

VEX AIM:

Getting Started with VEX AIM

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Agenda

- Introduction to VEX AIM
- Drive mode
- Button Coding
- VEXcode AIM Blocks
- Resources
- Q&A

Why Teach CS with a Robot?

```
for i in range(5):  
    print(2 ** i)
```

```
1  
2  
4  
8  
16
```

Why Teach CS with a Robot?

```
for repeat_count in range(4):  
    robot.move_for(200, 0)  
    robot.turn_for(RIGHT, 90)
```

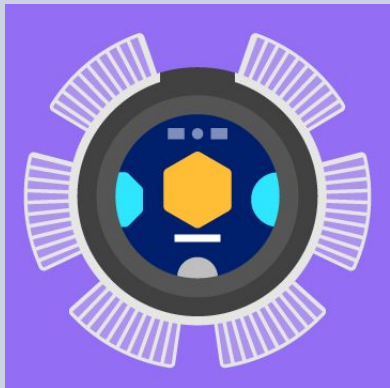


What is VEX AIM?



Features

LED



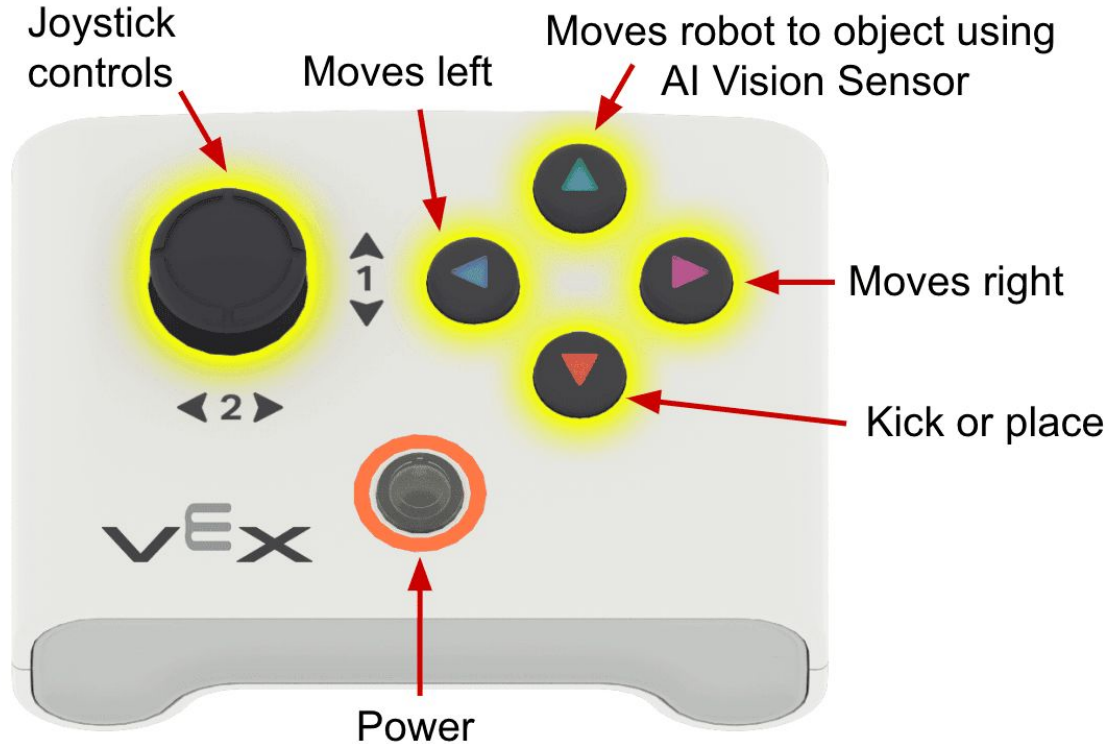
