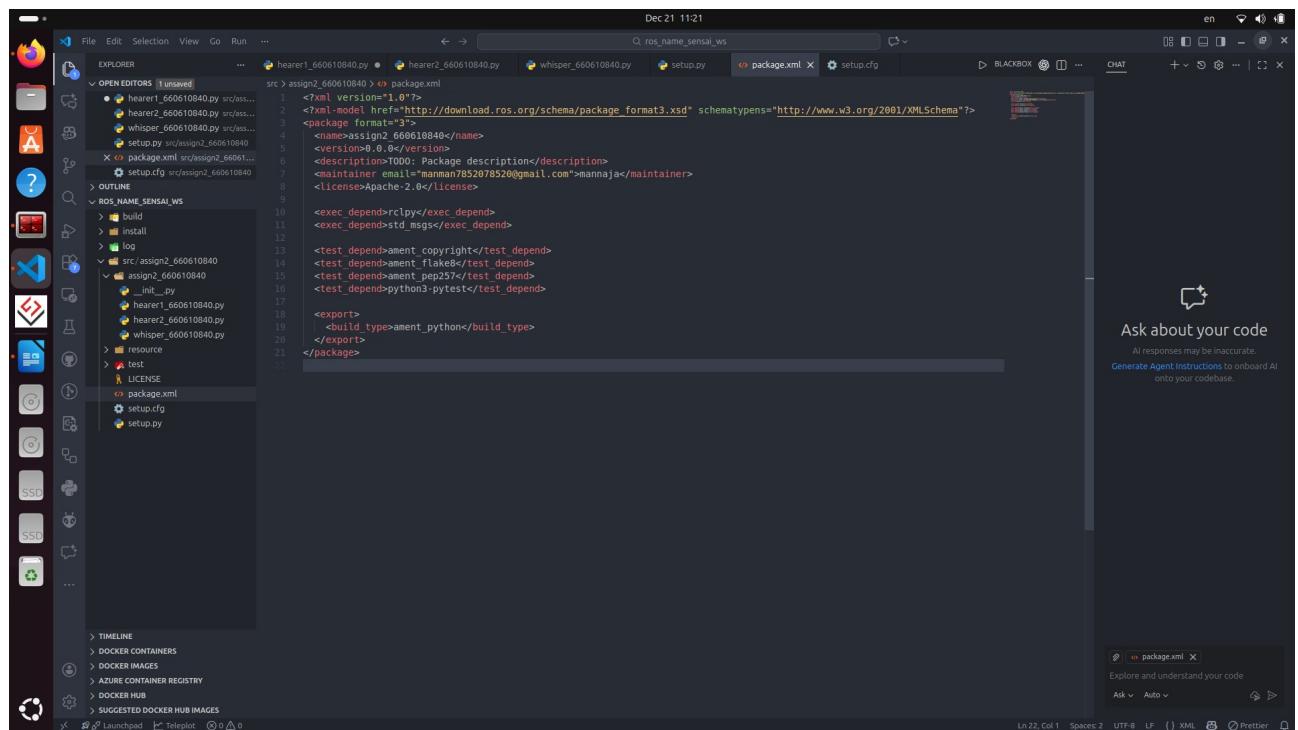


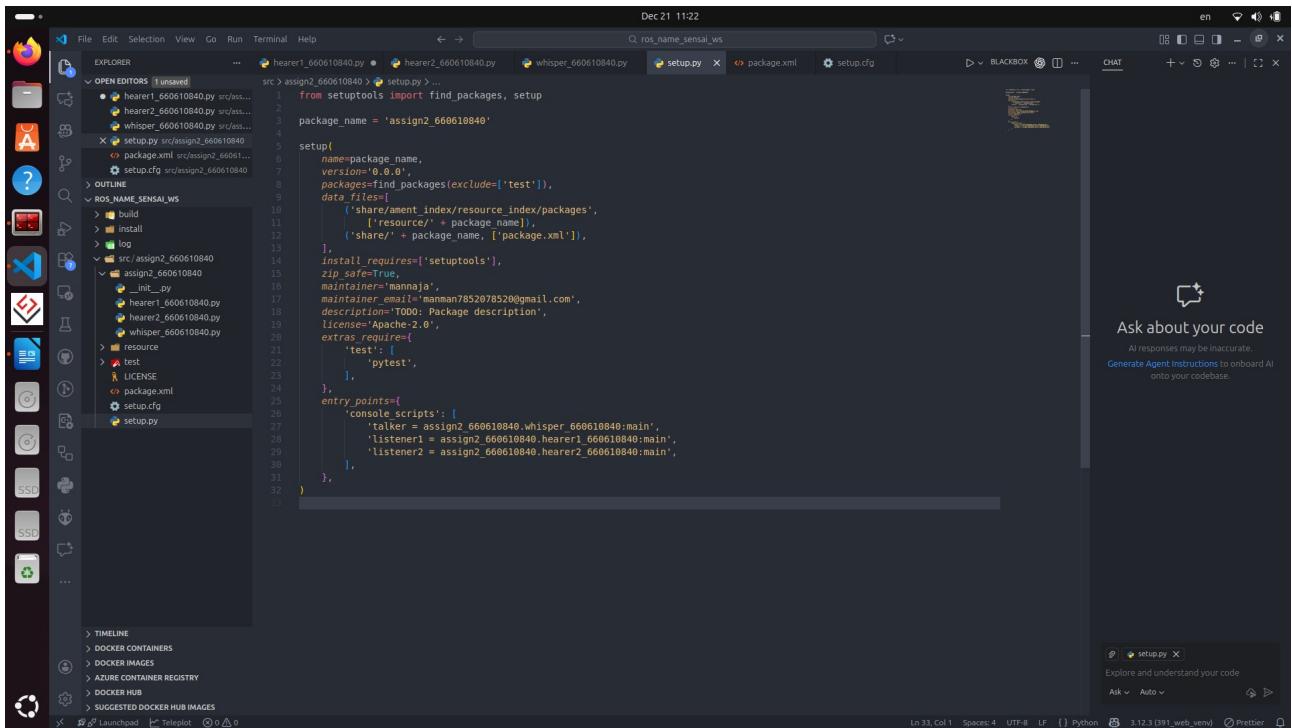
directory ของที่อยู่ไฟล์ source code

```
mannaia@mannaja:~/study/ros_name_sensai_ws/src/assign2_660610840/assign2_660610840
mannaia@mannaja:~/study/ros_name_sensai_ws/src/assign2_660610840/assign2_660610840 79x17
(391_web_venv) mannaia@mannaja:~/study/ros_name_sensai_ws$ ls
build install log src
(391_web_venv) mannaia@mannaja:~/study/ros_name_sensai_ws$ cd src/assign2_66061
0840/
(391_web_venv) mannaia@mannaja:~/study/ros_name_sensai_ws/src/assign2_660610840
$ ls
assign2_660610840 LICENSE package.xml resource setup.cfg setup.py test
(391_web_venv) mannaia@mannaja:~/study/ros_name_sensai_ws/src/assign2_660610840
$ cd assign2_660610840/
(391_web_venv) mannaia@mannaja:~/study/ros_name_sensai_ws/src/assign2_660610840
/assign2_660610840$ ls
hearer1_660610840.py hearer2_660610840.py __init__.py whisper_660610840.py
(391_web_venv) mannaia@mannaja:~/study/ros_name_sensai_ws/src/assign2_660610840
/assign2_660610840$
```

