



eYRC 2021-22: Agri Bot (AB)

Create a ROS Node

In this section we will learn how to create a ROS Node inside `pkg_ros_basics` ROS Package which we created in the previous section.

1. Navigate to `pkg_ros_basics`.

```
cd ~/catkin_ws/src/pkg_ros_basics
```



OR

```
roscd pkg_ros_basics
```



NOTE: `roscd` will work only if you have sourced `setup.bash` of your catkin workspace.

2. Create a `scripts` folder for your Python scripts and navigate into the folder.

```
mkdir scripts  
cd scripts
```



3. Create a Python script called `node_hello_ros.py`.

```
touch node_hello_ros.py
```



4. Open the script in any text-editor and start editing.

```
gedit node_hello_ros.py
```



5. First line of all your Python ROS scripts should be the following [shebang](#)

```
#!/usr/bin/env python
```



6. Now write a ROS Node to print `Hello World!` on the console.

```
#!/usr/bin/env python
```



```
import rospy
```

```
def main():
```

```
    # 1. Make the script a ROS Node.  
    rospy.init_node('node_hello_ros', anonymous=True)
```

```
# 2. Print info on console.
rospy.loginfo("Hello World!")

# 3. Keep the node alive till it is killed by the user.
rospy.spin()
```

```
if __name__ == '__main__':
    try:
        main()
    except rospy.ROSInterruptException:
        pass
```

7. Now you have to make this script an executable.

```
sudo chmod +x node_hello_ros.py
```



8. Now in order to run your ROS Node,

1. Open up a terminal and run ROS Master.

```
roscore
```



2. Once the roscore is up running, open a new terminal and run the ROS Node.

```
roslaunch pkg_ros_basics node_hello_ros.py
```



NOTE: This command will work only if you have sourced `setup.bash` of your catkin workspace either manually or using `.bashrc`.



9. You should get some output like this,

```
[INFO] [1601277063.968749]: Hello World!
```

