

Names: Thihini N.

Wiring Table (you will use this as a reference throughout the remainder of your project for coding and wiring purposes).

Component (variable name)	GP Pin #	GP Pin 2 (scoreboard only)
my_servo_left	GP22	
my_servo_right	GP2	
Ultrasonic sensor Trig	GP4	
Ultrasonic sensor Echo	GP5	
Bluetooth Module TXD		
Bluetooth Module RXD		

Each time to closeout for the day, paste your updated code here. Keep your previous day's code below (outside of the box).

Current Code: Phone controlled robot

```
"""CircuitPython Example of how to read data from the Dabble app"""
import binascii
import board
import busio
import digitalio
import time
import time
import board
import adafruit_hcsr04
import pwmio

from adafruit_motor import servo
from dabble import Dabble

# Initialize sonar sensor and PWM outputs for the servos
sonar = adafruit_hcsr04.HCSR04(trigger_pin=board.GP4, echo_pin=board.GP5)
pwmleft = pwmio.PWMOut(board.GP22, duty_cycle=2 ** 15, frequency=50)
pwmright = pwmio.PWMOut(board.GP2, duty_cycle=2 ** 15, frequency=50)

dabble = Dabble(board.GP0, board.GP1, debug=True)

# Create servo objects for left and right servos
my_servo_left = servo.Servo(pwmleft)
my_servo_right = servo.Servo(pwmright)

# Function to move forward
def forward():
```

```

my_servo_left.angle = 0
my_servo_right.angle = 175

def right():
    my_servo_left.angle = 135
    my_servo_right.angle = 135

def backward():
    my_servo_left.angle = 175
    my_servo_right.angle = 0

def left():
    my_servo_left.angle = 45
    my_servo_right.angle = 45

def stop():
    my_servo_left.angle = 90
    my_servo_right.angle = 90

while True:
    message = dabble.read_message()
    if (message != None):
        print("Message: " + str(message))
        # Implement tank steering on a 2 wheeled robot
        if (message.up_arrow_pressed):
            forward()
        elif (message.down_arrow_pressed):
            backward()
        elif (message.right_arrow_pressed):
            right()
        elif (message.left_arrow_pressed):
            left()
        elif (message.no_direction_pressed):
            stop()
            print("Stop both motors")
        else:
            print("Something crazy happened with direction!")

    if (message.triangle_pressed):
        print("Raise arm")
    elif (message.circle_pressed):
        print("Lower arm")
    elif (message.square_pressed):
        print("Squirt water")
    elif (message.circle_pressed):
        print("Fire laser")
    elif (message.start_pressed):
        print("Turn on LED")

```

```
elif (message.select_pressed):  
    print("Do victory dance")  
elif (message.no_action_pressed):  
    print("No action")  
else:  
    print("Something crazy happened with action!")
```

```
"""CircuitPython Example of how to read data from the Dabble app"""
```

```
import binascii
```

```
import board
```

```
import busio
```

```
import digitalio
```

```
import time
```

```
import time
```

```
import board
```

```
import adafruit_hcsr04
```

```
import pwmio
```

```
from adafruit_motor import servo
```

```
from dabble import Dabble
```

```
# Initialize sonar sensor and PWM outputs for the servos
```

```
sonar = adafruit_hcsr04.HCSR04(trigger_pin=board.GP4, echo_pin=board.GP5)
```

```
pwmleft = pwmio.PWMOut(board.GP22, duty_cycle=2 ** 15, frequency=50)
```

```
pwmright = pwmio.PWMOut(board.GP2, duty_cycle=2 ** 15, frequency=50)
```

```
dabble = Dabble(board.GP0, board.GP1, debug=True)
```

```
# Create servo objects for left and right servos
```

```
my_servo_left = servo.Servo(pwmleft)
```

```
my_servo_right = servo.Servo(pwmright)
```

```
# Function to move forward
```

```
def forward():
```

```
    my_servo_left.angle = 0
```

```
    my_servo_right.angle = 175
```

```
def right():
```

```
    my_servo_left.angle = 135
```

```
    my_servo_right.angle = 135
```

```
def backward():
```

```
    my_servo_left.angle = 175
```

```
    my_servo_right.angle = 0
```

```
def left():
```

```
    my_servo_left.angle = 45
```

```
    my_servo_right.angle = 45
```

```
def stop():
```

```
    my_servo_left.angle = 90
```

```
    my_servo_right.angle = 90
```

```
while True:
```

```
    message = dabble.read_message()
```

```
    if (message != None):
```

```
print("Message: " + str(message))
# Implement tank steering on a 2 wheeled robot
if (message.up_arrow_pressed):
    forward()
elif (message.down_arrow_pressed):
    backward()
elif (message.right_arrow_pressed):
    right()
elif (message.left_arrow_pressed):
    left()
elif (message.no_direction_pressed):
    stop()
    print("Stop both motors")
else:
    print("Something crazy happened with direction!")

if (message.triangle_pressed):
    print("Raise arm")
elif (message.circle_pressed):
    print("Lower arm")
elif (message.square_pressed):
    print("Squirt water")
elif (message.circle_pressed):
    print("Fire laser")
elif (message.start_pressed):
    print("Turn on LED")
elif (message.select_pressed):
    print("Do victory dance")
elif (message.no_action_pressed):
    print("No action")
else:
    print("Something crazy happened with action!")
```