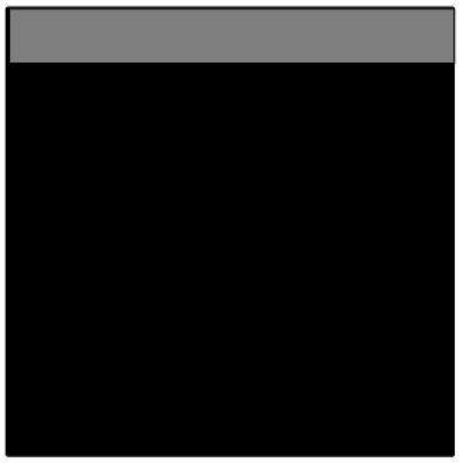
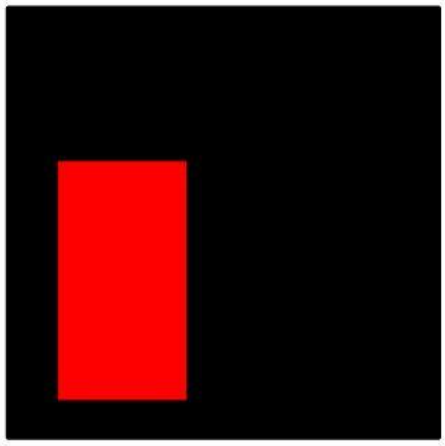
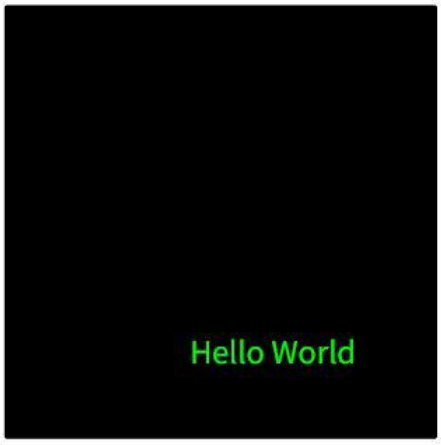
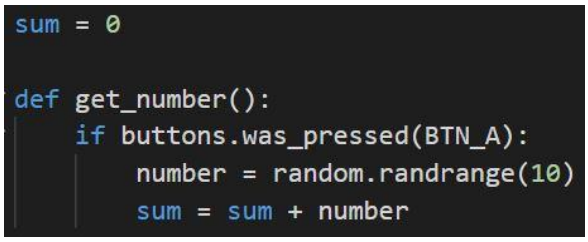
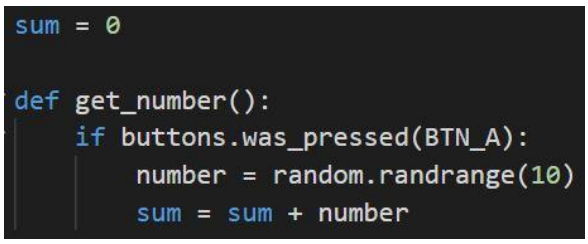
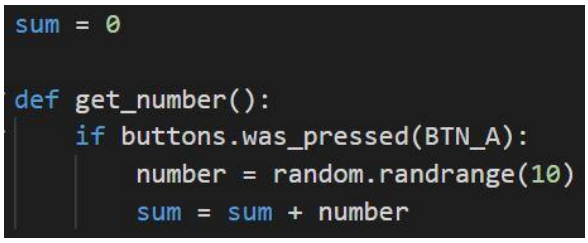
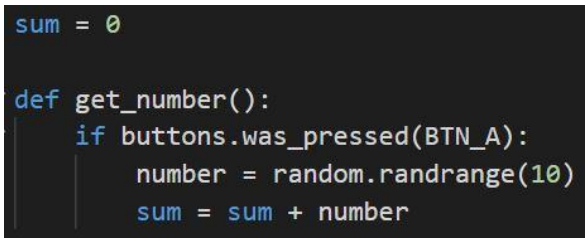
Links to Kahoots and Unit Tests