code 7wā package.xml



code ទូទៅ setup.py ក្នុង CmakeLists.txt



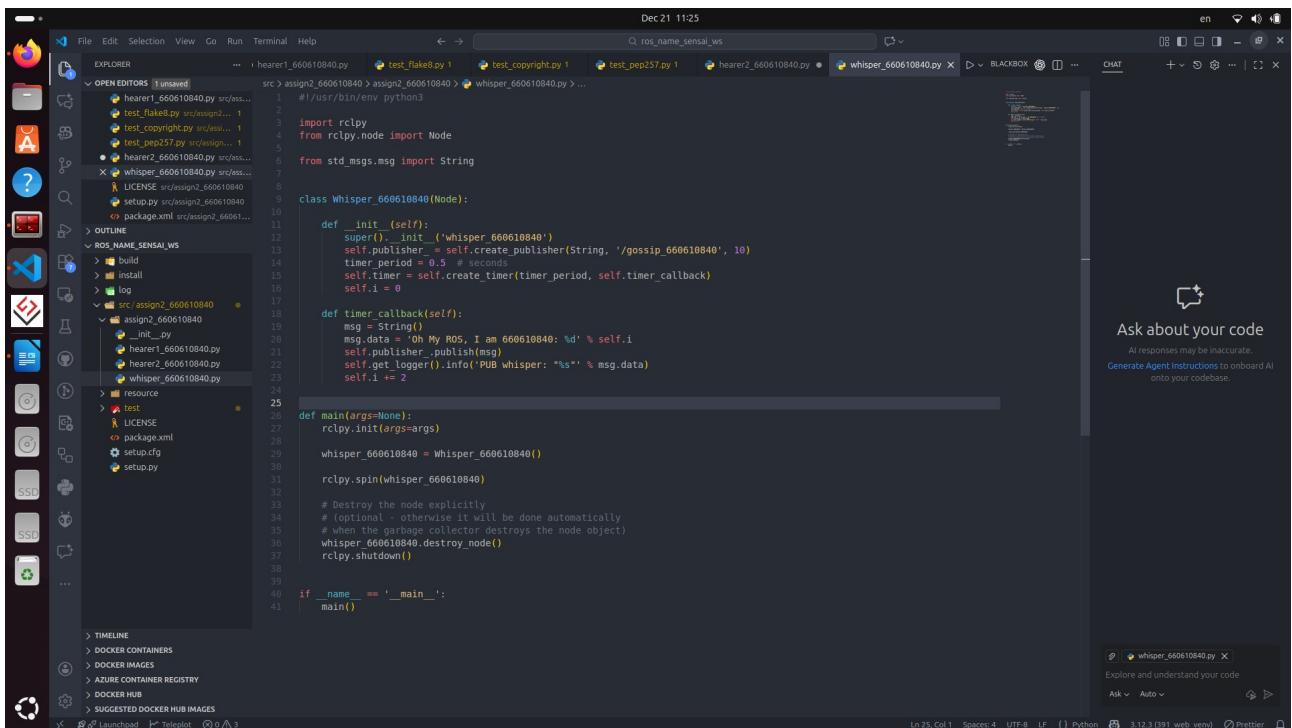
The screenshot shows the VS Code interface with the following details:

- File Explorer:** Shows files in the `src/assign2_660610840` directory, including `assign2_660610840.py`, `setup.py`, and `package.xml`.
- Terminal:** Shows the command `cd ros_name_sensai_ws`.
- Code Editor:** Displays the `setup.py` file content:from setuptools import find_packages, setup

package_name = 'assign2_660610840'

setup(
 name=package_name,
 version='0.0.0',
 packages=find_packages(exclude=['test']),
 data_files=[
 ('share/ament_index/resource_index/packages',
 ['resource/' + package_name]),
 ('share/' + package_name, ['package.xml']),
],
 install_requires=['setuptools'],
 zip_safe=True,
 maintainer='mannaj',
 maintainer_email='mannan785207852@gmail.com',
 description='TODO: Package description',
 license='Apache-2.0',
 extras_require={
 'test': [
 'pytest',
],
 },
 entry_points={
 'console_scripts': [
 'talker = assign2_660610840.whisper_660610840:main',
 'listener1 = assign2_660610840.hearer1_660610840:main',
 'listener2 = assign2_660610840.hearer2_660610840:main',
],
 },
)
- Bottom Status Bar:** Shows the current file is `setup.py`, and other details like line 33, column 1, and Python 3.12.3.

code ទូទៅ publisher



The screenshot shows the VS Code interface with the following details:

