## Create a ROS Workspace

$ mkdir -p ~/catkin\_ws/src

$ cd ~/catkin\_ws/

$ catkin\_make

$ source devel/setup.bash

$ echo $ROS\_PACKAGE\_PATH

/home/youruser/catkin\_ws/src:/opt/ros/kinetic/share

**- Create a new package**

$ cd ~/catkin\_ws/src

$ catkin\_create\_pkg beginner\_tutorials std\_msgs rospy roscpp

**Simple Publisher**

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[1](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_1) #!/usr/bin/env python

[2](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_2) # license removed for brevity

[3](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_3) import rospy

[4](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_4) from std\_msgs.msg import String

[5](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_5)

[6](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_6) def talker():

[7](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_7) pub = rospy.Publisher('chatter', String, queue\_size=10)

[8](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_8) rospy.init\_node('talker', anonymous=True)

[9](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_9) rate = rospy.Rate(10) # 10hz

[10](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_10) while not rospy.is\_shutdown():

[11](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_11) hello\_str = "hello world %s" % rospy.get\_time()

[12](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_12) rospy.loginfo(hello\_str)

[13](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_13) pub.publish(hello\_str)

[14](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_14) rate.sleep()

[15](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_15)

[16](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_16) if \_\_name\_\_ == '\_\_main\_\_':

[17](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_17) try:

[18](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_18) talker()

[19](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_19) except rospy.ROSInterruptException:

[20](http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29#rospy_tutorials.2FTutorials.2FWritingPublisherSubscriber.CA-c82832e0d612370fe9886563f0b7f5433f6caee1_20) pass

**Simple subscriber**

#!/usr/bin/env python

import rospy

from std\_msgs.msg import String

def callback(data):

rospy.loginfo(rospy.get\_caller\_id() + "I heard %s", data.data)

def listener():

rospy.init\_node('listener', anonymous=True)

rospy.Subscriber("my\_topic", String, callback)

rospy.spin()

if \_\_name\_\_ == '\_\_main\_\_':

listener()