ASSIGNMENT 3

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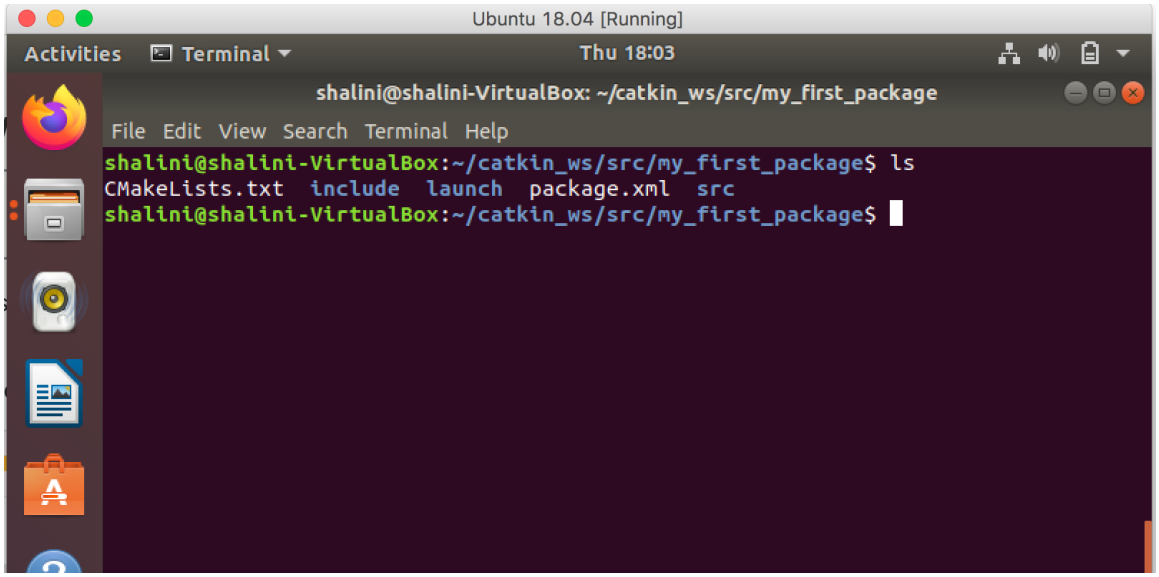
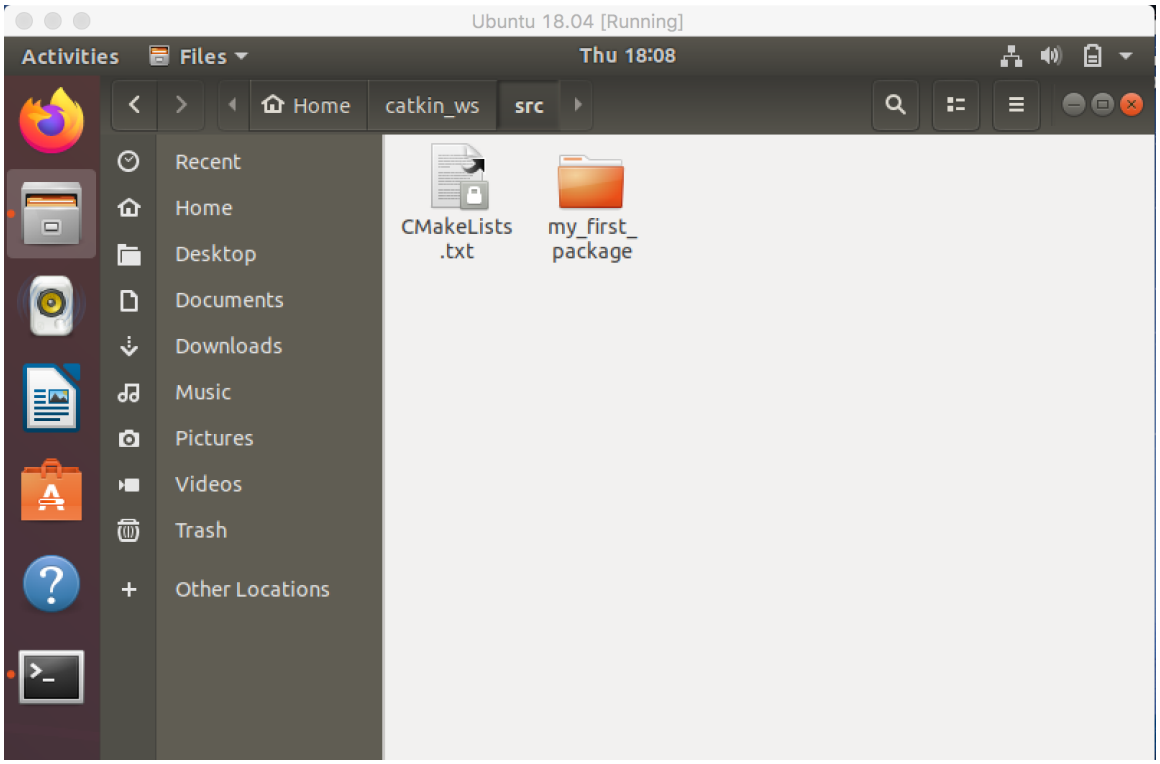
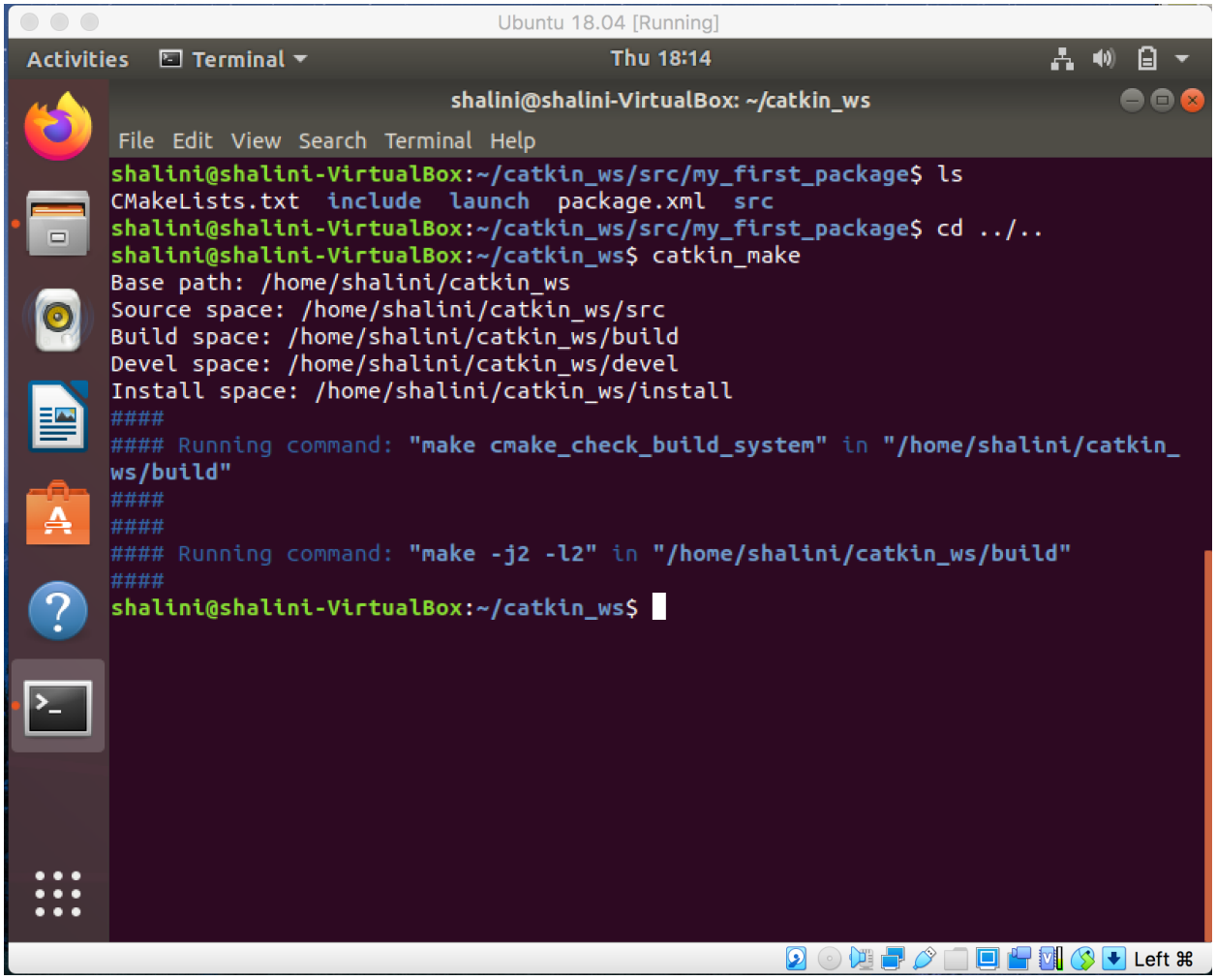
University: VIT Bhopal University

1.