Mission 13 Objectives 1-6	https://create.kahoot.it/share/firia-labs-mission-13-obj-1-6/e367f188-3f89-48a2-ae87-453d43d4e612
Mission 13 Objectives 7-11	https://create.kahoot.it/share/firia-labs-mission-13-obj-7-11/348820b1-3d5f-4f37-a913-d352eed86540
Mission 14 Objectives 1-5	https://create.kahoot.it/share/firia-labs-mission-14-obj-1-5/d03517f5-7bef-4be0-a945-2bfedac5cfd8
Mission 14 Objectives 6-9 & review	https://create.kahoot.it/share/firia-labs-mission-14-obj-6-9-review/dc78e7f2-af3e-4761-b2b2-d24d8687eb67
Unit 4 Vocabulary Review	https://create.kahoot.it/share/firia-labs-unit-4-vocabulary/520c4d1e-5092-4289-aa05-741f93f3c5ca
Unit 4 Coding and Concepts Review	https://create.kahoot.it/share/firia-labs-unit-4-coding-review/0a6d8d7f-f70d-4a37-b2cb-54d886b10ea4
Unit 4 Vocabulary Test (MS Form)	https://forms.office.com/Pages/ShareFormPage.aspx?id=DQSIkWdsW0yxEjajBLZtrQAAAAAAAAAAAO__SjBvJpUNUFFQUlMWjNVWjJTMktGRjFWQ1VEQkNZOS4u&sharetoken=U3XfAXSIHbayO9AgfW1v
Unit 4 Coding and Concepts Test (MS Form)	https://forms.office.com/Pages/ShareFormPage.aspx?id=DQSIkWdsW0yxEjajBLZtrQAAAAAAAAAAAO__SjBvJpUMksyRkNBSTNXMDExSUtFMVhZVjhMR0ZLUy4u&sharetoken=fzne45i2E4EsdjkAE4Qi

Mission 13 Review Kahoot #1

Mission 13 - Sounds Fun (Objectives 1-6)	
What line of code will draw this rectangle: 	a) display.draw_rect(0, 0, 30, 240, LIGHT_GRAY) b) display.fill_rect(0, 0, 240, 30, LIGHT_GRAY) c) display.draw_line(0, 0, 240, 30, LIGHT_GRAY) d) display.fill_rect(0, 0, 30, 240, LIGHT_GRAY)
What line of code will draw this rectangle:	a) display.fill_rect(20, 100, 50, 130, RED) b) display.fill_rect(100, 20, 50, 130, RED) c) display.draw_rect(50, 50, 100, 100, RED) d) display.draw_line(20, 100, 50, 130, RED)

	
What line of code will draw this text: 	a) display.draw_text(“Hello World”, 40, 200, GREEN) b) display.draw_text(“Hello World”, x=40, y=200) c) display.draw_text(“Hello World”, x=200, y=75, color=GREEN) d) display.draw_text(“Hello World”, x=75, y=200, color=GREEN, scale=3)
What will this command do? `display.draw_text("Hello World", x=100, y=120)`	a) Display “Hello World” in the upper left corner b) Display “Hello World” in the lower right corner c) Display “Hello World” near the middle of the screen d) Cause an error because color and scale are missing
What is the final value of number? `number = min(5, 2)`	a) 5 b) 2 c) 52 d) An integer between 2 and 5
What is the final value of number? `index = 3` `index = index + 1` `number = max(index, 2)`	a) 2 b) 3 c) 4 d) 6
Which line of code is an example of initialization?	a) sum = 0 b) number = random.randrange(10) c) sum = sum + number d) def get_number():

	
Which line of code defines a global variable? 	a) sum = 0 b) number = random.randrange(10) c) sum = sum + number d) def get_number():
Which line of code defines a local variable? 	a) sum = 0 b) number = random.randrange(10) c) sum = sum + number d) def get_number():
What is needed to fix the error that occurs in this code? 	a) Change the last line to sum = sum - number b) Add if statement before sum = sum + number c) Move sum = 0 inside the function d) Add global sum in the function

