Rotational Motion - Interactive Challenge Notebook

This notebook will guide you through controlling an **omni-wheel robot** step by step. You'll see an **example**, then try to complete a similar challenge on your own!

Learning Objectives

- Understand how to move the robot using Python commands.
- Experiment with different speeds, directions, and durations.
- Observe and adjust movement patterns to improve control.

In [ ]:
```
import sys
import os
import time

# Add parent directory to the Python path
sys.path.insert(0, os.path.abspath('..'))

import rclpy
from controllers.omni_robot_controller import OmniWheelControlNode  # Import


# Initialize ROS2 node
rclpy.init()
node = OmniWheelControlNode()
```

Challenge: User Input and Functions

For this challenge you are going to ask a student to enter the angle (in degrees) they would like the robot turn between 10 and 360 degrees

In [ ]:
```
# Challenge
# For this challenge you are going to ask the user to input in an angle in d
# You need to convert this degree measurement into radians (306 degrees = 2*
# You should then have the robot turn those degrees using a speed of 1 radia
```

Shutting Down the Node

Once you're done, **shutdown the node** properly.

In [ ]:
```
node.destroy_node()
rclpy.shutdown()
```