🤖 CODEBOT MISSION 4 LOG - Lesson 3

Pre-Mission Warm-Up	

What lines of code play a beep?	Answer should include three lines:
	    spkr.pitch(440)
	    sleep(0.1)
	    spkr.off()

What lines of code debounce a button?	Answer should include three lines of code, but could include more if they include the speaker:
	    if buttons.was_pressed(0):
	        sleep(0.1)
	        buttons.was_pressed(0)

Mission 4 Lesson 3 – Animatronics

Mission 4 Objective 8
  - Create a new file ***RobotMoves***. Follow the slides to write your code.

What code is needed before the motors will run?	motors.enable(True)

Use your data from Mission 3 Lesson 3. What speed and for how many seconds is needed to move forward 2 feet?	Answers will vary, depending on their data. Possible answer:
	    Power: 80
	    Seconds: 2.0

Use your data from Mission 3 Lesson 3. What speed and for how many seconds is needed to turn the robot a full circle?	Answers will vary, depending on their data. Possible answer:
	    Power: 30, -30
	    Seconds: 3.75

Mission 4 Objective 9
  - Look at the sample code below. Fill out the chart about the while loop for each one.

```
loops = 0
while loops < 5:
    loops = loops + 1
```

Control variable	loops
Initial value	0
Specific number	5
Increment	loops = loops + 1

```
skips = 0
while skips < 10:
    skips = skips + 2
```

Control variable	skips
Initial value	0
Specific number	10
Increment	skips = skips + 2

```
down = 10
while down > 1:
    down = down - 1
```

Control variable	down
Initial value	10
Specific number	1
Increment	down = down - 1

Mission 4 Objective 10

Fill out the chart by indicating the lowest and highest integer possible for each function call.

Function call	Lowest	Highest
randrange(0, 2)	0	1
randrange(1, 15)	1	14
randrange(100, 1000)	100	999
randrange(10, 101)	10	100

Mission 4 Objective 11

What is a function?	A function is a named chunk of code that can be called anytime and as often as you need to. It reduces code duplication.
How do you create a function?	def note(freq, duration):
How do you call a function?	note(349, 0.4)

Post-Mission Reflection

What part of this program was a review from earlier programs?	Answers can vary. Possible answers: - Using a while True: loop - If buttons.was_pressed(0): and break - motors.enable(True) - Moving forward and spinning - Incrementing - Using spkr.pitch() and spkr.off()

What part of this program was new?	Answers can vary. Possible answer:
	   • From random import randrange()
	   • Freq = randrange(100, 1000)
	   • While count < 10:
	   • Defining and calling a function