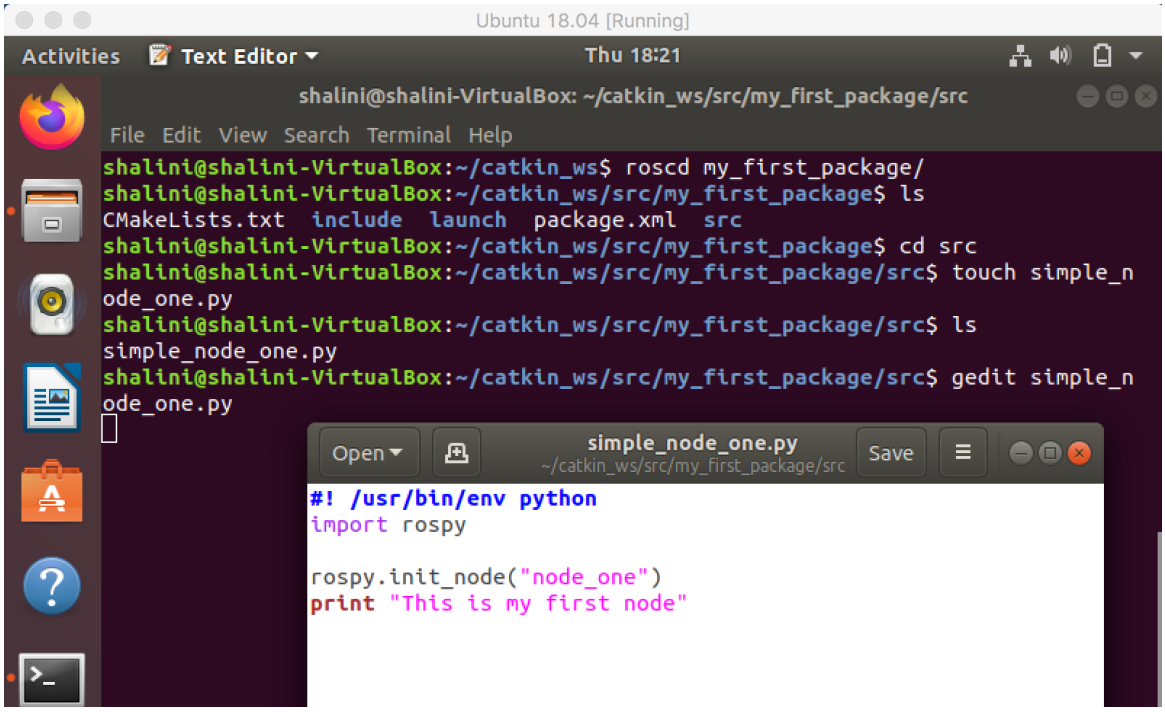


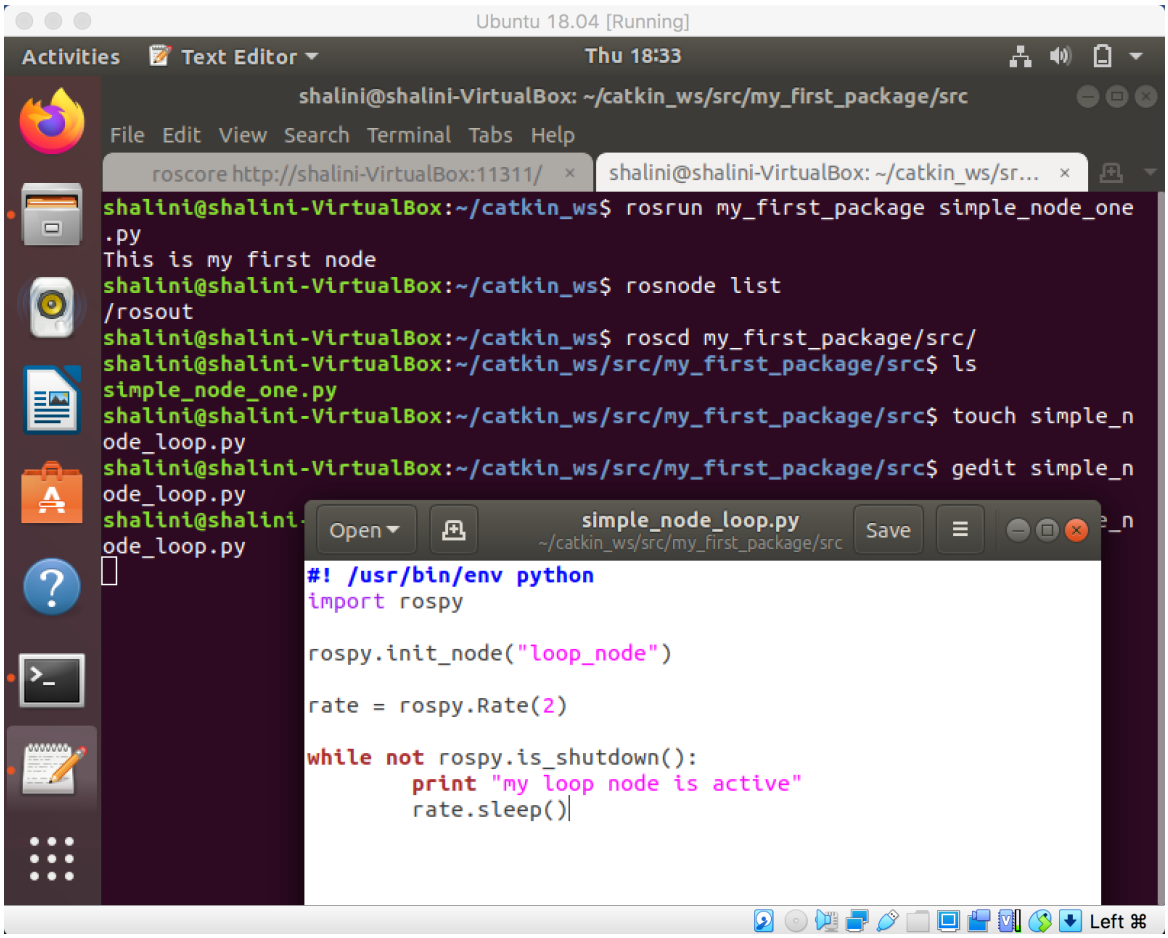


We use catkin_make to compile the package.

