

ENJOY AI 2024
INTERSTELLAR JOURNEY

CLOSING CEREMONY OF SPORTS

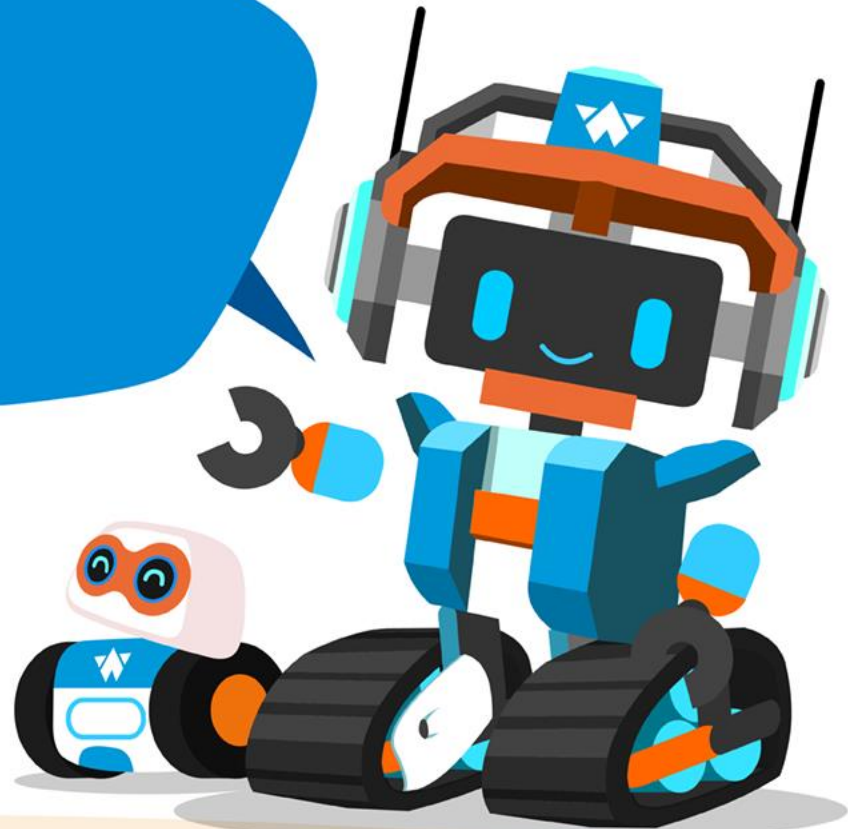


Task Analysis (Part 3)

Objectives:

1. In-depth analysis of task requirements and scoring rules
2. Design solutions
3. Write programs to finish the tasks

5+



Review



We have finished two of the eight tasks in the previous lesson.
Now, let us go on with other tasks!



Review

1. In the previous lesson, what problems did we meet when doing tasks?
2. Why do I need to add a waiting block before and after each action when coding the robot?

Challenges



Challenges



In this lesson, we'll learn the other two tasks:
artistic performance and medal presentation.



Challenges



To watch detailed rule analysis, go to
<https://www.youtube.com/watch?v=oitiXwSqGBM>

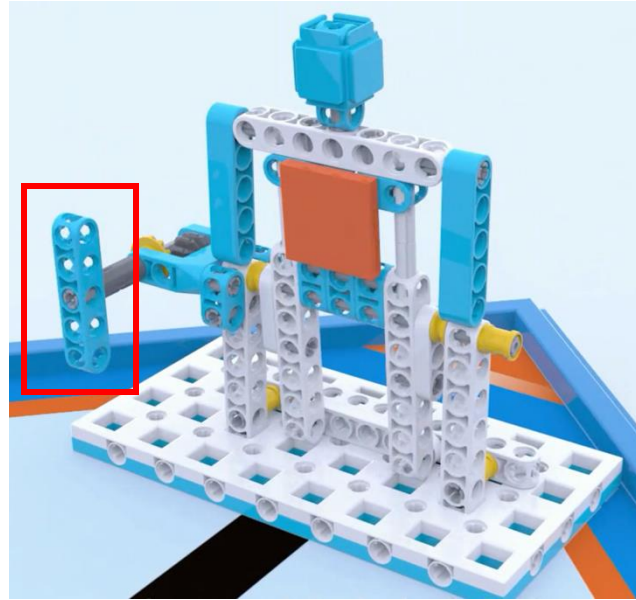
To watch a demo, go to
<https://www.youtube.com/watch?v=jn6KJHc9a2E>



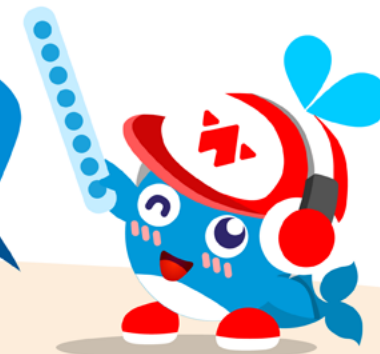
Task Analysis: Artistic Performance



Challenges



As shown in the previous video, we need to turn the lever to let the dancer stand up.