AI Vision



Kicker



Features



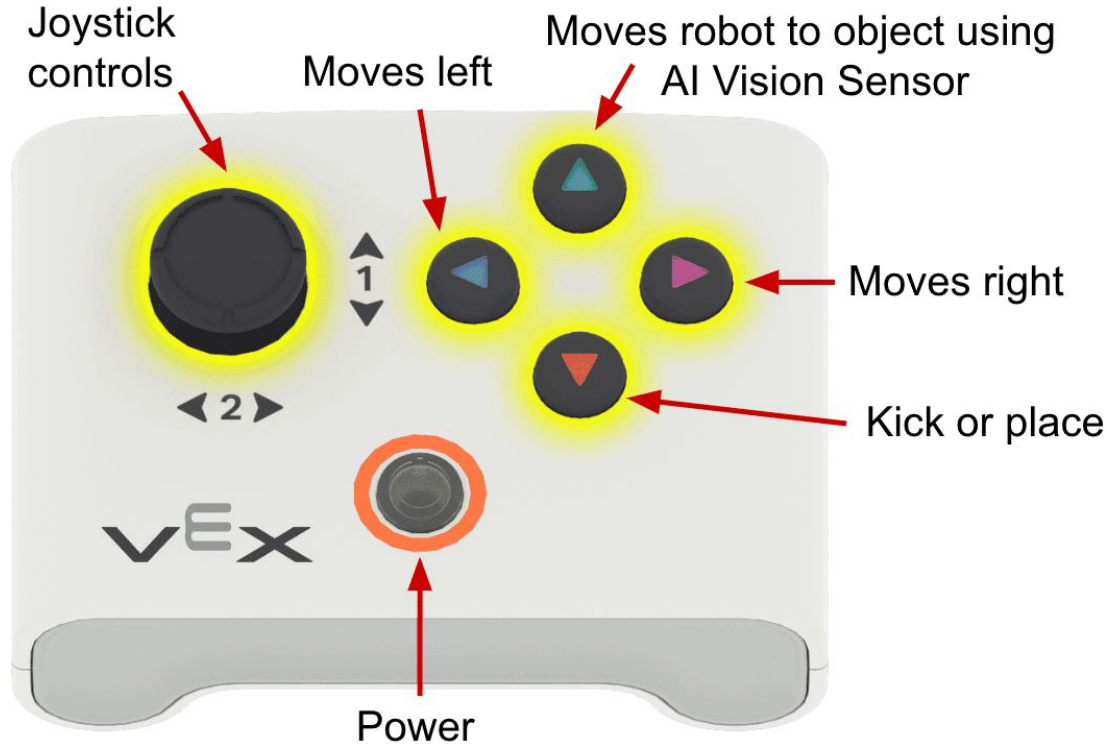
Drive mode



Drive mode



Features



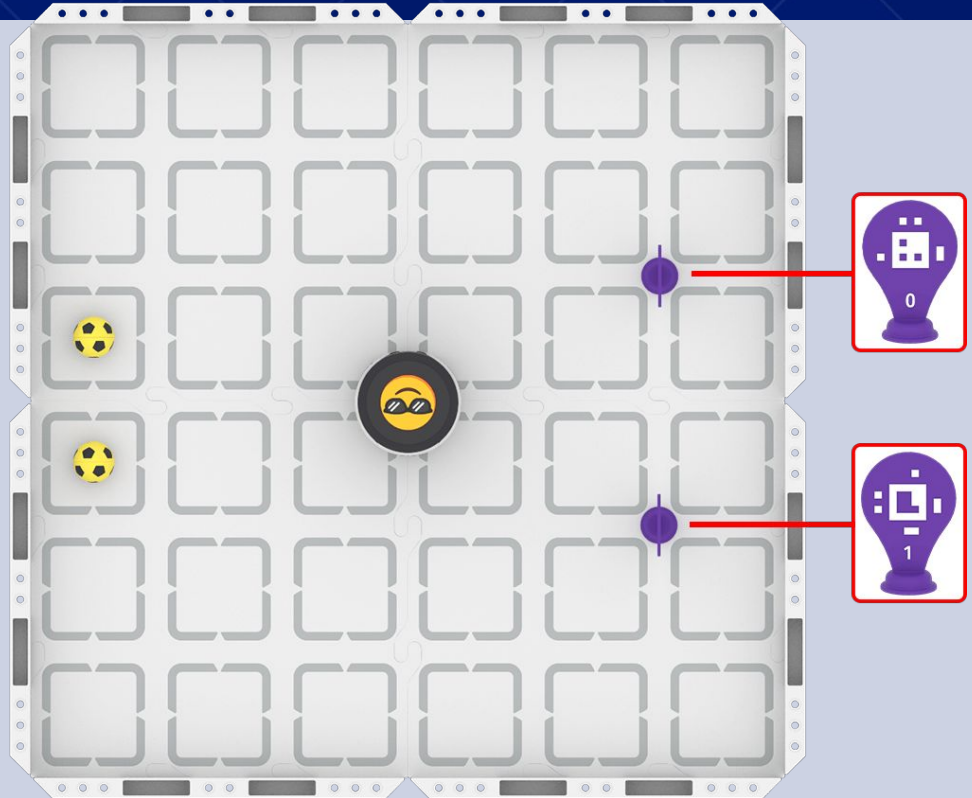
Drive mode

UP button

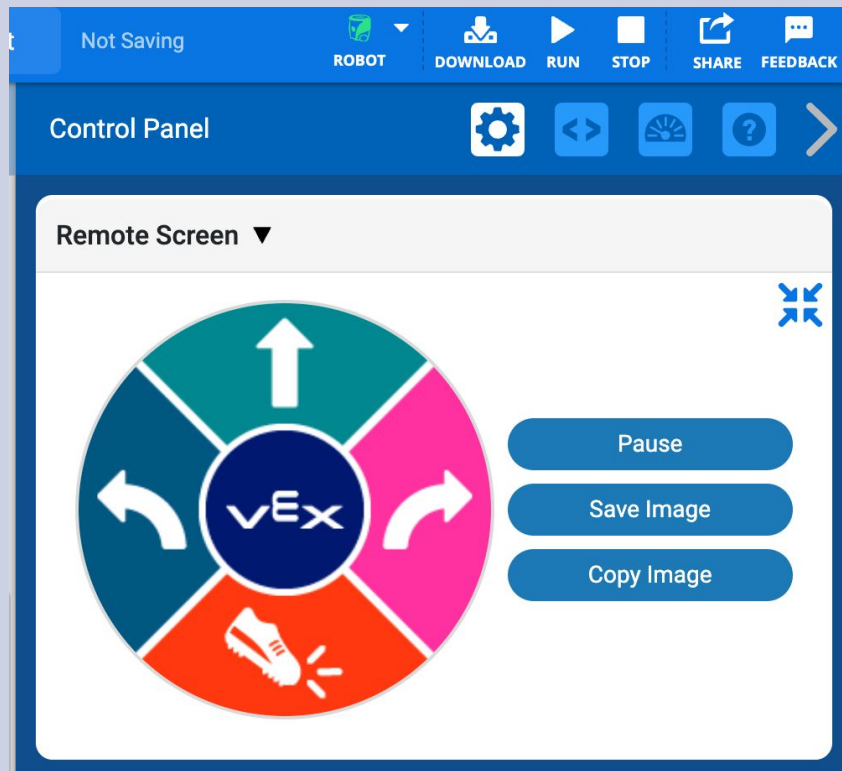


Drive mode