Mission 13 Review Kahoot #2

Mission 13 - Sounds Fun (Objectives 7-11)	
What code is needed in order to use non-blocking sound functions?	a) Use a while True: loop b) Use a for loop c) Import the soundlib module d) Import the time module
What line of code will set a violin tone from the soundlib module?	a) sweet_tone = soundmaker.get_tone('violin') b) set soundmaker.get_tone('violin') c) sweet_tone = soundlib.get_tone('violin') d) violin = soundmaker.get_tone(soundlib)
What function will ramp the current pitch to a new setting over a duration?	a) sweet_tone.play(new_pitch, duration) b) sweet_tone.glide(new_pitch, duration) c) sweet_tone.set_pitch(new_pitch, duration)

	d) sweet_tone.move(new_pitch, duration)
What does the first line of a for loop look like that will execute 5 times?	a) for i in range(5): b) for i in range(4): c) for i in range(5 times): d) for i in loop(5):
What is displayed by the following code: `for i in range(5):` `  print(i, end=",")`	a) 1, 2, 3, 4 b) 0, 1, 2, 3, 4, 5 c) 1, 2, 3, 4, 5 d) 0, 1, 2, 3, 4
What is displayed by the following code: `for i in range(1, 6, 2)):` `  print(i, end=",")`	a) 1, 2, 3, 4, 5 b) 1, 3, 5 c) 1, 2, 3, 4, 5, 6 d) 2, 4, 6
What is a blocking function?	a) A function composed of blocks b) A function that creates a 2D shape c) A function that blocks program execution until the function is finished d) A function that doesn't make the code wait for the function to finish
Which is a blocking function?	a) siren = soundmaker.get_tone('trumpet') b) siren.play() c) siren.glide(440, 1.5) d) time.sleep(5)
Which is a non-blocking function?	a) time.sleep(1.5) b) soundmaker.get_mp3('sounds/roll') c) audio.mp3('sounds/roll') d) audio.pitch(520, 1.5)
What is the final value of "init"? `init = True` `init = not init` `init = not init`	a) True b) False c) 2 d) An error occurs

Mission 14 Review Kahoot #1

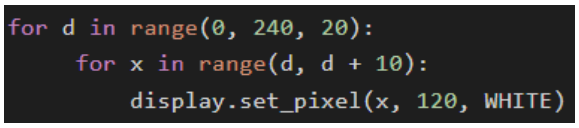
Mission 14 - Line Art (Objectives 1-5)	
What is the screen size of the CodeX LCD?	a) 120 x 120 pixels b) 100 x 100 pixels c) 240 x 240 pixels d) Depends on the button press
What is the result of this line of code: `display.set_pixel(50, 120, WHITE)`	a) Turns a pixel white near the top center of the LCD b) Turns a pixel white near the bottom center of the LCD c) Turns a pixel white near the left center of the LCD d) Returns the tuple (255, 255, 255)
What is the result of this code:	a) Turns a pixel black at the center of the LCD b) Returns the tuple (0, 0, 0)

`` display.fill(BLACK) display.get_pixel(120, 120) ```	c) Returns the tuple (255, 255, 255) d) Causes an error because it is missing a parameter
Given the code, which is an example of a magic number? ``` GRID = 10 x_center = 120 y_center = int(display.height / 2) ```	a) GRID b) x_center c) 120 d) display.height
How do you convert a float to an integer?	a) int(5.0 / 2) b) float(6 / 2) c) convert(120.0) d) str(120.0)
What error is caused by the code: ``` x_center = display.width / 2 display.set_pixel(x_center, 120, RED) ```	a) Index out of range b) x_center is not defined c) Invalid syntax d) Can't convert float to int
What is the result of this code? ``` for x in range(display.width): display.set_pixel(x, y_center, RED) ```	a) Draws a vertical line with pixels down the center b) Draws a horizontal line with pixels in the middle c) Draws a diagonal line from top left to lower right d) Displays 120 pixels in RED
How many times will i be printed? ``` for i in range(5): print(i) ```	a) 1 b) 4 c) 5 d) None - it has an error
How many times will i be printed? ``` for i in range(1, 6, 2): print(i) ```	a) 1 b) 5 c) 6 d) 3
How many times will j be printed? ``` for i in range(3): for j in range(2): print(j) ```	a) 6 b) 5 c) 3 d) 2

