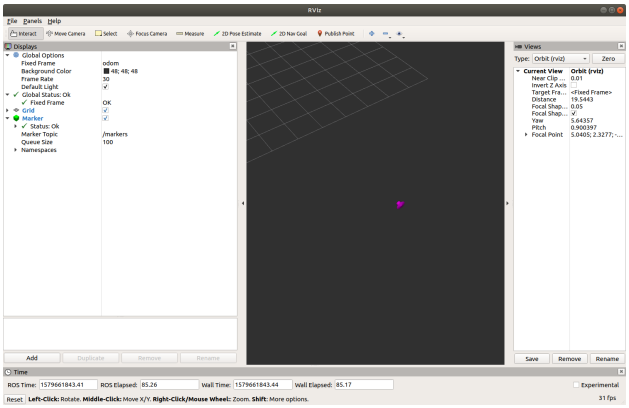
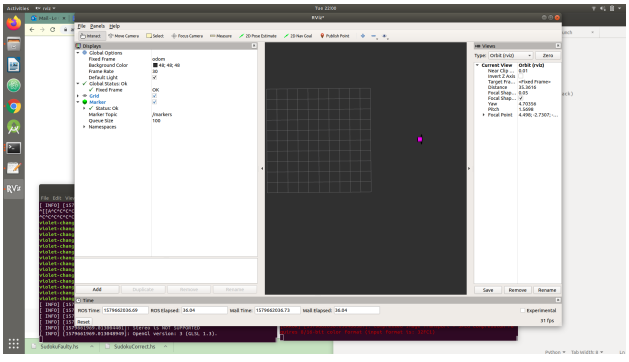
1 Description

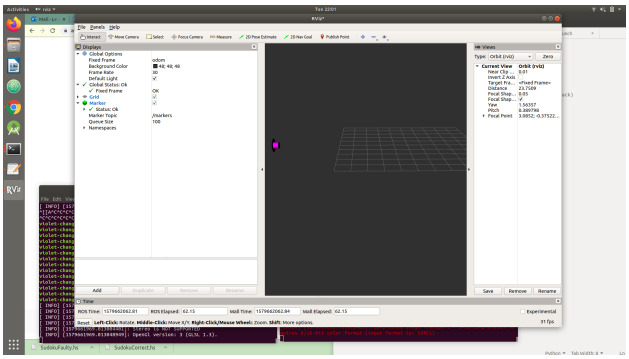
For this assignment, I created a package called hw1_pack. This package contains two folder:scripts and launch, two rosbag file: recordall.bag and recordcompressed.bag, a .csv file that record the travel distance every time I tested my program and a readme that has the instruction about how to run this package.

2 Result

The result shows when I only use script, the robot can run closely around 1 meter and when I run the launch file to run everything, the robot can only run about 0.4 meters. Below images show the position shown in rviz after run. (this is because I used the launch file, when rviz is opened, the robot already finished its movement)







3 Evaluation

For this assignment, I generally completed all the parts. The robot can run for certain distance, it can record the data and it can also show its position. However, it is not perfect. First of all, as I said above, when using the launch file, robot can only run 0.4 meters even though it is set to run 1 meter. I think this is because of the delay of information transmission. The other problem is that the position shown in rviz seems not correct, but I can't find how to fix it. I printed the callback message, it seems like position was changing and updating. I just couldn't be 100% sure that it is correct (Because rviz runs too slow). The last thing is that in order to record all topics with only /camera/compressed, I used two command line and that created two bag file. I don't know if there is a better way to do it. I tried the regular expression but it didn't work right.

4 Allocation of effort

Because this is an individual homework, I did everything on my own. I feel the most difficult part is how to set up the robot and how to let it behave as what I expect. Also, figure out how to show position on rviz took me lots of time on it.