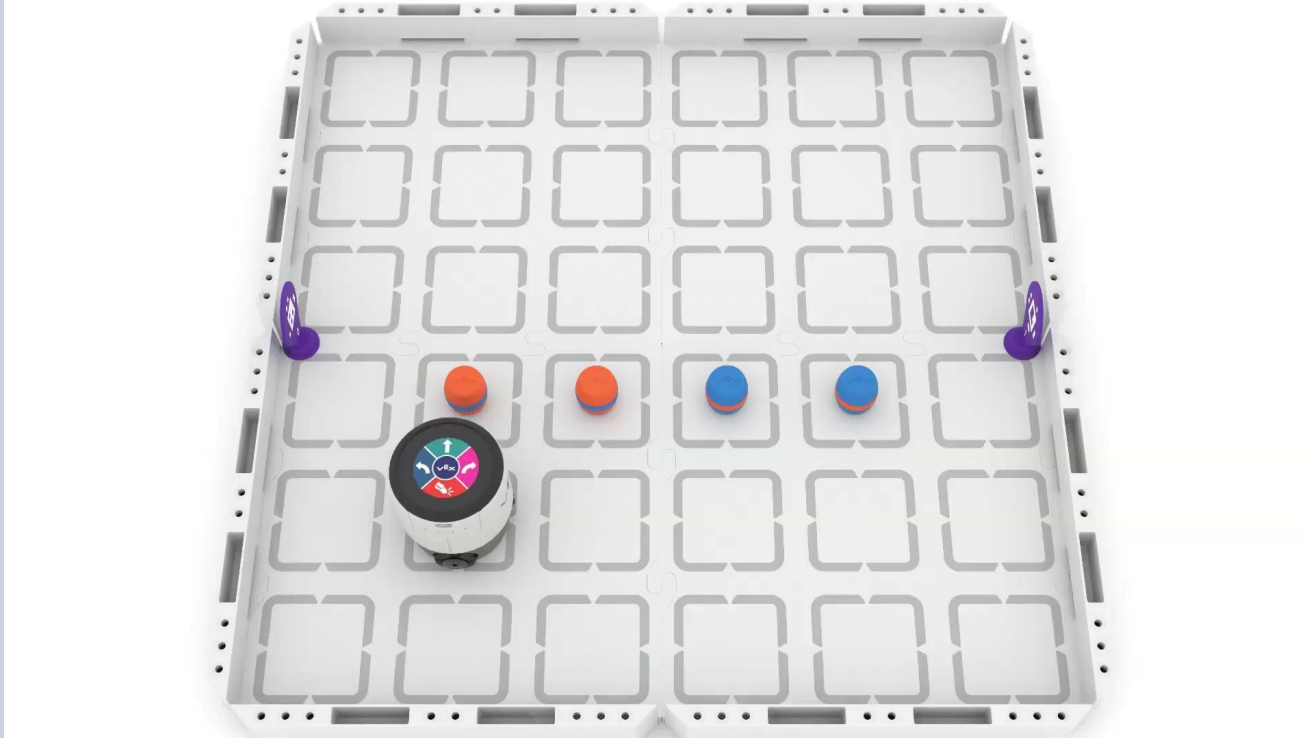
Drive the robot to kick both balls into the goal in as few attempts as possible.



Button Coding

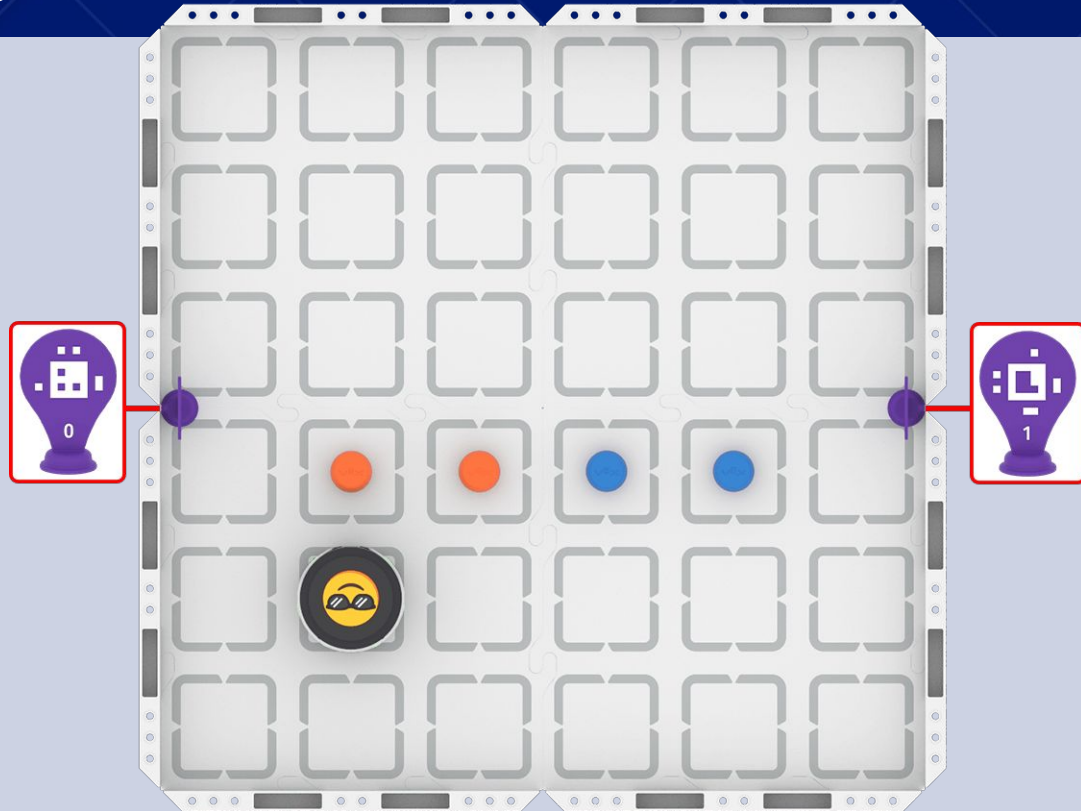


Button Coding



Button Coding

Place two blue barrels on one side and two orange barrels on the other.