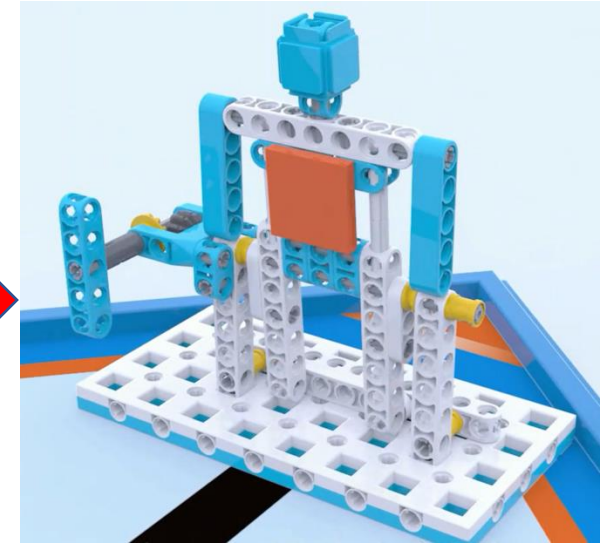
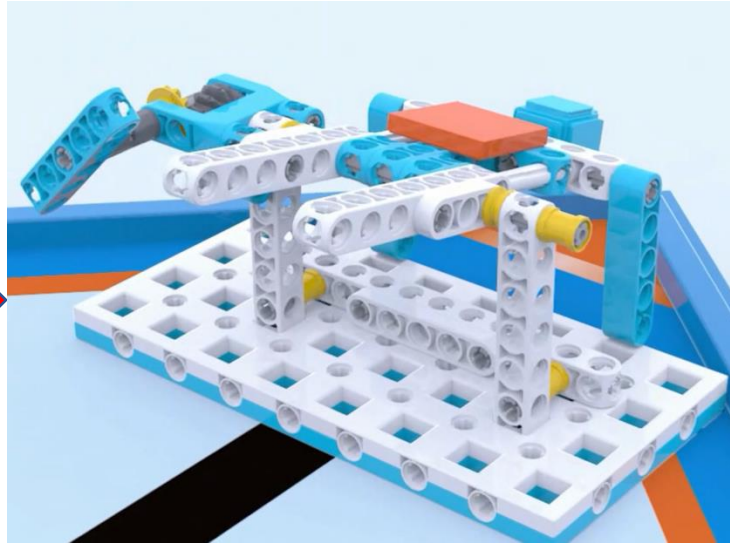
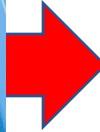
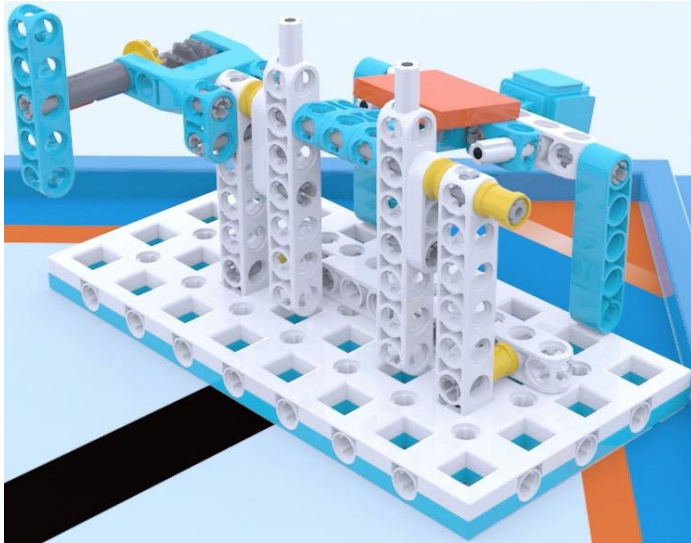


Challenges



Everyone, before we start practicing this task, let's learn how to win points in this task!

Challenges



We need to let the dancer do the following things to win full points in this task:

- (1) Turn its legs counterclockwise to a certain degree to lift the legs.
- (2) Turn its body clockwise to a certain degree to lift its body.

Challenges



So, how can we build our robot? What parts do we need?

Challenges

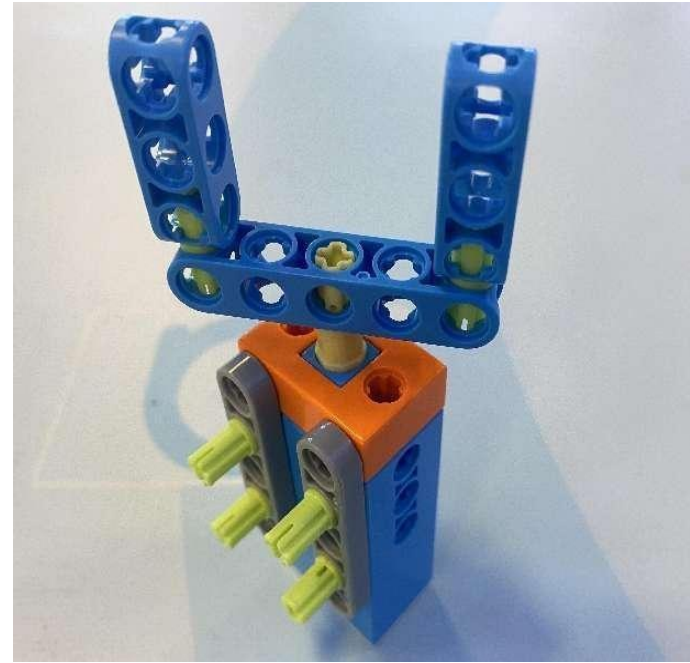
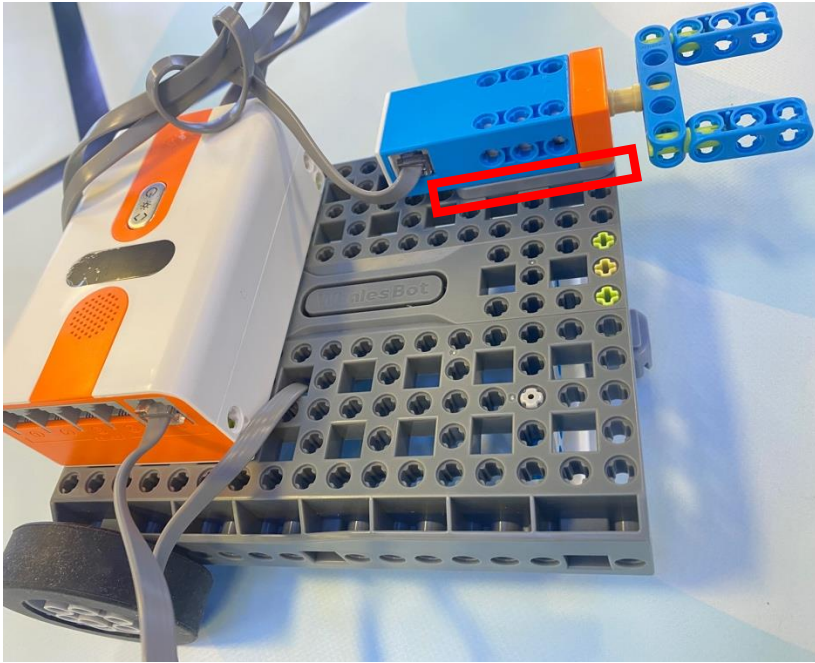


The first task is similar to one we did before. The key point is to turn the lever.
So, how can the robot do that? Let's think about it!

