down
7	// operator	<ul style="list-style-type: none"> a. Float division that results in a decimal quotient b. Modulo division that results in an integer remainder c. Integer division that results in a truncated quotient d. Gives the power of the base number by the exponent
8	% operator	<ul style="list-style-type: none"> a. Float division that results in a decimal quotient b. Modulo division that results in an integer remainder c. Integer division that results in a truncated quotient d. Gives the power of the base number by the exponent
9	** operator	<ul style="list-style-type: none"> a. Float division that results in a decimal quotient b. Modulo division that results in an integer remainder c. Integer division that results in a truncated quotient d. Gives the power of the base number by the exponent

Unit 4 Review Questions (in Kahoot)

1	A dictionary contains pairs of what?	<ul style="list-style-type: none"> a. Keys b. Values c. Keys and values d. Index and list
2	Other than <code>my_dictionary = { }</code> , what is another way to define a dictionary?	<ul style="list-style-type: none"> a. <code>dictionary(my_dictionary)</code> b. <code>my_dictionary = dict()</code> c. <code>my_dictionary = new_dict()</code> d. <code>dict(my_dictionary)</code>

3	<p>What does this code do?</p> <pre>commands['speak'] = fido_speak</pre>	<ul style="list-style-type: none"> a. Retrieves a value from a key b. Adds a new key:value pair to a dictionary c. Removes a key:value pair from the dictionary d. Calls the function paired with the key
4	<p>What does this code do?</p> <pre>for x in commands: print(x)</pre>	<ul style="list-style-type: none"> a. Iterates over the keys of a dictionary b. Iterates over the values of a dictionary c. Adds key:value pairs to the dictionary d. Retrieves the values from the keys in a dictionary
5	<p>What does this code do?</p> <pre>del commands[del_key]</pre>	<ul style="list-style-type: none"> a. Retrieves a value from a key b. Adds a new key:value pair to a dictionary c. Removes a key:value pair from the dictionary d. Calls the function paired with the key
6	<p>Given this key:value, the value is what type?</p> <pre>commands['speak'] = fido_speak</pre>	<ul style="list-style-type: none"> a. String b. Function c. Variable d. List
7	<p>Which is an example of an augmented assignment?</p>	<ul style="list-style-type: none"> a. count += 1 b. lites = [True] * number c. [ls.read(i)>2000 for i in range(5)] d. count = count + 1
8	<p>What does this expression evaluate to?</p> <pre>3 // 2</pre>	<ul style="list-style-type: none"> a. 1 b. 2 c. 1.5 d. 2/3
9	<p>What does this expression evaluate to?</p> <pre>8 % 5</pre>	<ul style="list-style-type: none"> a. 1.6 b. .6 c. 3 d. 1
10	<p>What does this expression evaluate to?</p> <pre>2**3</pre>	<ul style="list-style-type: none"> a. 6 b. 8 c. 9 d. .66667
11	<p>What is the correct code for detecting a white line?</p>	<ul style="list-style-type: none"> a. vals = ls.check(2000, True) b. vals = ls.check(2000, False) c. vals = ls.check(2000) d. vals = ls.read(2000, True)
12	<p>What variable is used to track the state of the line sensor detection?</p>	<ul style="list-style-type: none"> a. was_line = False b. was_line = 0 c. count = True d. count = 0
13	<p>What variable is used to keep track of the number of lines crossed?</p>	<ul style="list-style-type: none"> a. was_line = False b. was_line = 0 c. count = True d. count = 0
14	<p>Given this code, what is printed?</p>	<ul style="list-style-type: none"> a. Nothing is printed b. Detected c. Not detected d. An error occurs

	<pre> is_line = True was_line = False if is_line and not was_line: print('Detected') else: print('Not detected') was_line = is_line </pre>	
15	<p>Given this code, what is the final value of was_line?</p> <pre> is_line = True was_line = False if is_line and not was_line: print('Detected') else: print('Not detected') was_line = is_line </pre>	<ul style="list-style-type: none"> a. True b. False c. None d. 2
16	<p>Given this code, what will be the result of the if statement?</p> <pre> count = 16 remainder = count % 8 if remainder == 0: spkr.pitch(440) elif remainder == 3: spkr.off() </pre>	<ul style="list-style-type: none"> a. Speaker turns on b. Speaker turns off c. Speaker turns on and then off d. Nothing; neither condition is True
17	<p>Given this code, what will be the result of the if statement?</p> <pre> count = 18 remainder = count % 8 if remainder == 0: spkr.pitch(440) elif remainder == 3: spkr.off() </pre>	<ul style="list-style-type: none"> a. Speaker turns on b. Speaker turns off c. Speaker turns on and then off d. Nothing; neither condition is True
18	<p>Given this code, what is the result of the if statement?</p> <pre> count = 8 next_marker = 3 marker_dash = 2**next_marker if count == marker_dash: leds.prox(3) elif count == marker_dash + 3: leds.prox(0) next_marker += 1 </pre>	<ul style="list-style-type: none"> a. Nothing happens, no condition is true b. Proximity sensors turn on c. Proximity sensors turn off and next_marker is incremented d. Proximity sensors turn on and next_marker is decremented

19	<p>Given this code, what is the result of the if statement?</p> <pre>count = 11 next_marker = 3 marker_dash = 2**next_marker if count == marker_dash: leds.prox(3) elif count == marker_dash + 3: leds.prox(0) next_marker += 1</pre>	<ul style="list-style-type: none"> a. Nothing happens, no condition is true b. Proximity sensors turn on c. Proximity sensors turn off and next_marker is incremented d. Proximity sensors turn on and next_marker is decremented
20	<p>Given this code, which leds are turned on?</p> <pre>new_list = [True] * 2 leds.ls(new_list)</pre>	<ul style="list-style-type: none"> a. Line sensor LEDs 0, 1 b. Line sensor LEDs 4, 5 c. Line sensor LED 2 d. An error occurs