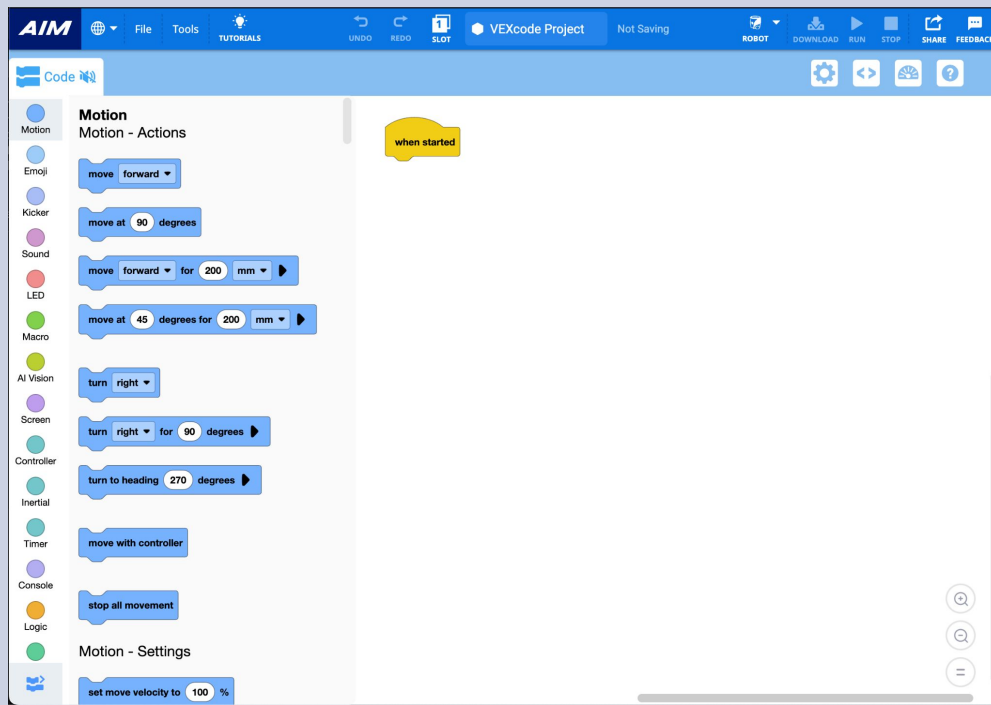


Mid-Workshop Reflections

How does driving the robot first
help break down the steps
needed for coding?