Unleash your imagination and try it out!

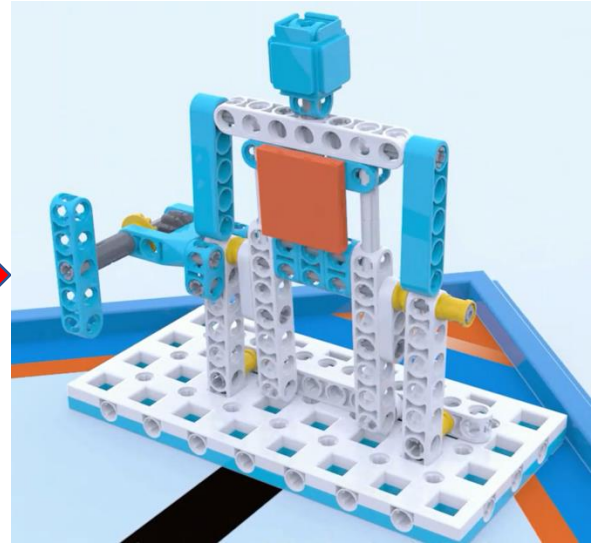
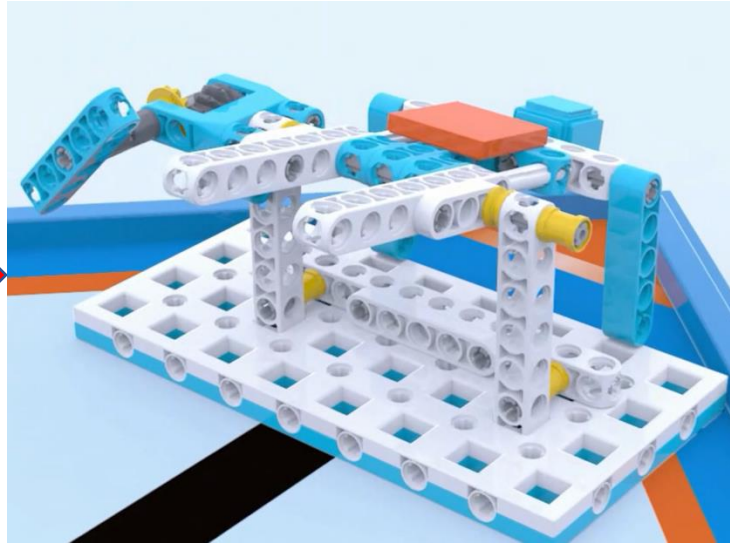
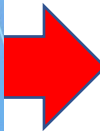
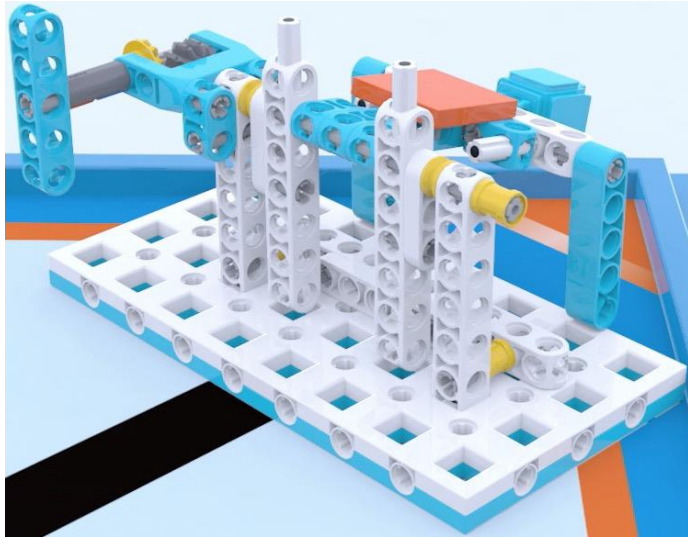


Challenges



Here's our solution. Let's do it!