- File Explorer:** Shows files in the `src/assign2_660610840` directory, including `assign2_660610840.py`, `test_flake8.py`, `test_copyright.py`, `test_pep257.py`, `hearer1_660610840.py`, `whisper_660610840.py`, and `hearer2_660610840.py`.
- Code Editor:** Displays the `whisper_660610840.py` file content:#!/usr/bin/env python3

import rclpy
from rclpy.node import Node

from std_msgs.msg import String

class Whisper_660610840(Node):
 def __init__(self):
 super().__init__('whisper_660610840')
 self.publisher = self.create_publisher(String, '/gossip_660610840', 10)
 timer_period = 0.5 # seconds
 self.timer = self.create_timer(timer_period, self.timer_callback)
 self.i = 0

 def timer_callback(self):
 msg = String()
 msg.data = f'Oh My ROS, I am 660610840: %d' % self.i
 self.publisher.publish(msg)
 self.get_logger().info("PUB whisper: %s" % msg.data)
 self.i += 2

def main(args=None):
 rclpy.init(args=args)

 whisper_660610840 = Whisper_660610840()

 rclpy.spin(whisper_660610840)

 # Destroy the node explicitly
 # (optional - otherwise it will be done automatically
 # when the garbage collector destroys the node object)
 whisper_660610840.destroy_node()

 rclpy.shutdown()

if __name__ == '__main__':
 main()
- Bottom Status Bar:** Shows the current file is `whisper_660610840.py`, and other details like line 25, column 1, and Python 3.12.3.

code **Iwá** subscriber1

code [Wá subscriber2

```
hearer1_660610840.py test_flake8.py test_copyright.py test_pep257.py hearer2_660610840.py whisper_660610840.py setup.cfg package.xml src/assign2_660610840 assingn2_660610840.py _init_.py hearer1_660610840.py hearer2_660610840.py whisper_660610840.py
```

The screenshot shows a terminal window with several tabs open. The active tab is titled 'hearer2_660610840.py'. The code in the terminal is as follows:

```
#!/usr/bin/env python3

import rclpy
from rclpy.node import Node

from std_msgs.msg import String

class Hearer2_660610840(Node):

    def __init__(self):
        super().__init__('hearer2_660610840')
        self.subscription = self.create_subscription(
            String,
            '/gossip_660610840',
            self.listener_callback,
            10)
        self.subscription # prevent unused variable warning

    def listener_callback(self, msg):
        self.get_logger().info("SUB2 get: %s" % msg.data)

def main(args=None):
    rclpy.init(args=args)

    hearer2_660610840 = Hearer2_660610840()

    rclpy.spin(hearer2_660610840)

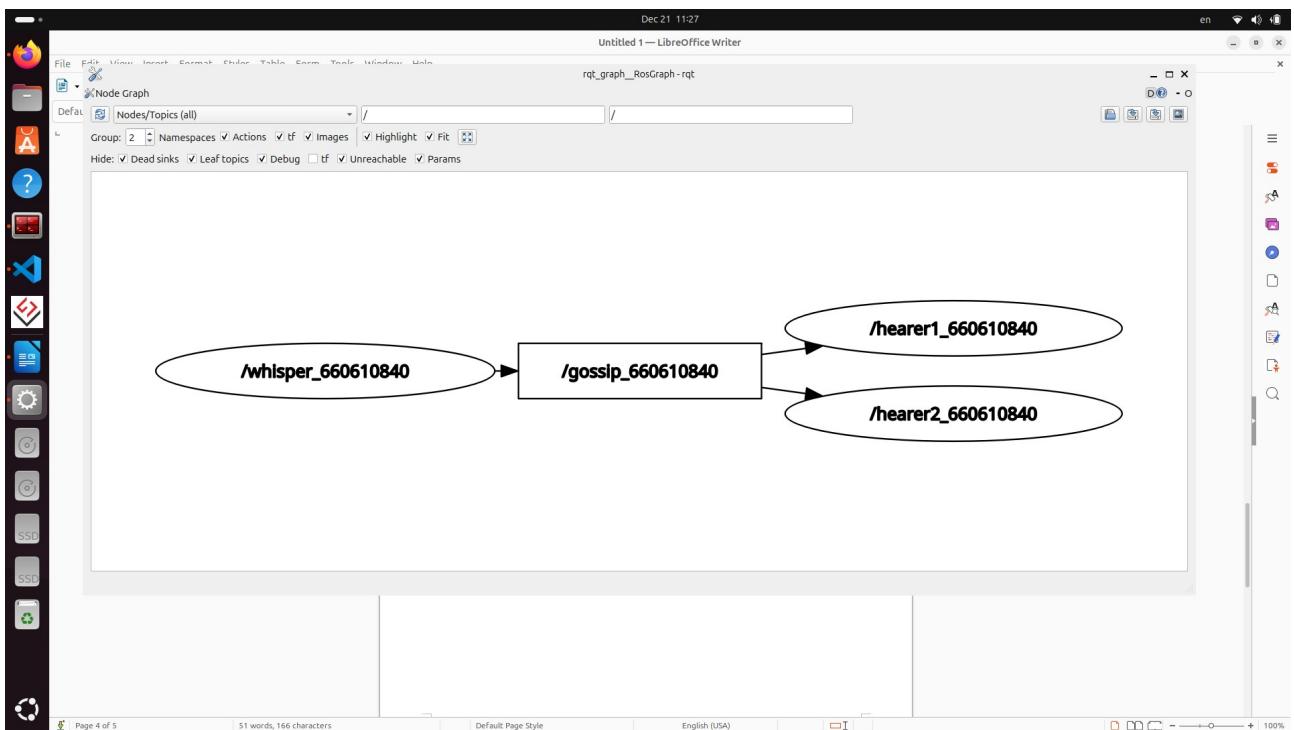
    # Destroy the node explicitly
    # (optional - otherwise it will be done automatically
    # when the garbage collector destroys the node object)
    hearer2_660610840.destroy_node()
    rclpy.shutdown()

if __name__ == '__main__':
    main()
```

