Exercise: The Talker–Listener Example (Hello World in ROS 2)

- Objective

Create a complete ROS2 system with a Talker node that publishes messages and a Listener node that subscribes to those me

- Concept Explanation

In ROS 2, robots are built as a collection of **nodes** , small programs that each perform a specific function.
These nodes communicate by **sending and receiving messages** through **topics**.

To demonstrate this, ROS 2 provides a simple example known as the **Talker–Listener**.
It's the "Hello World" of ROS 2 communication.

- The **Talker** node acts as a **publisher**. It continuously sends out messages ,for example, "Hello World: 1", "Hello World: 2", etc.

- The **Listener** node acts as a **subscriber**. It receives the messages published by the Talker and displays them on the screen.

Imagine two robots:

- Robot A (the Talker) keeps saying, *"I'm here! I'm here!"*

- Robot B (the Listener) keeps responding by printing what it hears.

This is how **data exchange** happens in ROS 2 between components such as sensors, controllers, or AI modules.