VEXcode AIM

codeaim.vex.com



Basic Movement

Motion

Emoji

Kicker

Sound

LED

Macro

AI Vision

Screen



Motion

Motion - Actions

move forward ▼

move at 90 degrees

move forward ▼ for 200 mm ▼ ▶

move at 45 degrees for 200 mm ▼ ▶

turn right ▼

turn right ▼ for 90 degrees ▶

Macro Blocks

 Code 


Motion


Emoji


Kicker


Sound


LED


Macro

Macro

act happy ▼

turn right ▼ until sports ball ▼ found

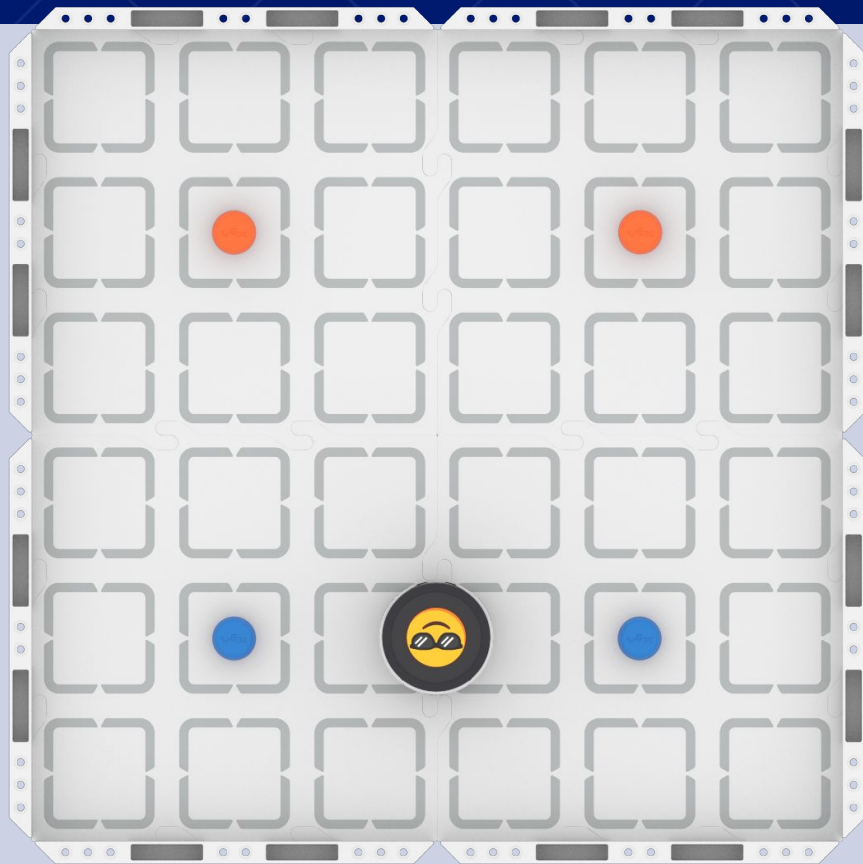
get sports ball ▼

move to AIM robot ▼

AI Vision

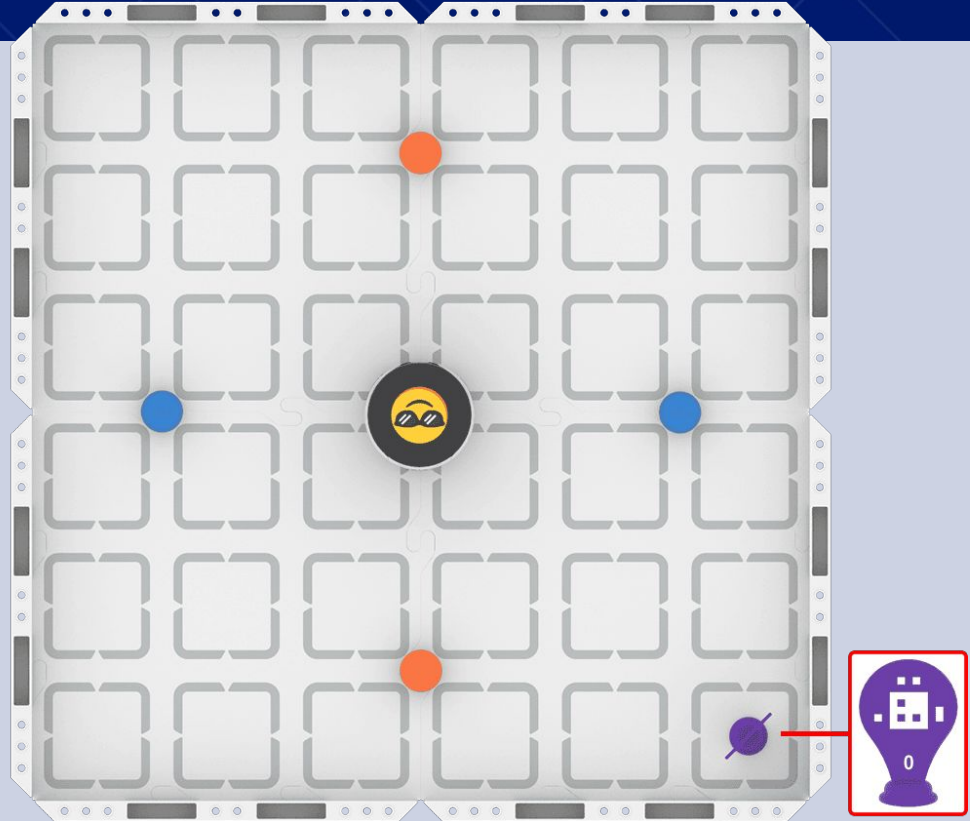
VEXcode AIM

Drive the robot around all four sides of each barrel on the field and return to the starting location as quickly as possible.