Challenges



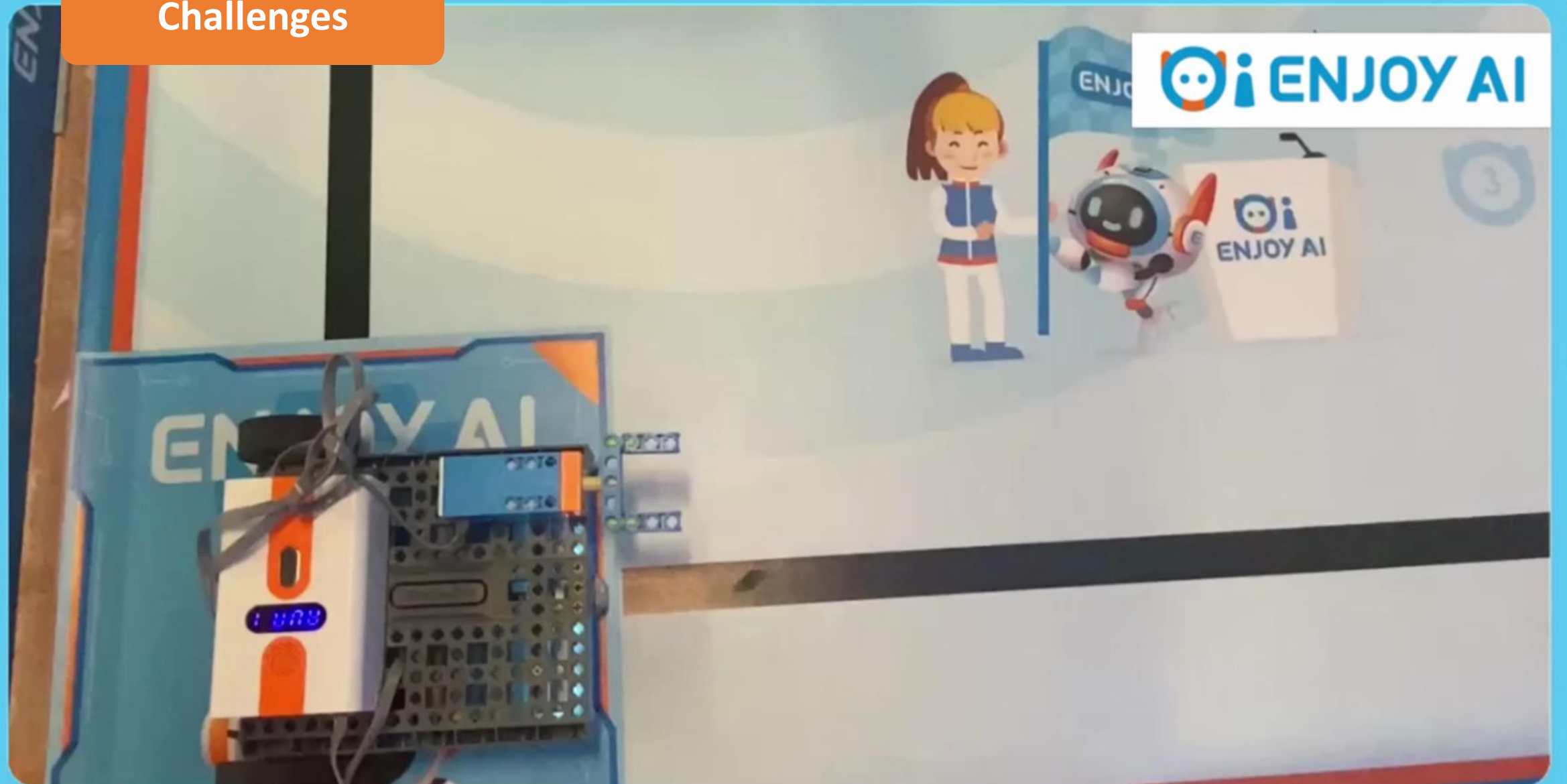
Try to write a program to complete this task!

Challenges

The following video provides a demo of this task.