Mission 14 Review Kahoot #2

Mission 14 - Line Art (Objectives 1-9) full review	
What is the result of this code? ``` for y in range(0, display.height, GRID): for x in range(0, display.width, GRID): display.set_pixel(x, y, WHITE) ```	a) Draws a row of lines across the LCD b) Draws a grid of pixels on the LCD c) Draws random pixels all over the LCD d) Changes the LCD from BLACK to WHITE

What code will draw a vertical line down the center of the LCD?	a) display.draw_line(0, y_center, display.width, y_center, RED) b) display.draw_line(x_center, 0, x_center, display.height, RED) c) display.draw_line(0, 0, display.width, display.height, RED) d) display.draw_rect(0, 0, display.width, display.height, RED)
What line of code will draw a box around the boundaries of the LCD?	a) display.draw_rect(0, y_center, display.width, y_center, RED) b) display.draw_rect(x_center, 0, x_center, display.height, RED) c) display.draw_line(0, 0, display.width, display.height, RED_ d) display.draw_rect(0, 0, display.width, display.height, RED)
What is the result of this code? `WEB_SPACING = 10` `for i in range(0, 240, WEB_SPACING):` `  display.draw_line(0, i, i, 239, RED)`	a) Will draw a web with spacing of 10 pixels b) Will draw a web with spacing of 20 pixels c) Will draw a diagonal line of red pixels d) Will cause an error with too many parameters
What function can be used to return the range of y values?	a) Display.width b) Display.height c) Display.x_range d) Display.y_range
What is the FIRST number printed on the console with this code: `for i in range(5):` `  print(i)`	a) 0 b) 1 c) 4 d) 5
What is the LAST number printed on the console with this code: `for i in range(5):` `  print(i)`	a) 0 b) 1 c) 4 d) 5
How many times will the outer loop execute? `for d in range(0, 240, 20):` `  for x in range(d, d + 10):` `  display.set_pixel(x, 120, WHITE)`	a) 240 b) 120 c) 12 d) 20
How many times will the inner loop execute each time it is run? `for d in range(0, 240, 20):` `  for x in range(d, d + 10):` `  display.set_pixel(x, 120, WHITE)`	a) 1 b) 20 c) 12 d) 10
How many pixels long is each dash?	a) 240 pixels

	b) 120 pixels c) 10 pixels d) 20 pixels

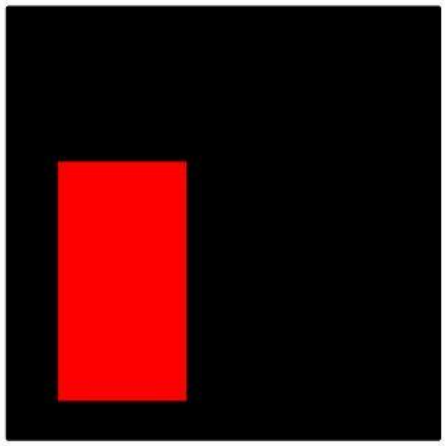
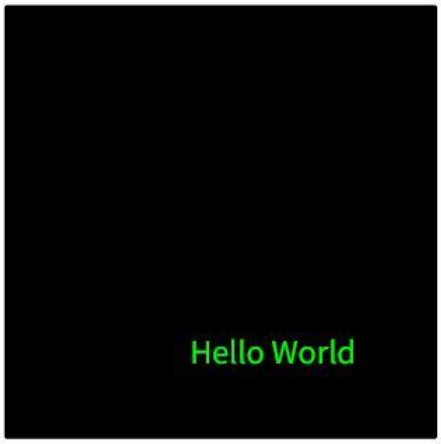
Unit 4 Vocabulary Review (and test questions, with order of choices changed)