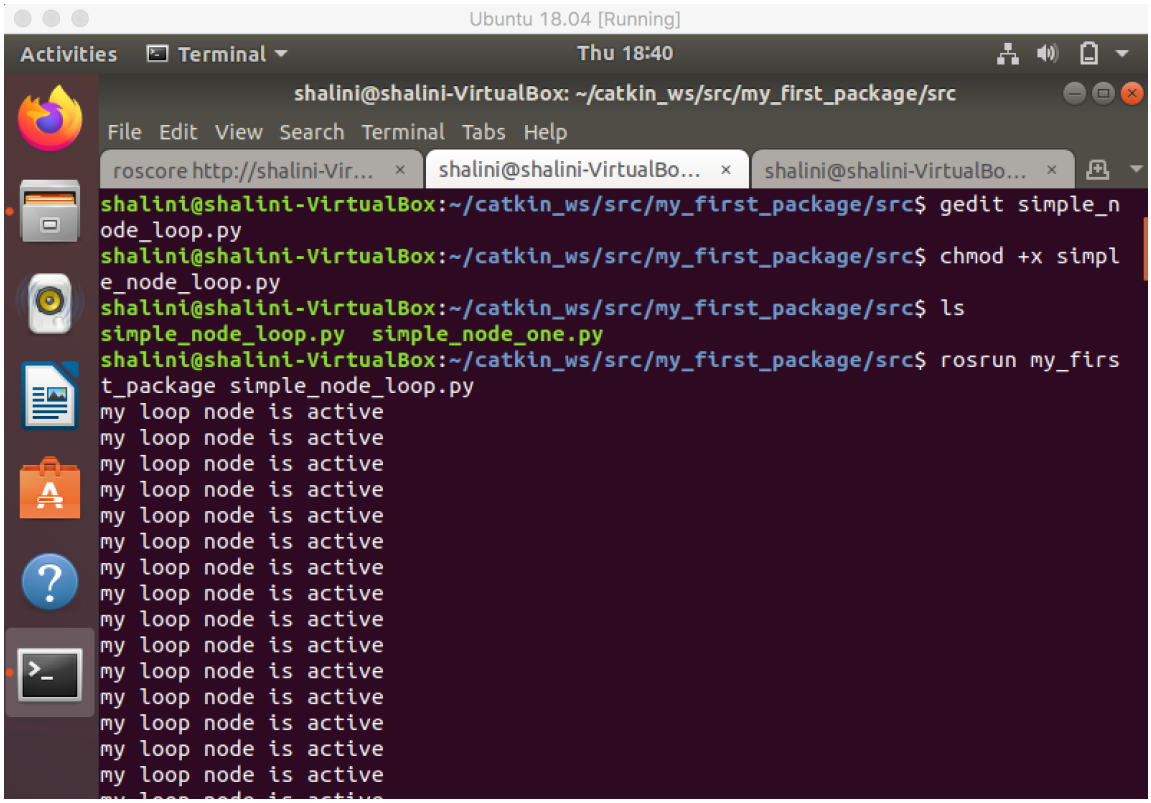


2. We create three nodes: simple_node_one.py, loop_node.py and simple_loop_three.py

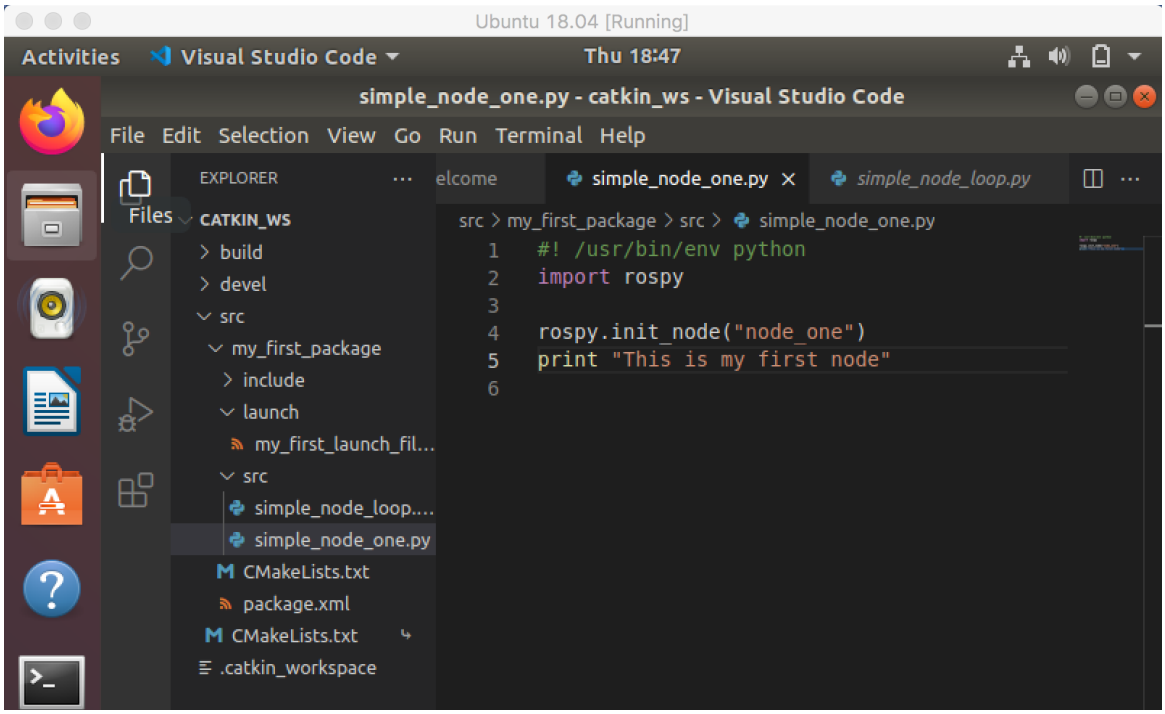


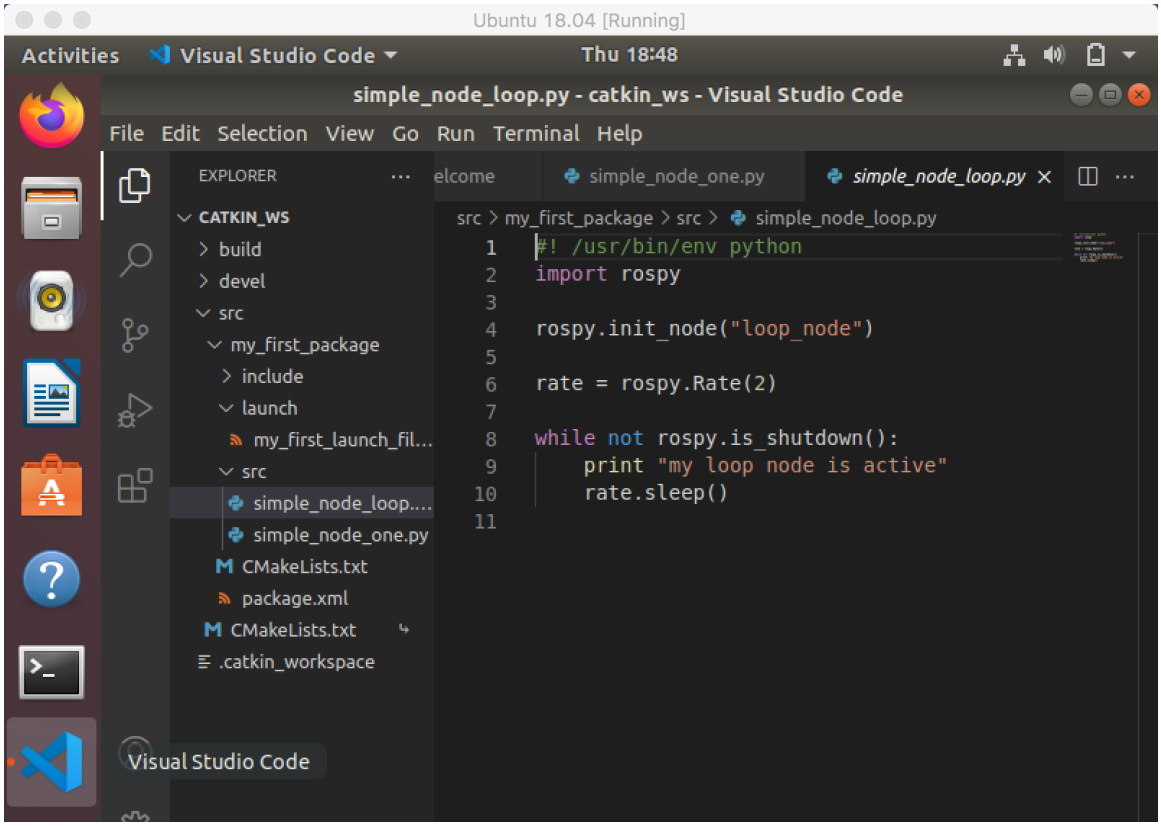


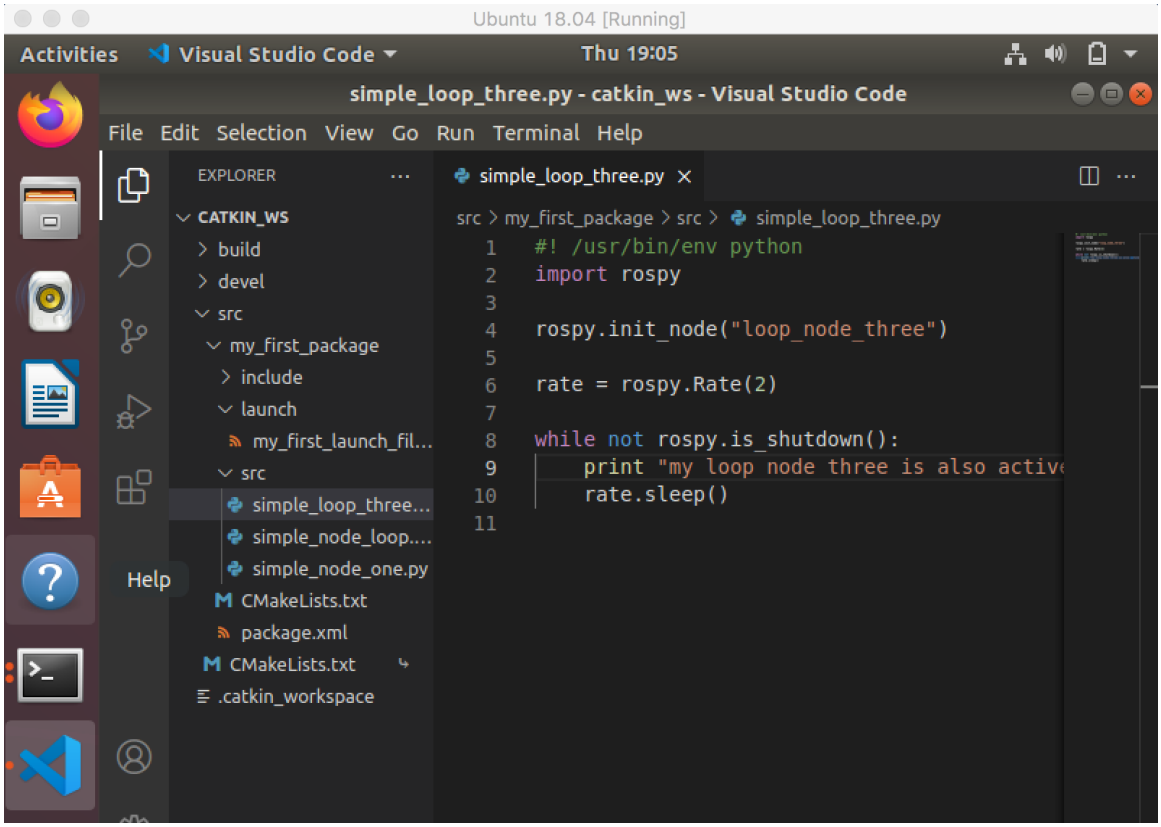
First we run the first nood i.e. simple_node_loop.py



