패키지 생성 `package`

```
$ cd ~/Workspaces/ros2_ws/src
$ ros2 pkg create simple_topic_pkg --build-type
  ament_python --dependencies rclpy std_msgs
```
────────────────────────────────
package.xml 중 일부
```xml
<depend>rclpy</depend>
<depend>std_msgs</depend>
```

메시지 인터페이스 `String.msg`

라이브러리 위치: /opt/ros/foxy/include/std_msgs/msg/
참고사이트: https://github.com/ros2/common_interfaces/blob
                    /foxy/std_msgs/msg/String.msg
────────────────────────────────
```
# This was originally provided as an example message.
# It is deprecated as of Foxy
string data
```

토픽 발행 프로그램 파일 `publisher.py`

$my_ws/src/simple_topic_pkg/simple_topic_pkg/publisher.py
────────────────────────────────
```python
import rclpy
from rclpy.node import Node
from std_msgs.msg import String

class  MyPublisher(Node):

    def __init__(self):
        super().__init__('pub_node')
        self.counter = 0
        self.pub = self.create_publisher(String,
'my_topic', 10)
        self.timer = self.create_timer(1, self.pub_cb)
        self.get_logger().info('Publisher Node
Running...')

    def pub_cb(self):
        self.counter += 1
        msg = String()
        msg.data = 'hi: ' + str(self.counter)
        self.pub.publish(msg)
        self.get_logger().info('Published message: '
+ msg.data)


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

    try:
        rclpy.spin(node)
    except KeyboardInterrupt:
        node.get_logger().info('Keyboard Interrupt')
    finally:
        node.destroy_node()
        rclpy.shutdown()

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

토픽 수신 프로그램 파일 `subscriber.py`

$my_ws/src/simple_topic_pkg/simple_topic_pkg/subscriber.py
────────────────────────────────
```python
import rclpy
from rclpy.node import Node
from std_msgs.msg import String

class MySubscriber(Node):

    def __init__(self):
        super().__init__('sub_node')
        self.sub = self.create_subscription(String,
'my_topic', self.sub_cb, 10)
        self.get_logger().info('Subscriber Node
Running...')

    def sub_cb(self, msg):
        self.get_logger().info('Received message: ' +
msg.data)

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

    try:
        rclpy.spin(node)
    except KeyboardInterrupt:
        node.get_logger().info('Keyboard Interrupt')
    finally:
        node.destroy_node()
        rclpy.shutdown()

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

파이썬 패키지 설정 파일 `setup.py`

```
$ cd ~/Workspaces/ros2_ws/src/topic_pkg
$ code setup.py
  ROS2 파이썬 패키지에서 배포를 위한 설정 파일
```
────────────────────────────────
```python
entry_points={
  'console_scripts': [
    'publisher_script = simple_topic_pkg.publisher:main',
    'subscriber_script = simple_topic_pkg.subscriber:main'
  ],
},
```

빌드 `build`

```
$ cd ~/Workspaces/ros2_ws
$ colcon build
$ source ./install/setup.bash
```

노드 실행 `run`

```
$ ros2 pkg executables simple_topic_pkg
$ ros2 run simple_topic_pkg subscriber_script
$ ros2 run simple_topic_pkg publisher_script
두 개의 창에 각각 실행함
```