Removing ROS from your System Completely:

sudo apt-get remove ros-\*

// gedit baxter.sh

// baxter\_hostname="011409P0005.local" // your\_hostname="arash.local"// your\_ip did not work!!!

1. ~/ros\_ws
2. . baxter.sh
3. Enable/ Disable the Robot

rosrun baxter\_tools enable\_robot.py -e // -d

1. Joint Velocity Wobbler

rosrun baxter\_examples joint\_velocity\_wobbler.py

1. Moving an arm, the other arm will move the same

rosrun baxter\_examples joint\_velocity\_puppet.py -l left

1. Moving the head

rosrun baxter\_examples head\_wobbler.py

1. Joint Trajectory Playback

rosrun baxter\_tools enable\_robot.py -e

rosrun baxter\_examples joint\_recorder.py -f <example\_file>

Stop recording when finished.

Starter a new Terminal and start a joint trajectory controller:

rosrun baxter\_interface joint\_trajectory\_action\_server.py

Now start ro Playback the recorded file

rosrun baxter\_examples joint\_trajectory\_file\_playback.py -f <example\_file>

1. Camera Control:

$ rosrun baxter\_tools camera\_control.py -l

// closing and opening a camera,

// Only 2 Cameras can be opened at time concurrently

(left\_hand\_camera, right\_hand\_camera, head\_camera)

rosrun baxter\_tools camera\_control.py -c left\_hand\_camera

rosrun baxter\_tools camera\_control.py -o left\_hand\_camera -r 1280x800

//

Resolutions can be: (1280x800 , 960x600 , 640x400 , 480x300 , 384x240 , 320x200 )

// Show the Cameras output

$ rosrun image\_view image\_view image:=/cameras/right\_hand\_camera/image

// View the camera feed in rviz:

$ rosrun rviz rviz

* Under the displays tab on the left hand side of rviz, change the 'Global Option - Fixed Frame' from '/map' to '/base'.
* Select 'Add' in the displays tab of rviz.
* Select 'Camera' display topic.
* The 'Camera' topic will now be displayed in a new embedded window.
* Under the 'Camera' tab on the left display window, choose the 'Image Topic': /cameras/right\_hand\_camera/image

// We can Open more that one Camera in rviz. Just Click on Add and select Camera again and follow the above steps to set it up

1. How to write a python program and run it in ros

1- Write your script in myscript .py file

2- make sure your file starts with the following, which gives the location of Python interpreter:

#!/usr/bin/env python

3- make your file executable by running the following command

$ chmod +x myscript.py

2- save it in ros\_ws/src/baxter\_examples/

your file can be saved in all subfolders under baxter\_examples since this the main ROS   
 package

ros\_ws/src/baxter\_examples/Arash\_Programs/HelloBaxter.py

3- rosrun baxter\_examples filename.py and Enter

1. Baxter Simulation

./baxter.sh sim

roslaunch baxter\_gazebo baxter\_world.launch

1. Running Movelt: Motion Planning Tool

## Tutorial

Verify that the robot is enabled from an [RSDK terminal session](http://sdk.rethinkrobotics.com/wiki/RSDK_Shell), ex:

    $ rosrun baxter\_tools enable\_robot.py -e

Start the joint trajectory controller, ex:

 $ rosrun baxter\_interface joint\_trajectory\_action\_server.py

In another [RSDK terminal session](http://sdk.rethinkrobotics.com/wiki/RSDK_Shell), Launch the [rviz MoveIt! plugin](http://moveit.ros.org/wiki/PR2/Rviz_Plugin/Quick_Start), ex:

    $ roslaunch baxter\_moveit\_config demo\_baxter.launch

1. xx