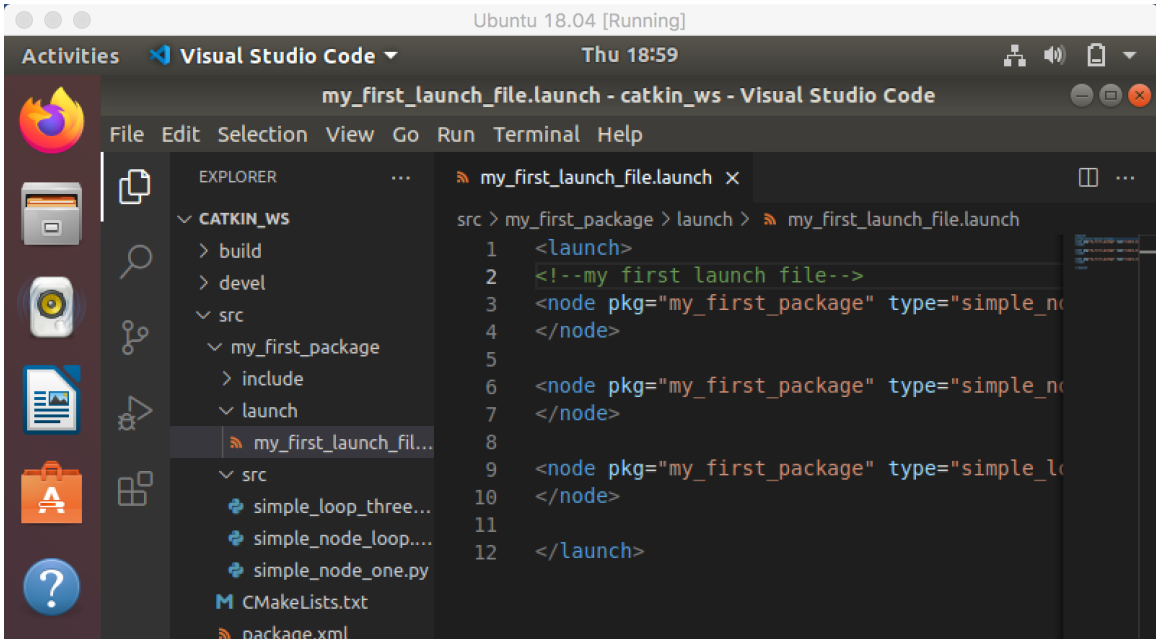
Opening the nodes in visual studio code



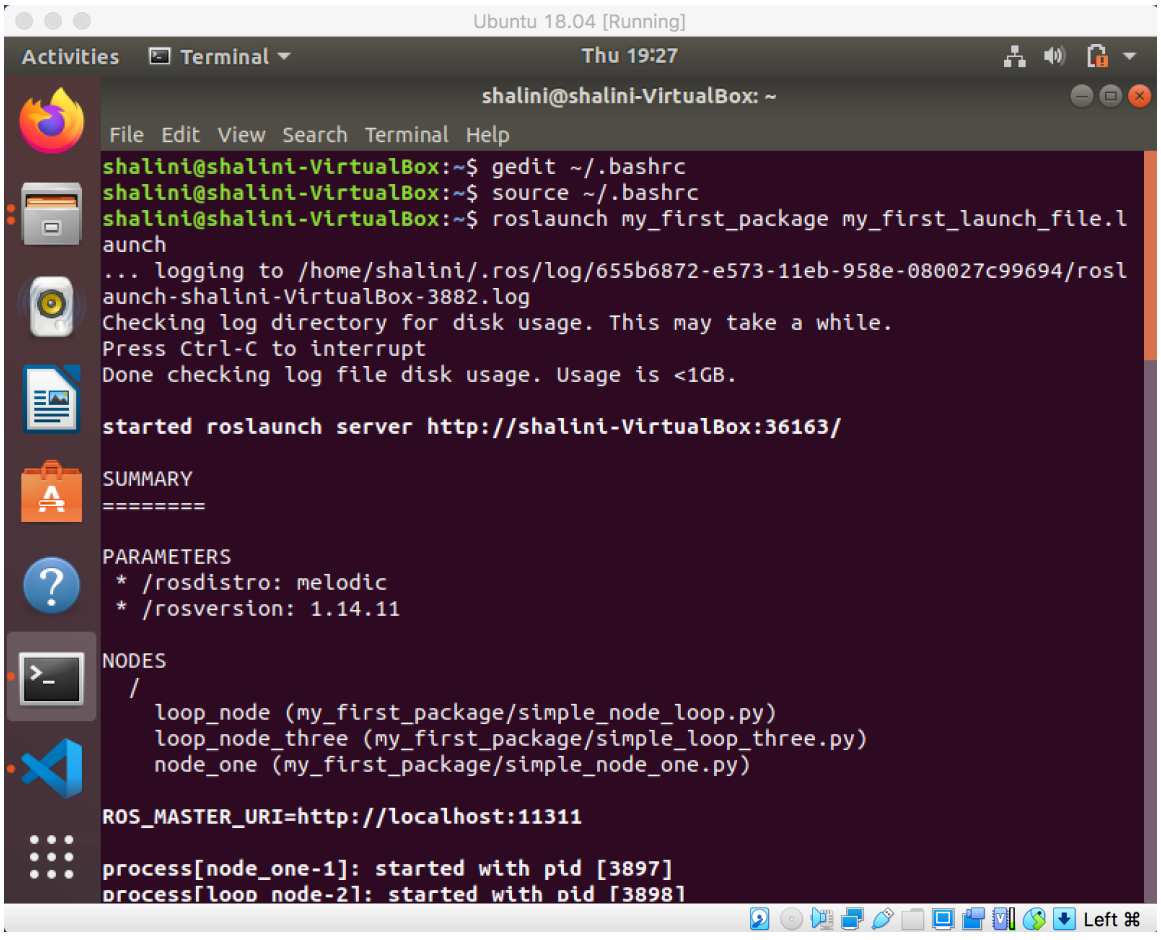

Ubuntu 18.04 [Running]
Activities
Visual Studio Code
Thu 18:48
simple_node_loop.py - catkin_ws - Visual Studio Code
File Edit Selection View Go Run Terminal Help
EXPLORER
CATKIN_WS
build
devel
src
my_first_package
include
launch
my_first_launch_fil...
src
simple_node_loop....
simple_node_one.py
CMakeLists.txt
package.xml
CMakeLists.txt
.catkin_workspace
elcome
simple_node_one.py
simple_node_loop.py
src > my_first_package > src > simple_node_loop.py
1 #! /usr/bin/env python
2 import rospy
3
4 rospy.init_node("loop_node")
5
6 rate = rospy.Rate(2)
7
8 while not rospy.is_shutdown():
9 print "my loop node is active"
10 rate.sleep()
11
Visual Studio Code

