Configure the Development Environment in Ubuntu 24.04

Update the System

Before installing any new package, make sure your system is up-to-date.

```
Unset
sudo apt-get update && sudo apt-get upgrade
```

Terminator

Terminator is a very flexible alternative to the standard Ubuntu terminal. To install it, you can use the command:

```
Unset
sudo apt-get install terminator
```

Install ROS 2 packages

In many lessons, we will use some amazing ROS 2 Packages available as Open Source. You will need to install all of them on your PC.

```
Unset
sudo apt-get install ros-jazzy-ros2-control
sudo apt-get install ros-jazzy-ros2-controllers
sudo apt-get install ros-jazzy-xacro
sudo apt-get install ros-jazzy-ros-gz-*
sudo apt-get install ros-jazzy-*-ros2-control
sudo apt-get install ros-jazzy-joint-state-publisher-gui
sudo apt-get install ros-jazzy-tf-transformations
sudo apt-get install ros-jazzy-moveit*
```

Install Python Packages

Finally, to develop the interface between our robot and the Alexa voice assistant, we need some additional Python packages.

```
Unset
sudo apt-get install python3-pip
sudo apt-get install python3-transforms3d
sudo apt-get install python3-flask
pip3 install pyserial --break-system-packages
pip3 install flask-ask-sdk --break-system-packages
pip3 install ask-sdk --break-system-packages
```

Install Additional Packages

In the final section of the course, we are going to build a real robot! For this reason, we are going to establish the communication between the Arduino and ROS 2 using the Serial protocol and the libserial package.

```
Unset
sudo apt-get install libserial-dev
```