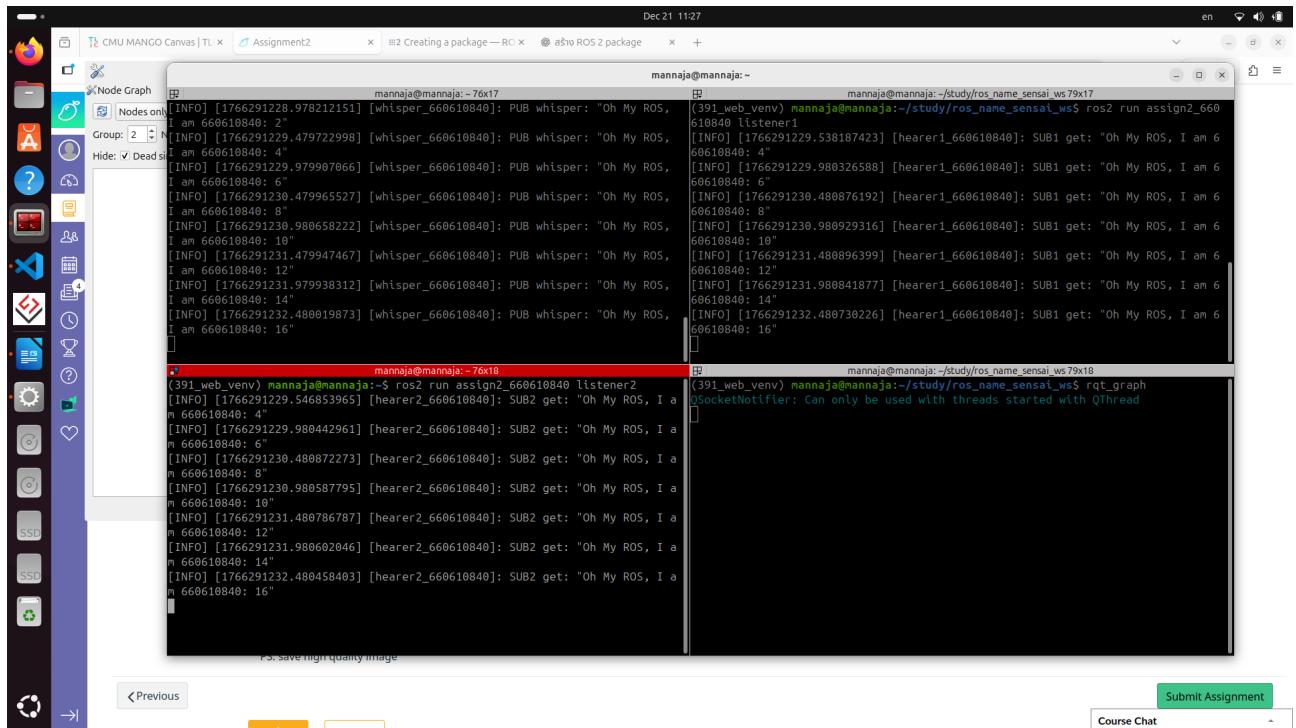
ກາພກອນຈະ run

The screenshot shows a terminal window with four panes. The top-left pane displays the command: `ros2 run assign2_660610840 talker`. The top-right pane displays the command: `ros2 run assign2_660610840 listener1`. The bottom-left pane displays the command: `ros2 run assign2_660610840 listener2`. The bottom-right pane displays the command: `rqt_graph`. The terminal interface includes a sidebar with course navigation links like Home, IgniteAI Sea, Announcements, Assignments, Discussions, Grades, People, Modules, Chat, Microsoft Rewards, and a file browser.

rqt_graph



terminals սանդող node



The screenshot shows a terminal window titled "mannaia@mannaia:~" with two tabs open. The left tab displays ROS 2 node logs from a "whisper" node, and the right tab displays logs from a "hearer1" node. Both nodes are publishing messages like "Oh My ROS, I am [value]" at various intervals. The terminal interface includes a sidebar with icons for file operations, a node graph, and system status.

```
mannaia@mannaia:~ 7x17
[INFO] [1766291228.978212151] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 2"
[INFO] [1766291229.479907066] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 4"
[INFO] [1766291229.979907066] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 6"
[INFO] [1766291230.479965527] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 8"