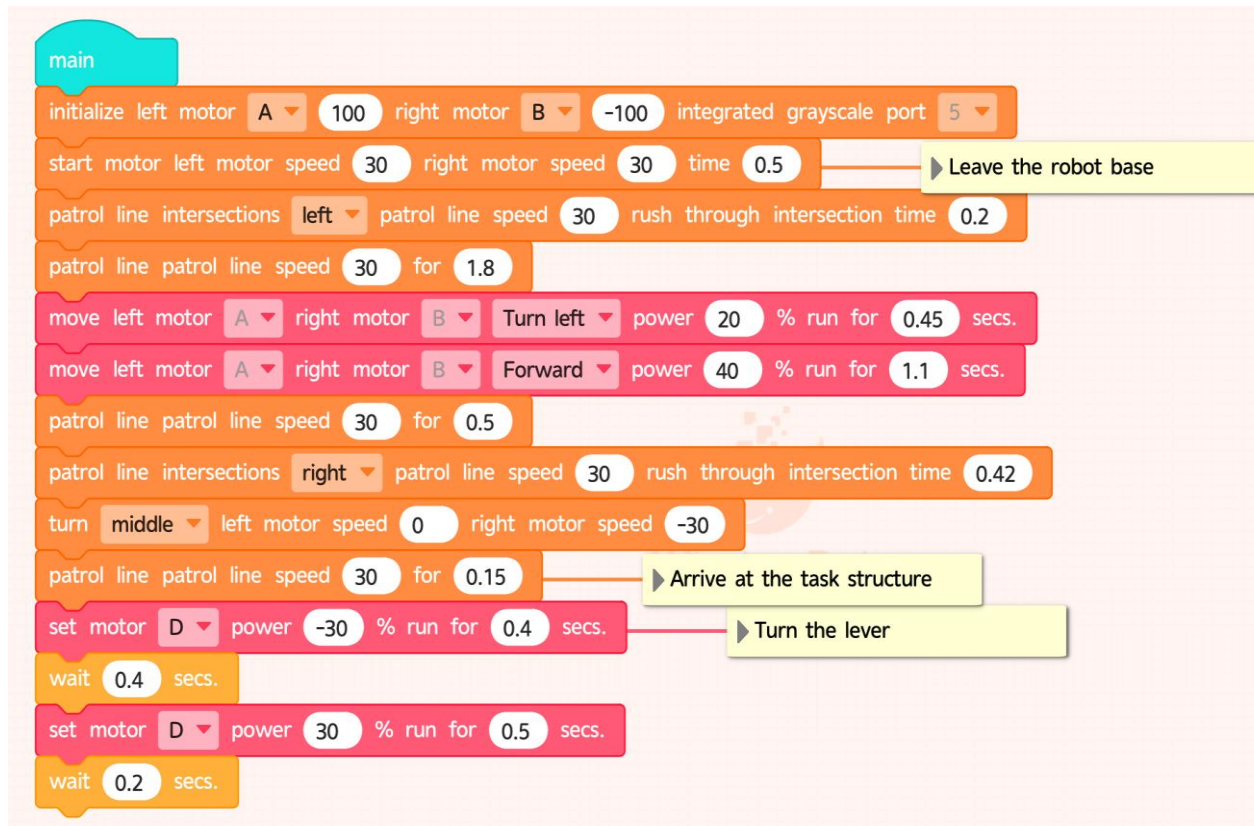


Challenges



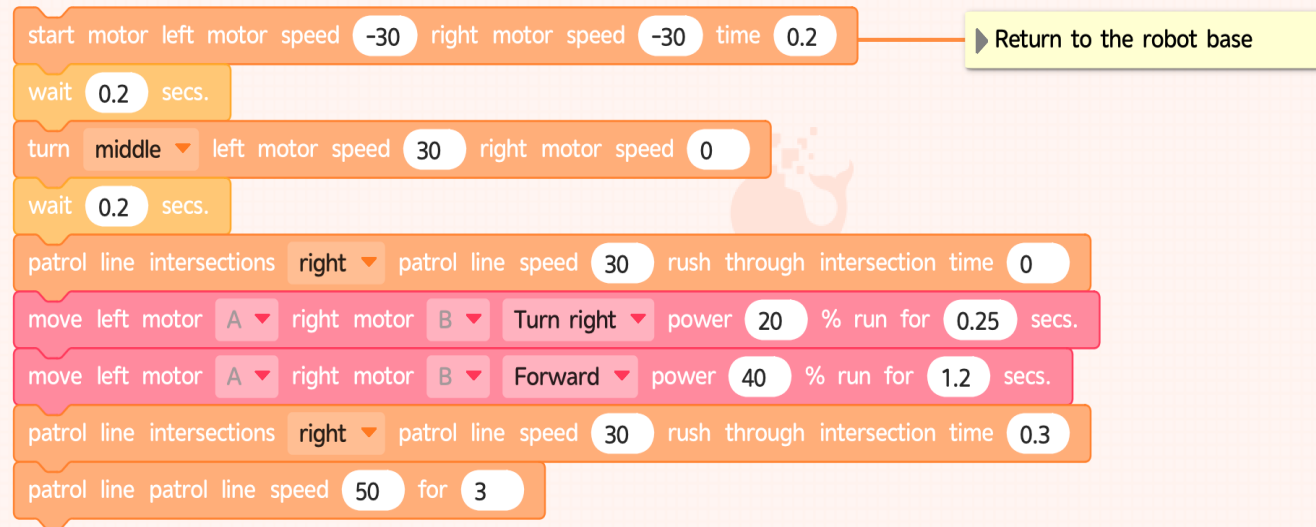
Challenges

Sample Program (Part 1)



Challenges

Sample Program (Part 2)

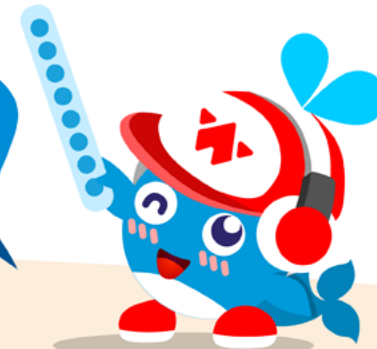


Challenges

Challenges accepted!



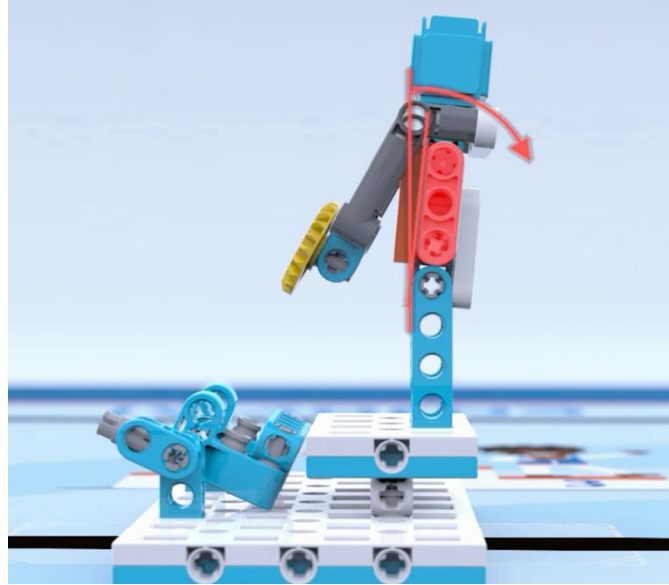
Congratulations! You have done this task! Let's go on with the next task!



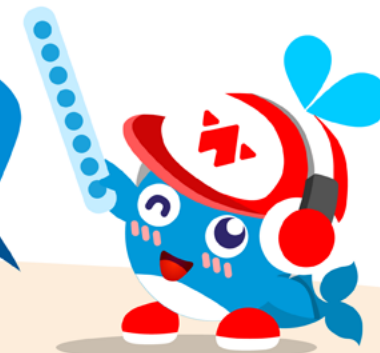
Task Analysis: Medal Presentation



Challenges



As shown in the previous video, the athlete needs to stand straight and wear the medal at the end of this task.

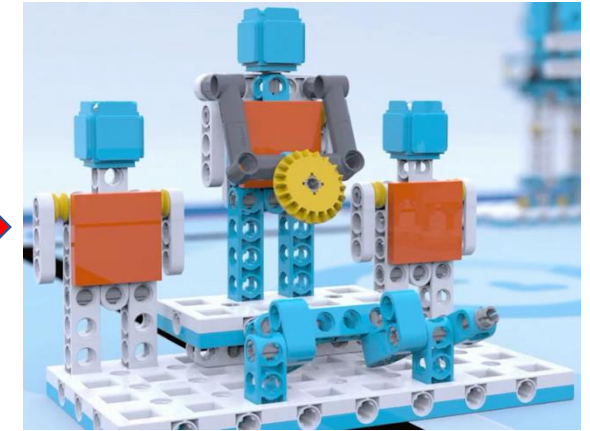
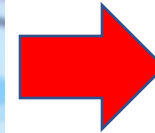
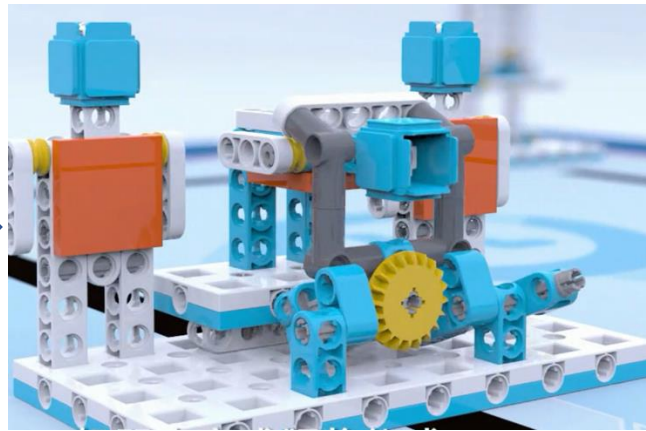
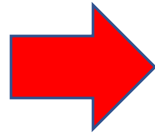
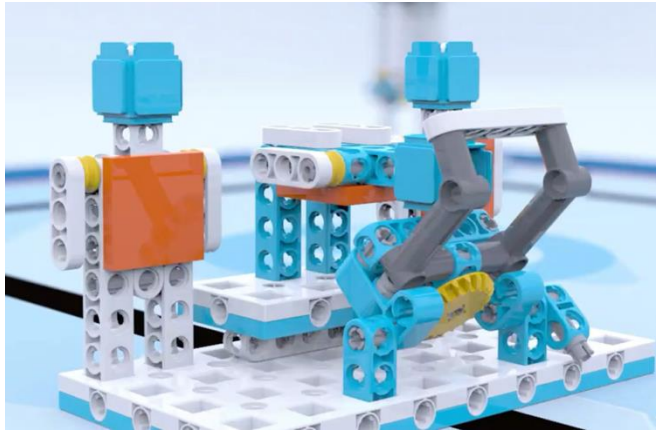


