Udemy Course
Robot Operating System
Basics, Motion, and OpenCV

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ROS File System Hands-On Notes

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ROS FILE SYSTEM

HANDS-ON

CONFIGURE WORKSPACE

- source **/opt/ros/kinetic/setup.bash**
  - activate the ROS default workspace
- Add the command into .bashrc file
  - .bashrc is a file executed automatically every time a new terminal is open
- roscd
  - take you to the default workspace

CONFIGURE WORKSPACE

- cd
  - takes you to HOME directory
  - .bashrc is in the HOME directory
- you can create shortcuts and aliases in .bashrc
  - alias gb="gedit /home/riotu/.bashrc"
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CREATE WORKSPACE

- create your own **catkin** workspace (catkin_ws) in your HOME directory
  - your catkin workspace will be used to create and store your own ROS packages (project)
  - **catkin** is the name of the build tool used to compile and execute programs in ROS
  - reference: http://wiki.ros.org/ROS/Tutorials/InstallingandConfiguringROSEnvironment

```
mkdir -p ~/catkin_ws/src
$ cd ~/catkin_ws/
$ catkin_make
```

CREATE A ROS PACKAGE

- Create your ROS package (project) that you will use to develop programs.
- the package must be created inside the src folder
- first move to the folder
  - **cd ~catkin_ws/src/**
- Create your package (specify the dependencies)
- **catkin_create_pkg** cs460_package std_msgs **rospy roscpp**
- Go to catkin_ws and compile
  - cd ..
  - catkin_make
- this will generate executable and configuration files for the project

MAKE THE NEW PACKAGE THE DEFAULT ONE

- add the following command in .bashrc
  - source /home/riotu/catkin_ws/devel/setup.bash
  - *replace riotu by your username*