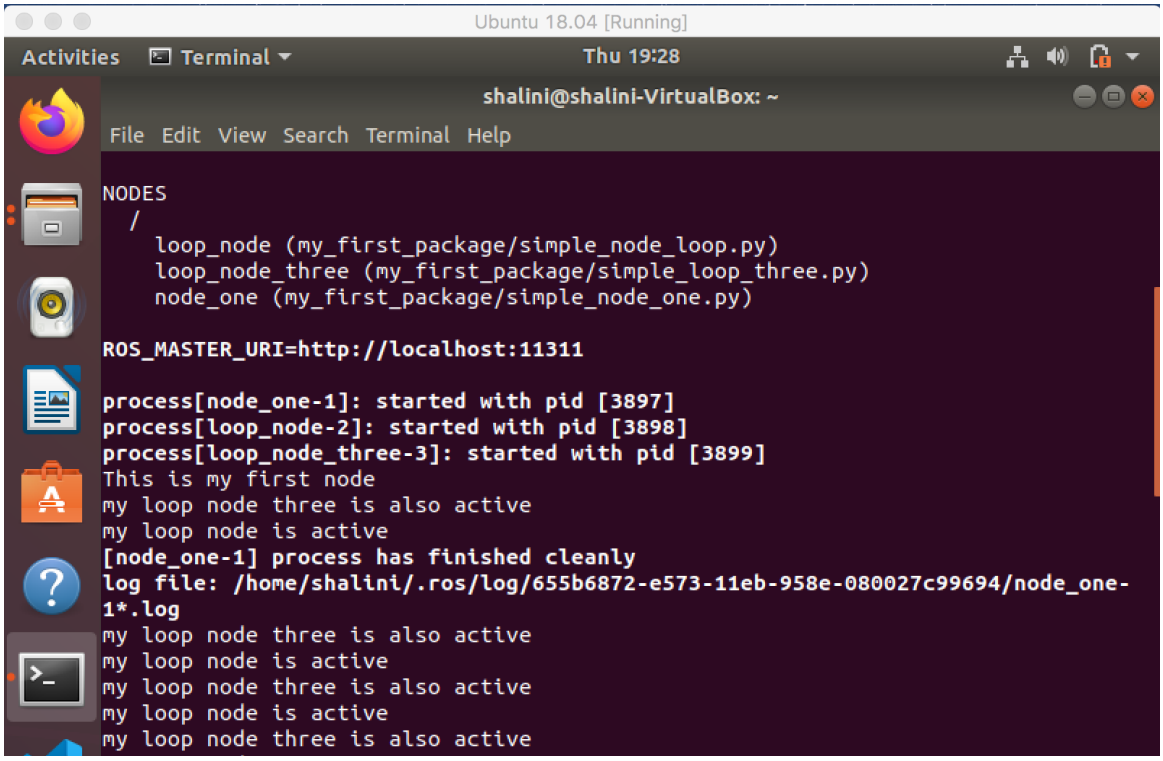

Ubuntu 18.04 [Running]
Activities
Visual Studio Code
Thu 19:05
simple_loop_three.py - catkin_ws - Visual Studio Code
File Edit Selection View Go Run Terminal Help
EXPLORER
CATKIN_WS
build
devel
src
my_first_package
include
launch
my_first_launch_fil...
src
simple_loop_three...
simple_node_loop....
simple_node_one.py
CMakeLists.txt
package.xml
CMakeLists.txt
.catkin_workspace
simple_loop_three.py
src > my_first_package > src > simple_loop_three.py
1 #! /usr/bin/env python
2 import rospy
3
4 rospy.init_node("loop_node_three")
5
6 rate = rospy.Rate(2)
7
8 while not rospy.is_shutdown():
9 print "my loop node three is also activ
10 rate.sleep()
11
Help

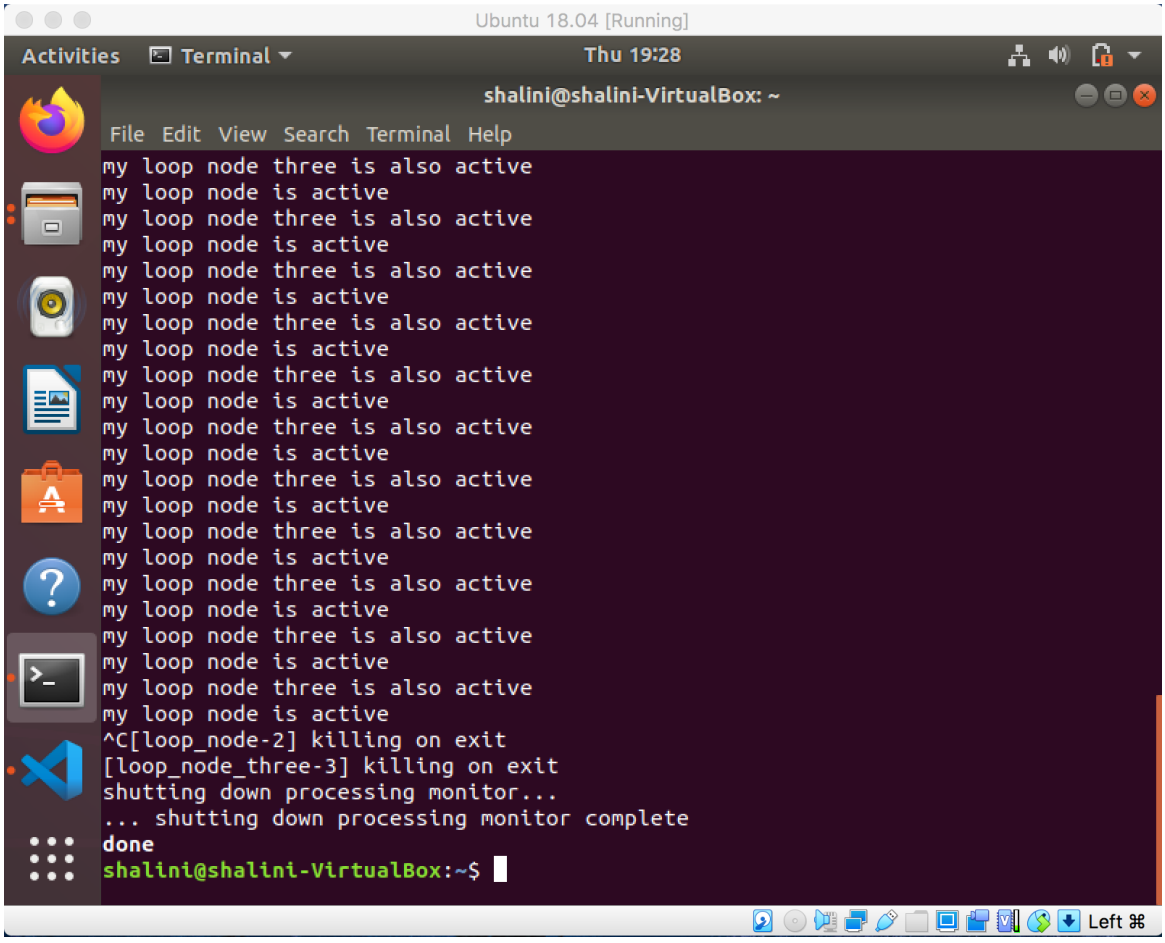
3. Creating a launch file named my_first_launch_file.launch.