Unit 4 Exam Questions (in Microsoft Forms)

1	<p>A dictionary contains pairs of what?</p>	<ul style="list-style-type: none"> a. Keys b. Values c. Keys and values d. Index and list
2	<p>Other than <code>my_dictionary = {}</code>, what is another way to define a dictionary?</p>	<ul style="list-style-type: none"> a. <code>dictionary(my_dictionary)</code> b. <code>my_dictionary = dict()</code> c. <code>my_dictionary = new_dict()</code> d. <code>dict(my_dictionary)</code>
3	<p>What does this code do?</p> <pre>my_dict = dict() my_dict['one'] = funct_one</pre>	<ul style="list-style-type: none"> a. Calls the function paired with the key b. Retrieves a value from a key c. Adds a new key:value pair to a dictionary d. Removes a key:value pair from the dictionary
4	<p>What type is the value added to the dictionary?</p> <pre>my_dict = dict() my_dict['one'] = funct_one</pre>	<ul style="list-style-type: none"> a. String b. List c. Function d. Dictionary
5	<p>What does this code do?</p> <pre>sensor_data = [['N', 3557], ['E', 286], ['S', 1391], ['W', 2481]] for pos in sensor_data: print(pos)</pre>	<ul style="list-style-type: none"> a. Iterates over the keys of a dictionary b. Iterates over the values of a dictionary c. Adds key:value pairs to the dictionary d. Retrieves the values from the keys in a dictionary
6	<p>If <code>my_dict</code> is a dictionary, what does this code do?</p> <pre>del my_dict['one']</pre>	<ul style="list-style-type: none"> a. Retrieves a value from a key b. Removes a key:value pair from the dictionary c. Adds a new key:value pair to a dictionary d. Calls the function paired with the key

7	Which is an example of an augmented assignment?	<ul style="list-style-type: none"> a. <code>pixs = [True] * number</code> b. <code>[ls.read(i)>2500 for i in range(5)]</code> c. <code>ind = ind + 1</code> d. <code>ind += 1</code>
8	What does this expression evaluate to? <code>7 // 3</code>	<ul style="list-style-type: none"> a. 1 b. 2 c. 2.333 d. .333
9	What does this expression evaluate to? <code>13 % 5</code>	<ul style="list-style-type: none"> a. 3 b. 2 c. 2.6 d. .6
10	What does this expression evaluate to? <code>3**2</code>	<ul style="list-style-type: none"> a. 5 b. 6 c. 9 d. 8
11	What is the correct code for detecting a white line?	<ul style="list-style-type: none"> a. <code>vals = ls.check(2000)</code> b. <code>vals = ls.read(2000, True)</code> c. <code>vals = ls.check(2000, False)</code> d. <code>vals = ls.check(2000, True)</code>
12	What variable is used to keep track of the number of lines crossed?	<ul style="list-style-type: none"> a. <code>count = True</code> b. <code>count = 0</code> c. <code>was_line = False</code> d. <code>was_line = 0</code>
13	What variable is used to track the state of the line sensor detection?	<ul style="list-style-type: none"> a. <code>was_line = False</code> b. <code>was_line = 0</code> c. <code>count = True</code> d. <code>count = 0</code>
14	What is printed when the code runs? <pre> current = False previous = True if current and not previous: print("Yes") else: print("No") previous = current </pre>	<ul style="list-style-type: none"> a. Yes b. No c. True d. False
15	What is the final value of previous after the code runs? <pre> current = False previous = True if current and not previous: print("Yes") else: print("No") previous = current </pre>	<ul style="list-style-type: none"> a. True b. False c. None d. 2
16	Which LEDs turn on when the code runs?	<ul style="list-style-type: none"> a. Line sensor LEDs 0, 1, and 2 b. Line sensor LEDs 1, 2, and 3

	<pre>my_leds = [True] * 3 leds.ls(my_leds)</pre>	<ul style="list-style-type: none"> c. Line sensors LEDs 3, 4 and 5 d. An error occurs
17	<p>What is the result of the code when it runs?</p> <pre>count = 12 remainder = count % 5 if remainder == 0: spkr.pitch(440) elif remainder == 2: spkr.off()</pre>	<ul style="list-style-type: none"> a. Nothing – no condition is true b. Speaker turns on c. Speaker turns off d. Speaker turns on and then off
18	<p>What is the result of the code when it runs?</p> <pre>count = 15 remainder = count % 5 if remainder == 0: spkr.pitch(440) elif remainder == 2: spkr.off()</pre>	<ul style="list-style-type: none"> a. Nothing – no condition is true b. Speaker turns on c. Speaker turns off d. Speaker turns on and then off
19	<p>What is the result of the code when it runs?</p> <pre>count = 6 next = 2 next_thing = 2**next if count == next_thing: leds.ls(0b11111) elif count == next_thing + 3: leds.ls(0) next += 1</pre>	<ul style="list-style-type: none"> a. Nothing – no condition is true b. Line sensors light up c. Line sensors turn off d. Line sensors turn off and next is incremented
20	<p>What is the result of the code when it runs?</p> <pre>count = 7 next = 2 next_thing = 2**next if count == next_thing: leds.ls(0b11111) elif count == next_thing + 3: leds.ls(0) next += 1</pre>	<ul style="list-style-type: none"> a. Nothing – no condition is true b. Line sensors light up c. Line sensors turn off d. Line sensors turn off and next is incremented