User Interface	a) Graphics bits – an object that can hold a 2D image of a given width and height b) The area where a person interacts with a physical device, often through a screen c) Tiny dots that make up images, short for “picture element” d) Functions for creating music and sound effects, including different types of tones
Bitmap	a) Graphics bits – an object that can hold a 2D image of a given width and height b) The area where a person interacts with a physical device, often through a screen c) Tiny dots that make up images, short for “picture element” d) Functions for creating music and sound effects, including different types of tones
Soundlib module	a) Graphics bits – an object that can hold a 2D image of a given width and height b) The area where a person interacts with a physical device, often through a screen c) Tiny dots that make up images, short for “picture element” d) Functions for creating music and sound effects, including different types of tones
Pixel	a) Graphics bits – an object that can hold a 2D image of a given width and height b) The area where a person interacts with a physical device, often through a screen c) Tiny dots that make up images, short for “picture element” d) Functions for creating music and sound effects, including different types of tones
Local variable	a) A curve created by straight lines moving down and across a grid b) A variable defined outside a function and can be accessed anywhere in the code c) Numbers that just appear in code without an explanation d) A variable defined inside a function and only exists while the function is running
Global variable	a) A curve created by straight lines moving down and across a grid b) A variable defined outside a function and can be

	accessed anywhere in the code c) Numbers that just appear in code without an explanation d) A variable defined inside a function and only exists while the function is running
Magic number	a) A curve created by straight lines moving down and across a grid b) A variable defined outside a function and can be accessed anywhere in the code c) Numbers that just appear in code without an explanation d) A variable defined inside a function and only exists while the function is running
Envelope	a) A curve created by straight lines moving down and across a grid b) A variable defined outside a function and can be accessed anywhere in the code c) Numbers that just appear in code without an explanation d) A variable defined inside a function and only exists while the function is running
Initialization	a) Set the initial or first value of a global variable when the program starts b) A variable used in a condition that determines when a loop will end c) A specific value, like 120 d) Flip the state of a variable from True to False or False to True
Toggle	a) Set the initial or first value of a global variable when the program starts b) A variable used in a condition that determines when a loop will end c) A specific value, like 120 d) Flip the state of a variable from True to False or False to True
Literal	a) Set the initial or first value of a global variable when the program starts b) A variable used in a condition that determines when a loop will end c) A specific value, like 120 d) Flip the state of a variable from True to False or False to True
For loop	a) A loop inside a loop b) Repeating code across a range of numbers c) A function that doesn't make your code wait for the function to finish d) A function that makes your code wait until it is finished before continuing execution
Blocking function	a) A loop inside a loop

	b) Repeating code across a range of numbers c) A function that doesn't make your code wait for the function to finish d) A function that makes your code wait until it is finished before continuing execution
Non-blocking function	a) A loop inside a loop b) Repeating code across a range of numbers c) A function that doesn't make your code wait for the function to finish d) A function that makes your code wait until it is finished before continuing execution
Nested for loop	a) A loop inside a loop b) Repeating code across a range of numbers c) A function that doesn't make your code wait for the function to finish d) A function that makes your code wait until it is finished before continuing execution

Unit 4 Coding and Concepts Review

What line of code will draw this rectangle: 	a) display.fill_rect(20, 100, 50, 130, RED) b) display.fill_rect(100, 20, 50, 130, RED) c) display.draw_rect(50, 50, 100, 100, RED) d) display.draw_line(20, 100, 50, 130, RED)
What line of code will draw this text: 	a) display.draw_text("Hello World", 40, 200, GREEN) b) display.draw_text("Hello World", x=40, y=200) c) display.draw_text("Hello World", x=200, y=75, color=GREEN) d) display.draw_text("Hello World", x=75, y=200, color=GREEN, scale=3)
What is the final value of number?	a) 2