Challenge

Code the robot to deliver all four barrels to AprilTag ID 0 as quickly as possible.



Robot to Robot Communication

Message

- Motion
- Emoji
- Kicker
- Sound
- LED
- Message**
- Macro
- AI Vision
- Screen
- Controller
- Inertial

send message message

send message message with data 0

get latest message

get latest message with data

latest message

latest data

linked robot name

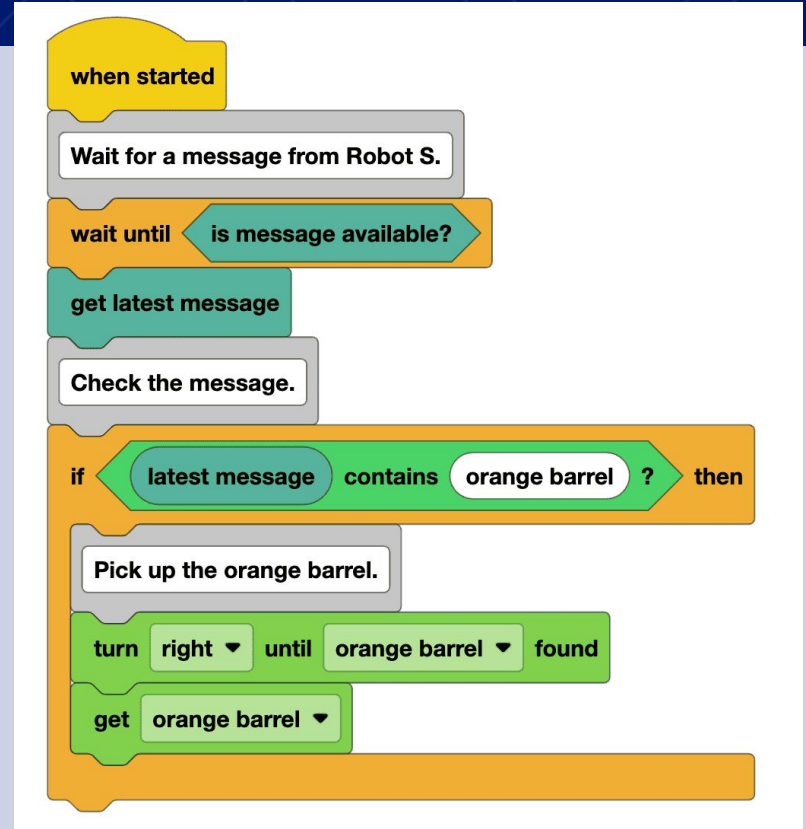
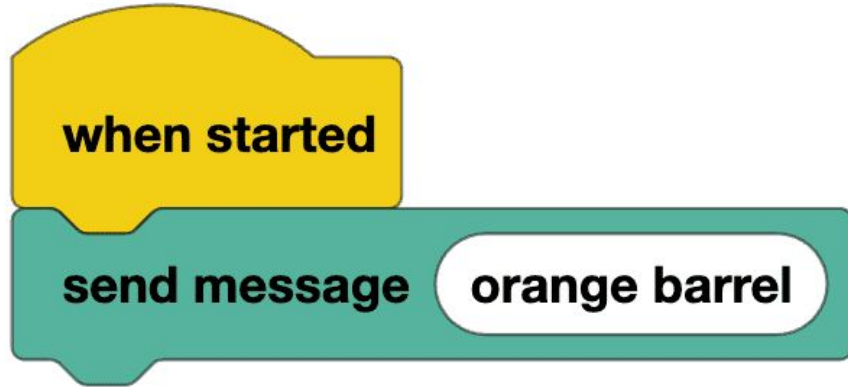
is message available?

is connected?

Partner Dance



Partner Dance



Partner Dance

when controller button



pressed



Resources

- AIM Intro Course & Activities
 - education.vex.com
- PD+ VEX AIM Educator Certification Course
 - pd.vex.com
- VEXcode API Reference
 - api.vex.com
- teachaim.vex.com

Stay Connected

Let's Connect!

X (Twitter): @jimmylin

VEX PD+ Community: @Jimmy_Lin

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Schedule a **1-on-1 Session** in VEX PD+