```
/**********************************************************************
***************************************************/
/* AMCLhints.docx  */
/* These are some hints for creating and running the map follower */
/**********************************************************************
***************************************************/
/* You will login automatically */
/* Jetson TX2 runs stock Ubuntu with custom kernel */
/* You can use a display/keyboard/mouse to execute Linux and ROS
commands on the Rally Car, or you can connect remotely via VNC Viewer
(freeware) */

/**********************************************************************
***************************************************/
/* Create the package (only do this once) */
/**********************************************************************
***************************************************/
cd ~/ros_ws/src
catkin_create_pkg map_follower urg_node hector_slam map_server amcl
rviz std_msgs nav_msgs rospy roscpp
cd ..
catkin_make

/* you need to copy the provided source files in
/ros_ws/src/map_follower/ as following*/

/* load a map and set waypoints */
map_follower/launch/load_map.launch
map_follower/src/waypoint.py

/* open hallmap.yaml and edit the first line so that it matches with
your directory */
map_follower/resources/map/hallmap.yaml
map_follower/resources/map/hallmap.pgm

/* localization using amcl */
map_follower/launch/amcl.launch
map_follower/src/odom.py

/* make .py files executable */
cd ~/ros_ws/src/map_follower/src
chmod +x *.py
cd ~/ros_ws

/**********************************************************************
***************************************************/
/* example launch file: Execute the package and run program */
/**********************************************************************
***************************************************/
/* example to load the map and display way points */
map_follower/launch/load_map.launch
```

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/* example to start laser, load map, localize robot, and perform
waypoint control */
<launch>

     <!-- Load a Map  -->
     <arg name="map_file" default="$(find
map_follower)/resource/map/hallway.yaml"/>
     <node name="map_server" pkg="map_server" type="map_server"
args="$(arg map_file)" />

     <!-- Hokuyo driver for UST-10LX, -135 to 135 deg, 10m range -->
     <node pkg="urg_node" type="urg_node" name="run_hokuyo_10lx" >
          <param name="ip_address" value="128.46.112.200"/>
     </node>

     <!-- localization using amcl -->
     <include file="$(find map_follower)/launch/amcl.launch"/>

     <!-- source code of path -->
     <node pkg="map_follower" type="myRallyCarCode.py" output="screen"
name="myRallyCarCode" />
</launch>

/*********************************************************************
***************************************************/
/* get robot position and orientation from amcl
/*********************************************************************
***************************************************/
/* start robot near initial pose marked on the floor in the hallway */
/* subscribe to /amcl_pose topic to get robot position and orientation
*/

/*********************************************************************
***************************************************/
/* Make the scripts run automatically upstart
/*********************************************************************
***************************************************/
/*    example of executing map_follower map_following.launch
     automatically */

/*    edit this file */
nano ~/.bashrc

/*    put these commands in the end of this file and create
     map_following.launch */
source /opt/ros/indigo/setup.bash
source ~/ros_ws/devel/setup.bash
roslaunch map_follower map_following.launch

/*    cntl + x to exit and select yes to save the change */
/*********************************************************************
***************************************************/
```

```
/* check out: delete source files once finished
/*********************************************************************
***************************************************/
/*     put these commands in the end of this file */
/*     save delete the launch file and python scripts, empty the
trashcan, you can leave the package there and put your source files
back next time */
```