

AP CSP Python with Robots Mission 2 Assignment

Name:

Mission 2 Introduction

Before you start the objectives, read through the mission introduction. Click on Peripherals to add it to your toolbox. Read about them. Pay attention to peripherals that are input and the ones that are output. You will be quizzed on this later.

Mission 2 Objectives

Complete Objectives 1-5. Click on each CodeBot part as it is introduced so it is added to your toolbox. [Take notes in the space provided.](#)

Students take notes as needed

Take the quiz. [What is something you learned about static electricity?](#)

Answers will vary. Example answers:

- Static electricity is a charge that can build up when you walk.
- Static electricity causes a jolt or spark when touching something grounded.
- Dry or cold air affects the build up of static electricity.
- Touch grounded metal before handling the CodeBot to avoid damaging its sensitive components with static electricity.

Complete Objective 6. [What are the two things that happen when you connect CodeBot with the USB cable?](#)

1. It lets your computer communicate with the CodeBot.
2. It provides 5 volt DC power to the CodeBot.

Complete Objective 7. You should see this bar in the lower left corner.



Complete Objective 8 and 9. Click on the Hints and the CodeTrek.

Complete Objective 10. [What is the punctuation tip given?](#)
[What are the labels of the LEDs?](#)

Capitalization matters! Code is case sensitive. Punctuation is important.

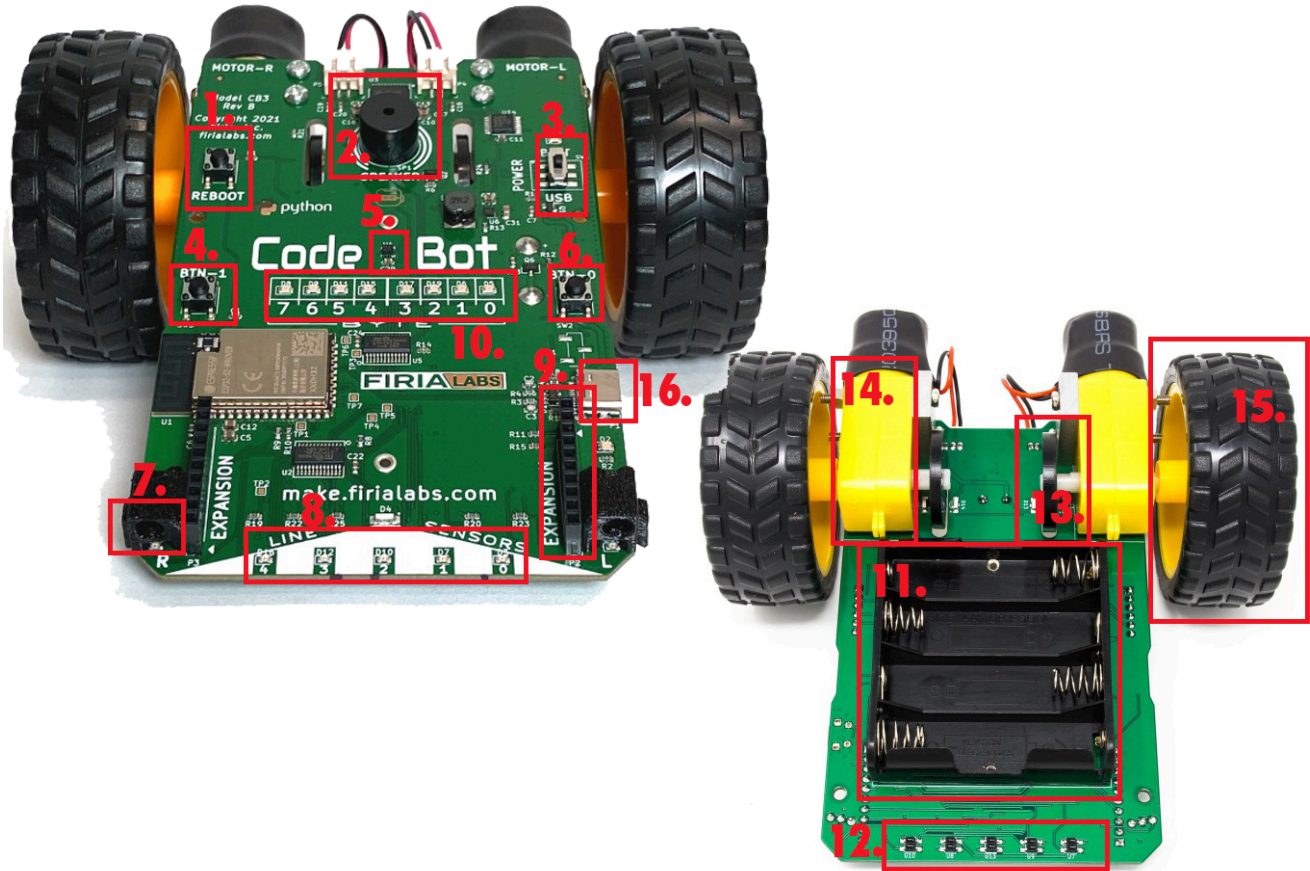
After Objective 10, submit your **LightsOn** program to the teacher.

This Mission went over only a few parts of CodeBot. Spend some time exploring your CodeBot. Can you find all the sensors, motors, LEDs, buttons, etc. Look on the top and flip it over to see underneath.

If you need to, review the inputs and outputs from the mission introduction.

When you are familiar with CodeBot and all its parts, go to the "Check your understanding" on the next page.

Label the parts of CodeBot. Indicate if they are used for input or output (or something else).



1. Reboot button	9. Expansion connector
2. Speaker	10. User LEDs
3. Power switch	11. Battery pack
4. Button 1	12. Line sensors
5. Accelerometer	13. Wheel encoders
6. Button 0	14. Motors
7. Proximity sensors	15. Wheels
8. Line sensor LEDs	16. USB connector

Parts of CodeBot:

- Accelerometer
- Expansion connector
- Battery pack
- User LEDs
- Wheel encoders
- Line sensor LEDs
- Line sensors
- Button 0
- Button 1
- Wheels
- USB connector
- Proximity sensors
- Reboot button
- Speaker
- Motors
- Power switch