Challenges



Everyone, before we start practicing this task, let's learn how to win points in this task!

Challenges



If the arm-to-vertical angle is or exceeds 0° and a medal is draped around the neck of the athlete, you get 50 points.

Challenges



So, how can we build our robot? What parts do we need?

Challenges

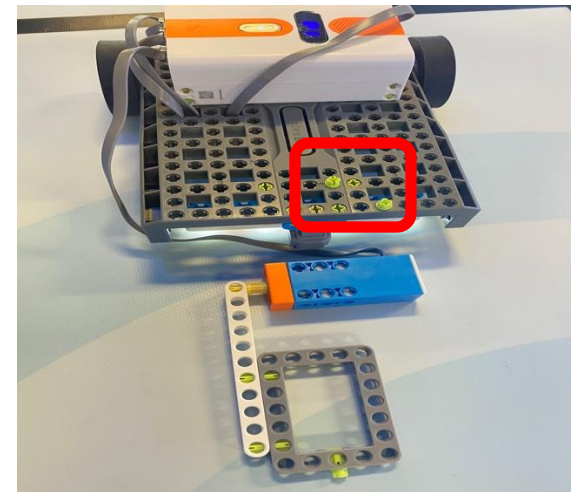
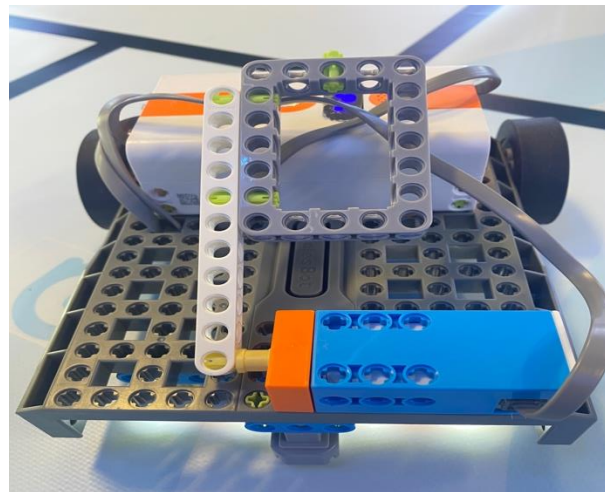


This task is similar to the second task of the previous lesson. The key point is to lift and push the task structure. So, we need a device that helps do that.

Let's build one!

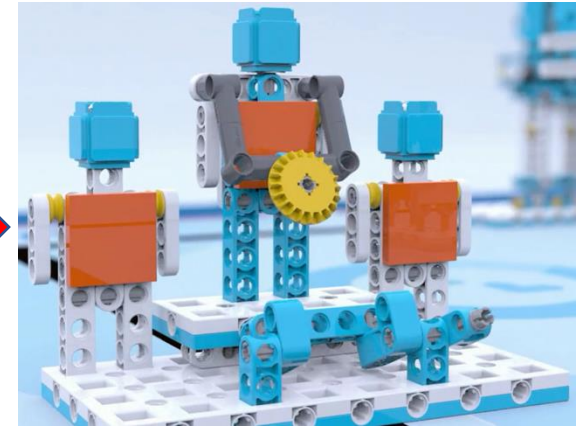
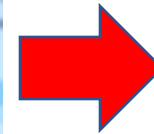
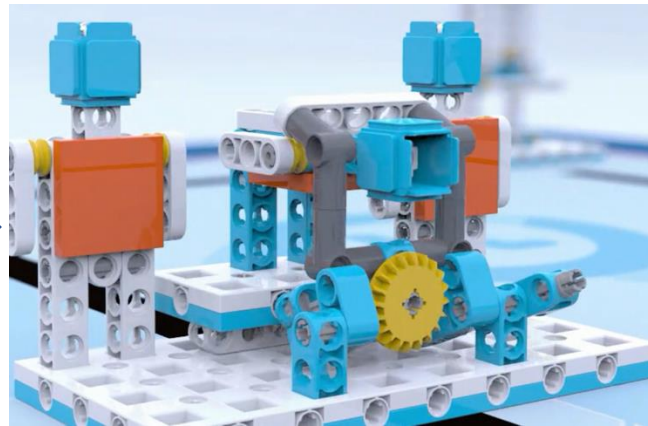
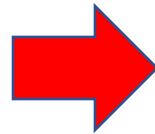
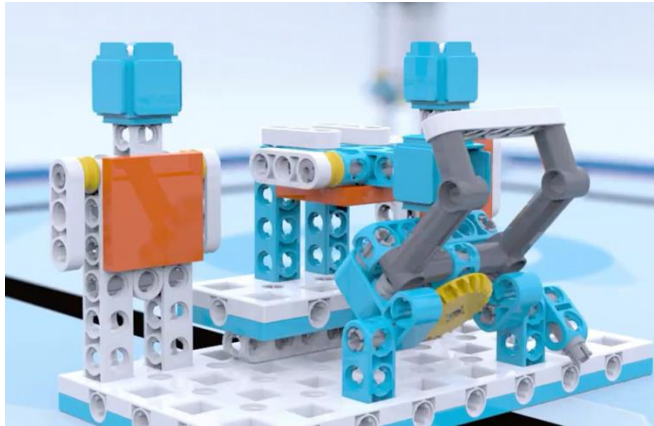


Challenges



Here's our solution. Let's do it!