[INFO] [1766291230.980658222] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 10"
[INFO] [1766291231.479947467] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 12"
[INFO] [1766291231.979938312] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 14"
[INFO] [1766291232.480019873] [whisper_660610840]: PUB whisper: "Oh My ROS, I am 660610840: 16"

mannaia@mannaia:~ 79x17
[391_web_venv] mannaia@mannaia:~/study/ros_name_sensai_ws$ ros2 run assign2_660610840 listener1
[INFO] [1766291229.546853965] [hearer2_660610840]: SUB1 get: "Oh My ROS, I am 660610840: 4"
[INFO] [1766291229.980442961] [hearer2_660610840]: SUB2 get: "Oh My ROS, I am 660610840: 6"
[INFO] [1766291230.480872273] [hearer2_660610840]: SUB2 get: "Oh My ROS, I am 660610840: 8"
[INFO] [1766291230.980587795] [hearer2_660610840]: SUB2 get: "Oh My ROS, I am 660610840: 10"
[INFO] [1766291231.480876787] [hearer2_660610840]: SUB2 get: "Oh My ROS, I am 660610840: 12"
[INFO] [1766291231.980602046] [hearer2_660610840]: SUB2 get: "Oh My ROS, I am 660610840: 14"
[INFO] [1766291232.480458403] [hearer2_660610840]: SUB2 get: "Oh My ROS, I am 660610840: 16"

mannaia@mannaia:~ 79x18
[391_web_venv] mannaia@mannaia:~/study/ros_name_sensai_ws$ rqt_graph
QSocketNotifier: Can only be used with threads started with QThread

mannaia@mannaia:~ 79x18
[391_web_venv] mannaia@mannaia:~/study/ros_name_sensai_ws$ rqt_graph
QSocketNotifier: Can only be used with threads started with QThread
```