

Cobot Troubleshooting:

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Customer Support - people who help customers with a company's products or services.

Customer support is to help customers solve their issues and have a positive experience

Troubleshooting - focuses on identifying the root cause of a problem rather than simply addressing the symptoms, then identifying a corrective action that will resolve the root cause

Ticketing System - a software tool that helps a business manage customer support requests by organizing, prioritizing, and resolving them

Job Outlook - the likelihood that the selected occupation will be available and hiring in the future

Engage

What do you think of when you hear the words "Customer Support?"

Answers will vary as this is highly subjective.

How might customer support differ for a robotic arm compared to a service like internet service?

Answers will vary, but could include that the robotic arm is a physical device versus a service like the internet, which is less tangible.

Explore

While robotic arms have a key role in today's lesson, we will explore the related career of Technical Support Specialist. After watching the video, find the following information about the Technical Support Specialist:

Education needed to be a Technical Support Specialist	Entry requirements vary for computer support specialists. User support specialists typically need to complete some college courses.
Skills Needed to be a Technical Support Specialist	Technical support specialists often work on complex problems, so they need to be able to find solutions.
Duties of a Technical Support Specialist	The support specialist helps users with computer hardware and software issues.
What kind of work environment does a Technical Support Specialist work in?	Generally, in an office environment. Since support services may need to be available 24 hours a day, some specialists work nights or weekends.
Average Salary in your state	Answers will vary by state, but median pay is \$60,810 per year
What is the job outlook for this career?	Overall employment of computer support specialists is projected to grow 6 percent from 2023 to 2033

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Elaborate

In this challenge, you will receive three different support tickets. You will need to resolve each ticket using the troubleshooting process.

Ticket 1: What is wrong with Evo?

A customer submits a support ticket reporting that their Evo is not connecting to their Editor when they click on the "Connect Evo" button in Ozobot Editor. Identify the most likely causes of this connection issue and describe the remedies for the issue.

Steps:

1. Is the Evo dead/low on battery?
 - a. Resolve by charging Evo for 1 hour with the included USB cable
2. Is the Evo turned on?
 - a. Resolve by pushing the power button on Evo.
3. Is Bluetooth activated on the device with Ozobot Editor open?
 - a. Resolve by turning on Bluetooth.
4. Is the computer trying to pair with the correct Evo?
 - a. Resolve by removing other Evos or turning on only one Evo at a time.

Ticket 2: Troubles with ORA Code

A customer submits a support ticket reporting that their ORA is running into errors when performing the code. A customer has submitted the code and setup and would like you to resolve their errors! Refer to the comments for each function to understand what each part should do!

Setup and Code:

Place a wooden cylinder, on end, on A1, center.

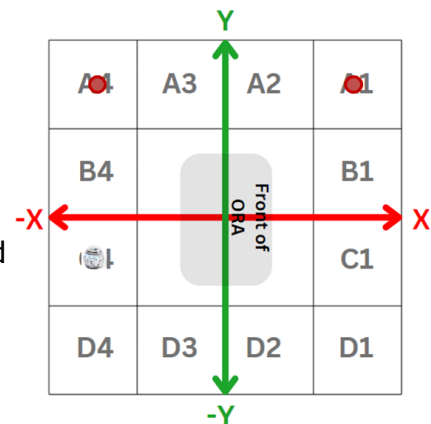
Place a wooden cylinder, on end, on A4, center.

Place Evo on C4, center.

[Link to "fixed" code](#)

Part 1: ORA is moving from A4 to D1 in a path through the base of the ORA.

- Resolve by either using the Joint movement type or the Move Safely code block.



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Part 2a: ORA collides with the cylinder in A1.

- Resolve by increasing the Z value when ORA moves to pick up the cylinder. The cylinders have an approximate height of 60mm.

Part 2b: ORA knocks over the cylinder in D1.

- Resolve by increasing the Z value when ORA moves the cylinder to D1. The cylinders have an approximate height of 60mm.

Part 3a: ORA does not pick up Evo.

- ORA moves to B1 to pick up Evo, change the coordinates to correspond to C4 to pick up Evo.

Part 3b: ORA moves Evo to the wrong location.

- ORA Moves Evo to D1 instead of D2. Change the coordinates to correspond to moving Evo to D2.

Ticket 3: Logic Problems?

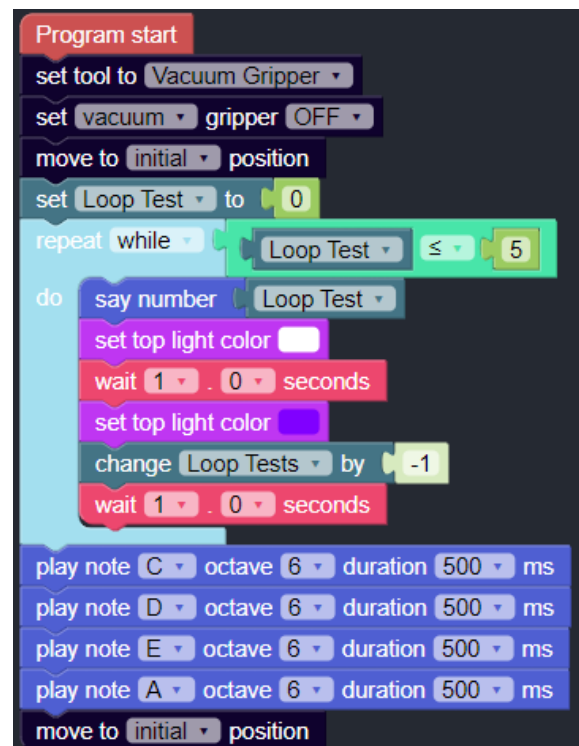
A customer submits a support ticket and has submitted a screenshot of the code in question. The customer is trying to get the code to perform a loop and then move on to the music, but the code stays in the loop and never leaves.

What suggestions can you give the customer to ensure their code is successful?

This code has a repeat-while loop that will continue until the variable Loop Test is greater than or equal to 5. The while loop begins at zero. Within the loop, the "Change Loop Test" block is decreasing the value of the variable "Loop Test" by 1 each time.

Resolve by removing the "-" from the Loop Test code block.

Ticket 3 [Code Snapshot](#)



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Evaluate

Please answer the following prompts.

Remember to include your **name** and **date** on this paper!

1. After learning the troubleshooting process, how could you apply this to situations other than customer support?

Answers will vary but could include evaluating a broken computer at their house or diagnosing why the lawnmower may not be starting.

2. Which support ticket was the hardest to resolve/fix? What about that problem made it most difficult?

Answers will vary, but likely Ticket #2 since there were multiple parts to fix and the students did not see the next error until the one before was resolved.

3. Does the job of Technical Support Specialist interest you? After learning about helping other people solve problems in this lesson, would this be a path you may consider? Why or why not?

Answers will vary, but the career could interest students who enjoy tinkering!