Challenges



Try to write a program to complete this task!

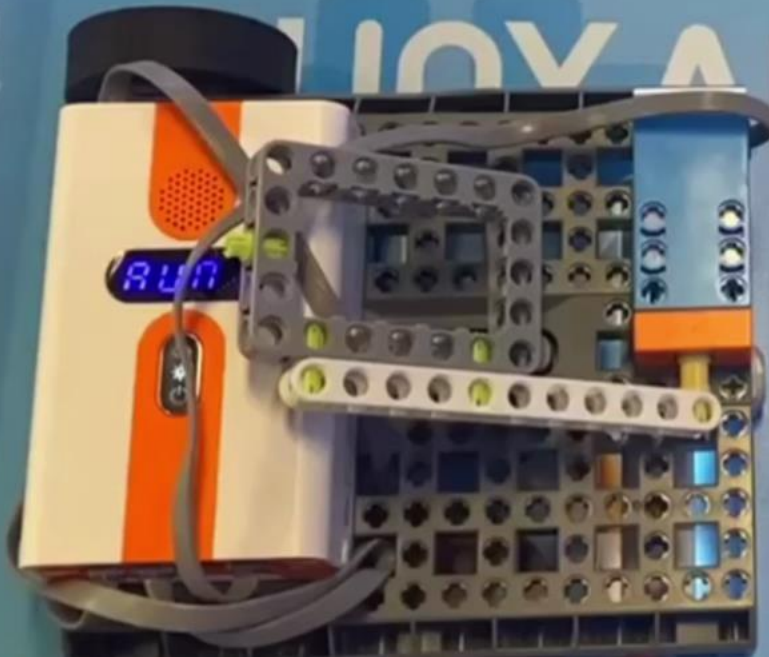
Challenges

The following video provides a demo of this task.