`` index = 3 index = index + 1 number = max(index, 2) ```	b) 3 c) 4 d) 6
Which line of code is an example of initialization? ``` sum = 0 def get_number(): if buttons.was_pressed(BTN_A): number = random.randrange(10) sum = sum + number ```	a) sum = 0 b) number = random.randrange(10) c) sum = sum + number d) def get_number():
Which line of code defines a global variable? ``` sum = 0 def get_number(): if buttons.was_pressed(BTN_A): number = random.randrange(10) sum = sum + number ```	a) sum = 0 b) number = random.randrange(10) c) sum = sum + number d) def get_number():
Which line of code defines a local variable? ``` sum = 0 def get_number(): if buttons.was_pressed(BTN_A): number = random.randrange(10) sum = sum + number ```	a) sum = 0 b) number = random.randrange(10) c) sum = sum + number d) def get_number():
What is needed to fix the error that occurs in this code? ``` sum = 0 def get_number(): if buttons.was_pressed(BTN_A): number = random.randrange(10) sum = sum + number ```	a) Change the last line to sum = sum - number b) Add if statement before sum = sum + number c) Move sum = 0 inside the function d) Add global sum in the function
What line of code will set a violin tone from the soundlib module?	a) sweet_tone = soundmaker.get_tone('violin') b) set soundmaker.get_tone('violin') c) sweet_tone = soundlib.get_tone('violin') d) violin = soundmaker.get_tone(soundlib)
What function will ramp the current pitch to a new setting over a duration?	a) sweet_tone.play(new_pitch, duration) b) sweet_tone.glide(new_pitch, duration) c) sweet_tone.set_pitch(new_pitch, duration) d) sweet_tone.move(new_pitch, duration)

What does the first line of a for loop look like that will execute 5 times?	a) for i in range(5): b) for i in range(4): c) for i in range(5 times): d) for i in loop(5):
What is displayed by the following code: `for i in range(5):` `  print(i, end=",")`	a) 1, 2, 3, 4 b) 0, 1, 2, 3, 4, 5 c) 1, 2, 3, 4, 5 d) 0, 1, 2, 3, 4
Which is a blocking function?	a) siren = soundmaker.get_tone('trumpet') b) siren.play() c) siren.glide(440, 1.5) d) time.sleep(5)
Which is a non-blocking function?	a) time.sleep(1.5) b) soundmaker.get_mp3('sounds/roll') c) audio.mp3('sounds/roll') d) audio.pitch(520, 1.5)
What is the final value of "init"? `init = True` `init = not init` `init = not init`	a) True b) False c) 2 d) An error occurs
Given the code, which is an example of a magic number? `GRID = 10` `x_center = 120` `y_center = int(display.height / 2)`	a) GRID b) x_center c) 120 d) display.height
How do you convert a float to an integer?	a) int(5.0 / 2) b) float(6 / 2) c) convert(120.0) d) str(120.0)
What error is caused by the code: `x_center = display.width / 2` `display.set_pixel(x_center, 120, RED)`	a) Index out of range b) x_center is not defined c) Invalid syntax d) Can't convert float to int
What is the result of this code? `for x in range(display.width):` `  display.set_pixel(x, y_center, RED)`	a) Draws a vertical line down the center with pixels b) Draws a horizontal line across the center with pixels c) Draws a diagonal line from top left to lower right d) Displays 120 pixels in RED
How many times will i be printed? `for i in range(1, 6, 2):` `  print(i)`	a) 1 b) 5 c) 6 d) 3
How many times will j be printed?	a) 6 b) 5

`` for i in range(3): for j in range(2): print(j) ```	c) 3 d) 2
What code will draw a vertical line down the center of the LCD?	a) display.draw_line(0, y_center, display.width, y_center, RED) b) display.draw_line(x_center, 0, x_center, display.height, RED) c) display.draw_line(0, 0, display.width, display.height, RED) d) display.draw_rect(0, 0, display.width, display.height, RED)
What is the result of this code? ``` WEB_SPACING = 10 for i in range(0, 240, WEB_SPACING): display.draw_line(0, i, i, 239, RED) ```	a) Will draw a web with spacing of 10 pixels b) Will draw a web with spacing of 20 pixels c) Will draw a diagonal line of red pixels d) Will cause an error with too many parameters
What function can be used to return the range of y values?	a) Display.width b) Display.height c) Display.x_range d) Display.y_range
How many times will the outer loop execute? ``` for d in range(0, 240, 20): for x in range(d, d + 10): display.set_pixel(x, 120, WHITE) ```	a) 240 b) 120 c) 12 d) 20
How many times will the inner loop execute each time it is run? ``` for d in range(0, 240, 20): for x in range(d, d + 10): display.set_pixel(x, 120, WHITE) ```	a) 1 b) 20 c) 12 d) 10