Launching the nodes in the terminal.




Ubuntu 18.04 [Running]
Activities
Terminal
Thu 19:28
shalini@shalini-VirtualBox: ~
File Edit View Search Terminal Help
NODES
/
loop_node (my_first_package/simple_node_loop.py)
loop_node_three (my_first_package/simple_loop_three.py)
node_one (my_first_package/simple_node_one.py)
ROS_MASTER_URI=http://localhost:11311
process[node_one-1]: started with pid [3897]
process[loop_node-2]: started with pid [3898]
process[loop_node_three-3]: started with pid [3899]
This is my first node
my loop node three is also active
my loop node is active
[node_one-1] process has finished cleanly
log file: /home/shalini/.ros/log/655b6872-e573-11eb-958e-080027c99694/node_one-1*.log
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active


Ubuntu 18.04 [Running]
Activities
Terminal
Thu 19:28
shalini@shalini-VirtualBox: ~
File Edit View Search Terminal Help
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
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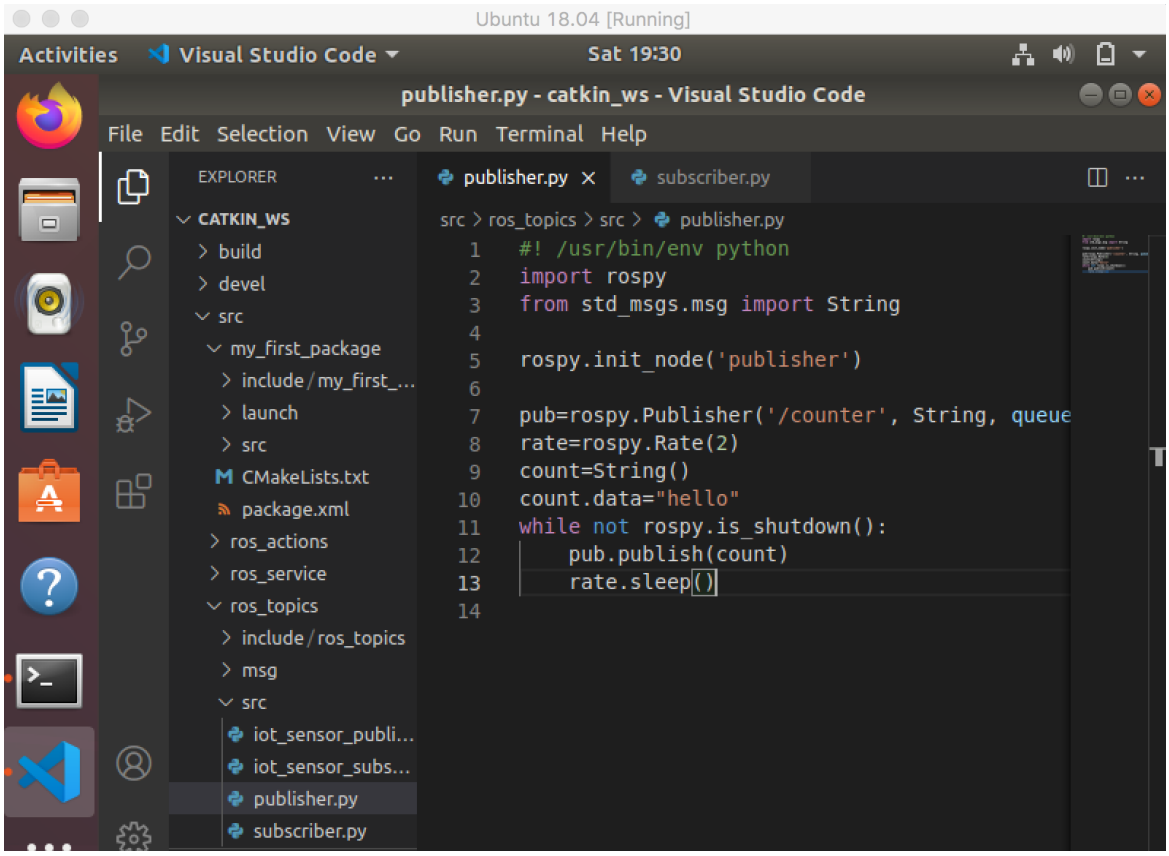
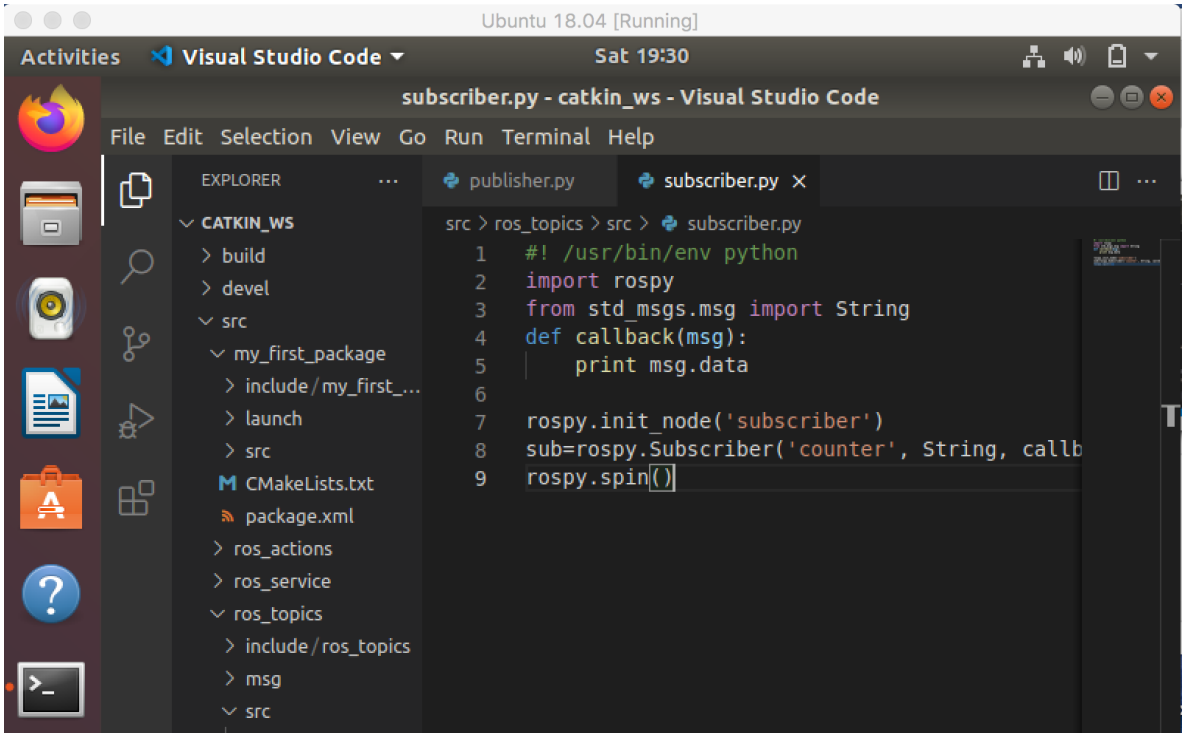
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
my loop node three is also active
my loop node is active
^C[loop_node-2] killing on exit
[loop_node_three-3] killing on exit
shutting down processing monitor...
... shutting down processing monitor complete
done
shalini@shalini-VirtualBox:~$
Left ⌘