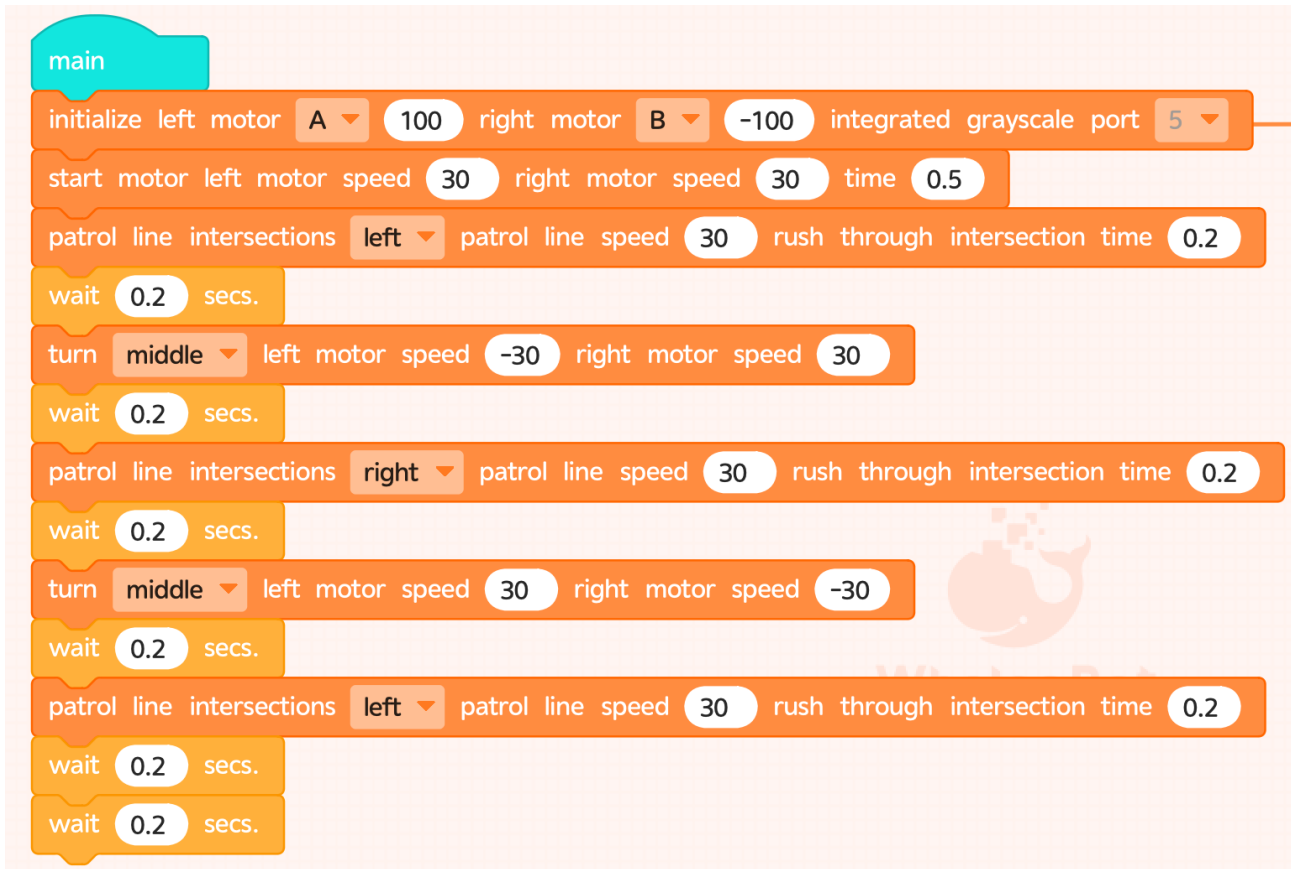
Challenges

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Challenges

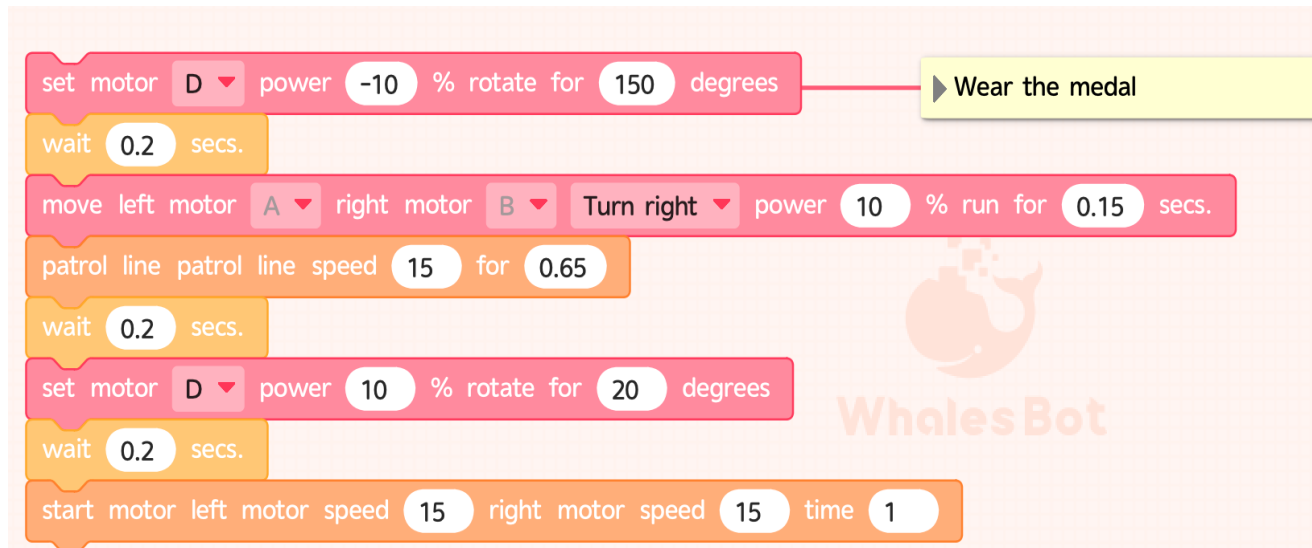
Sample Program (Part 1)



Set off

Challenges

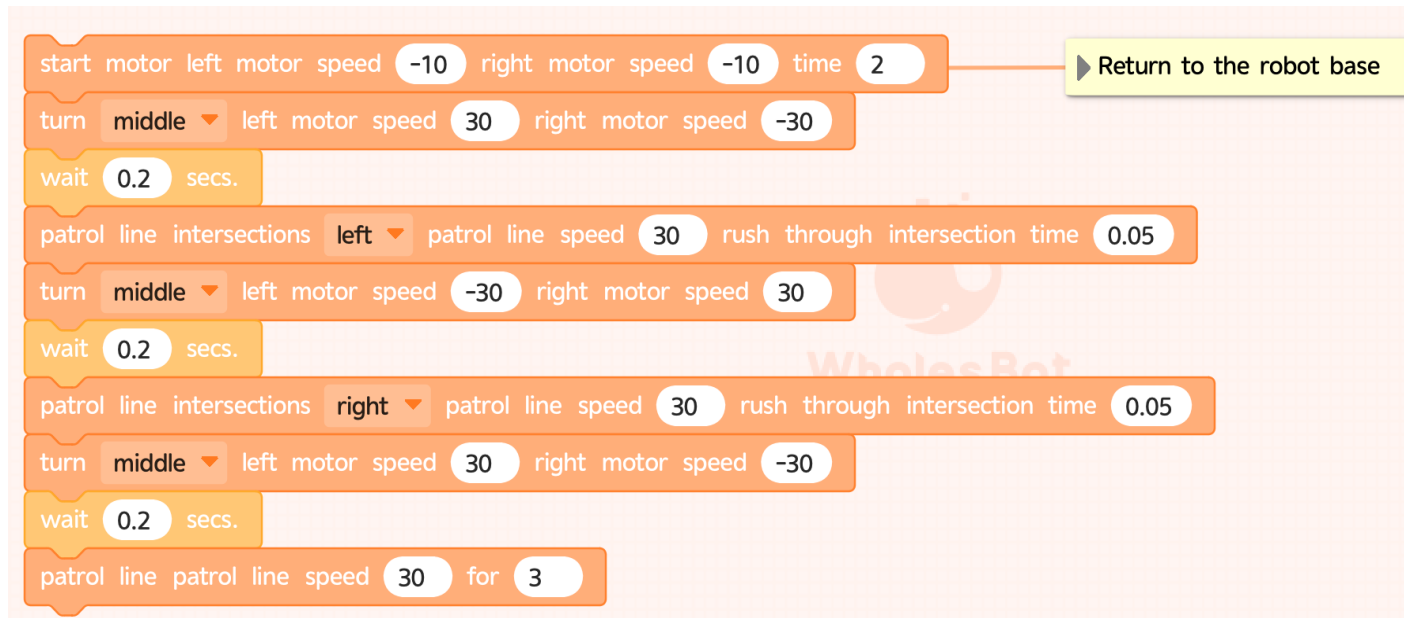
Sample Program (Part 2)



Medal presentation

Challenges

Sample Program (Part 3)



Return

Challenges

Challenges accepted!



Great! You've finished two tasks today. Let's spend the rest of the time practicing the two tasks and see if we can finish them more quickly!

Try it out!



Let's try to finish these two tasks and then let the robot return to the base!



See you next time!