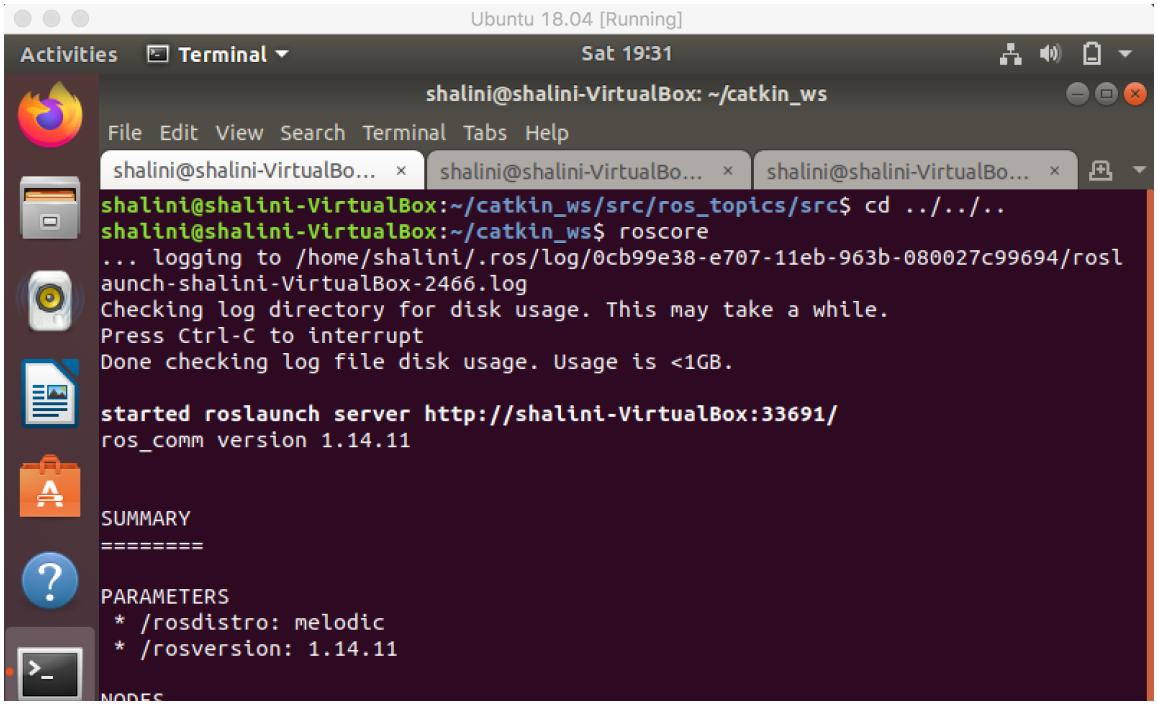
4. First creating a publisher node in the ros_topics package.



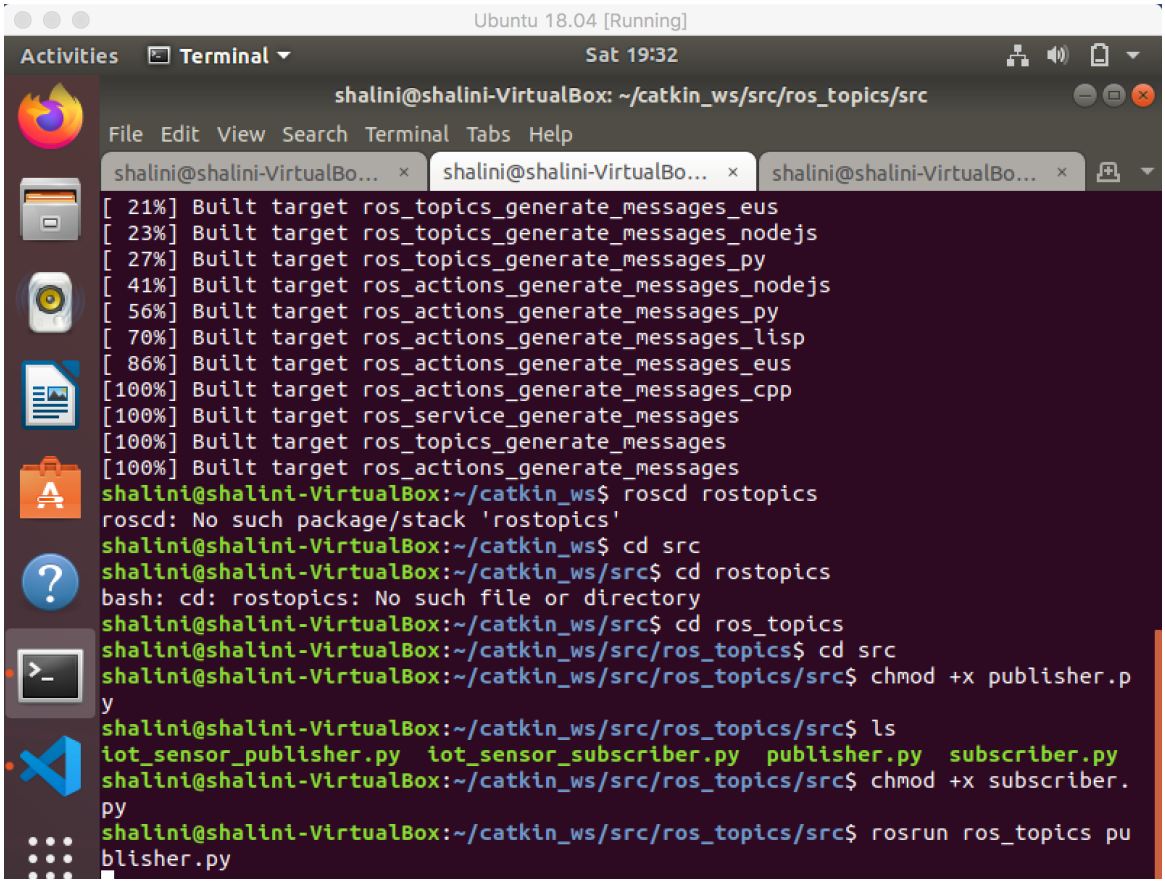
Then creating a subscriber node.



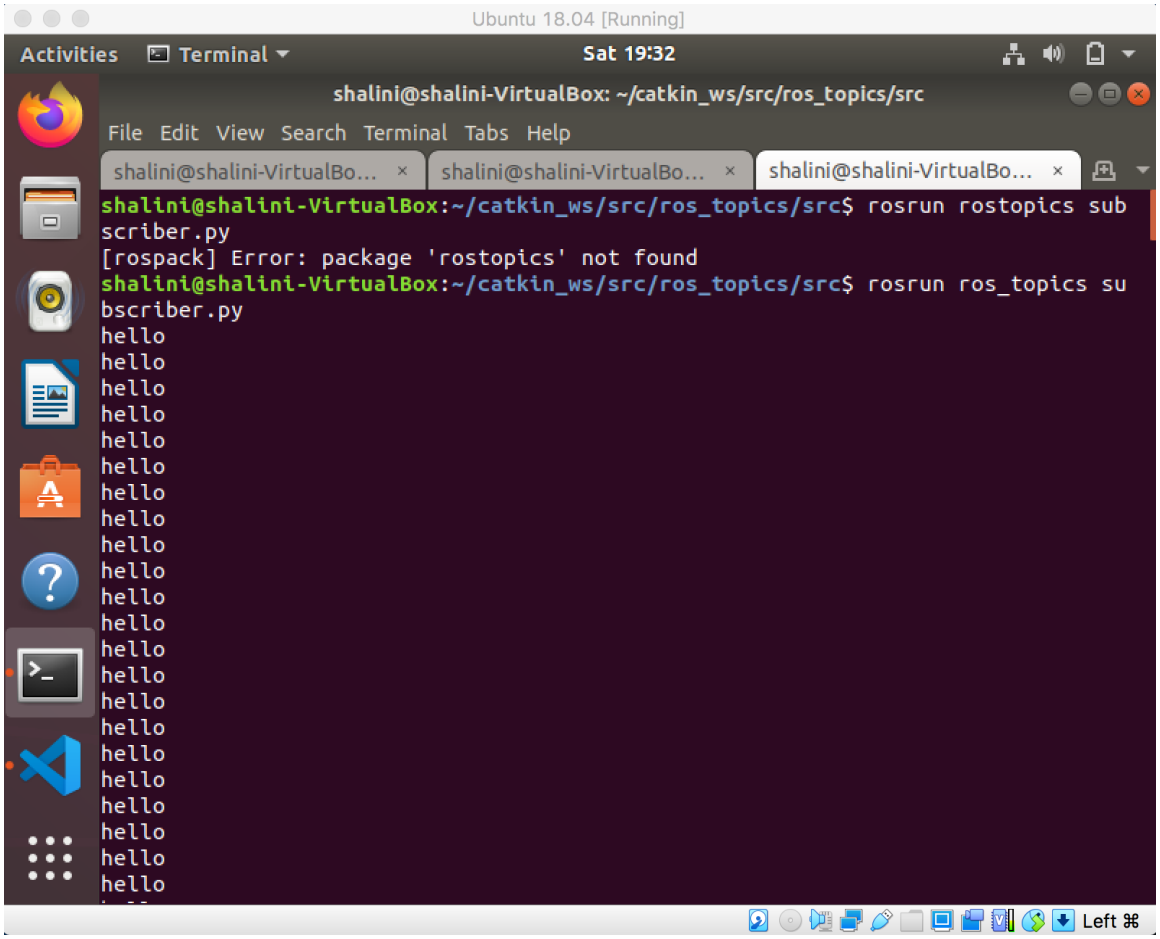
Running the master node in the terminal.



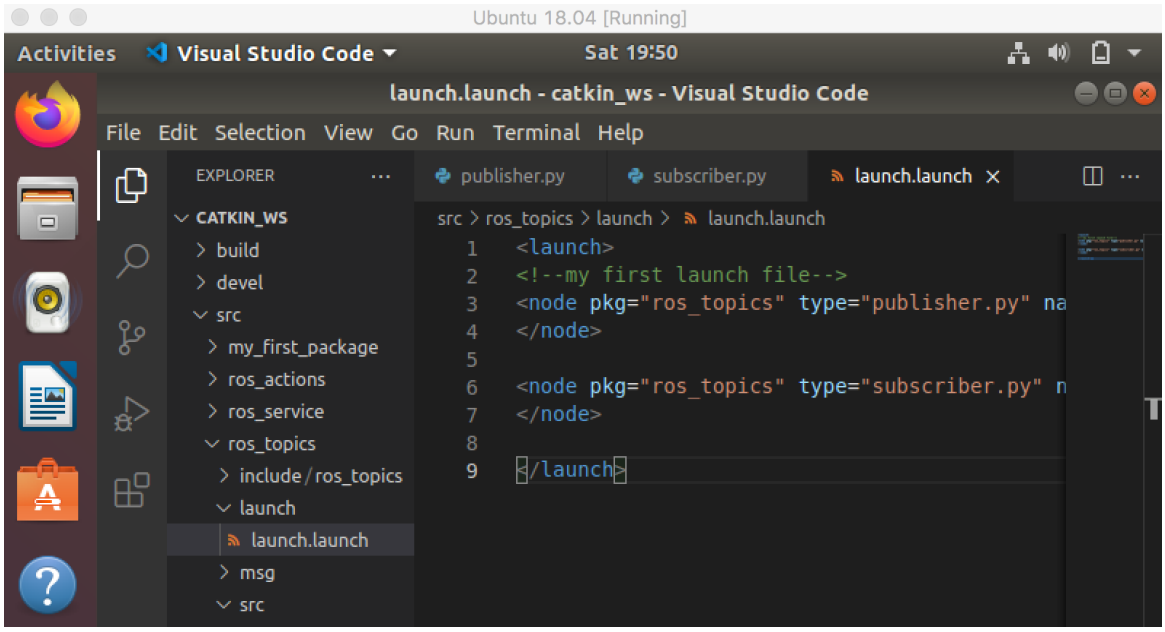
Running the publisher node in the terminal.



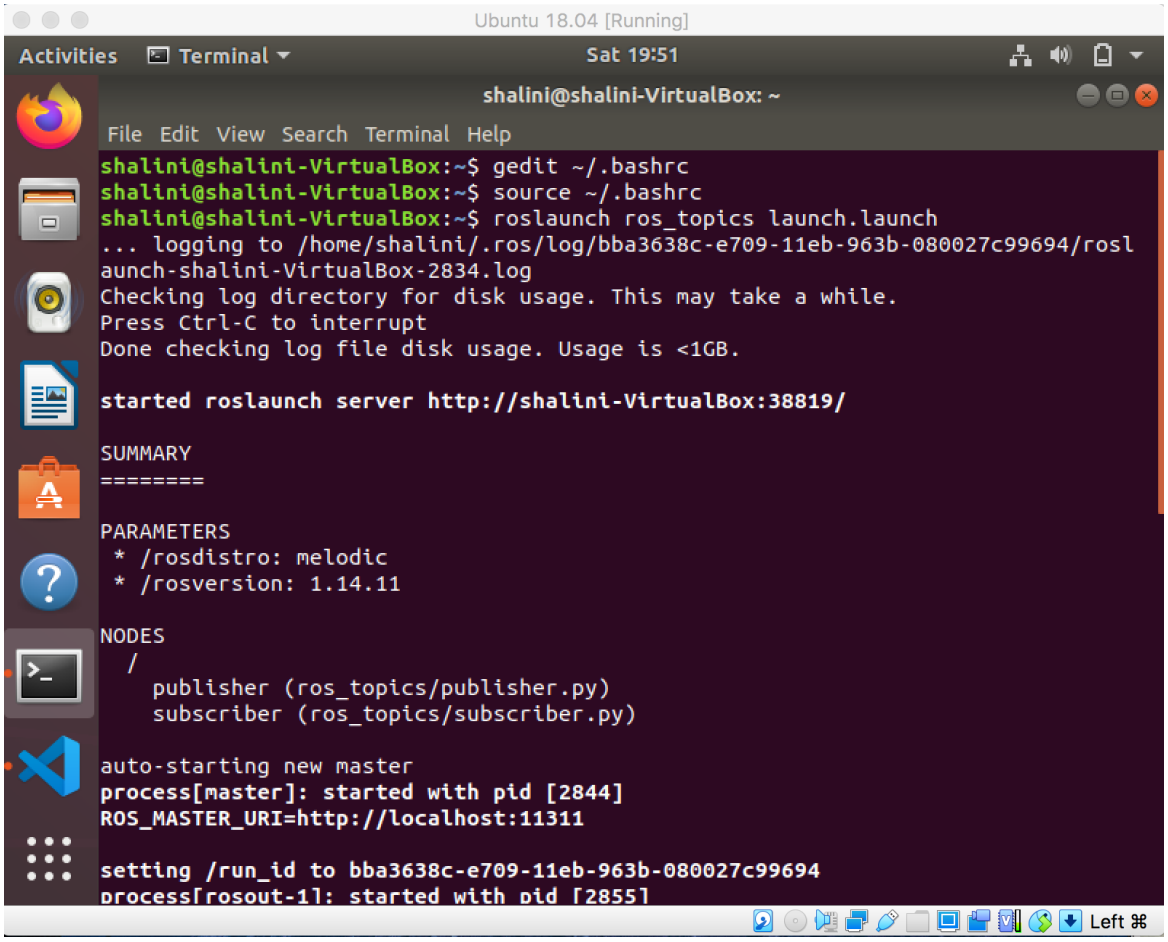
The string "hello" is printed.



5. Creating a launch file launch.launch to launch subscriber and publisher together.



Launching both the nodes in the terminal.



We can see that the string hello is printed.