EQUIPE DE ROBOTIQUE AUTONOME

ERA IITK

Midsem Break Learning

Instructions

- You are expected to attempt all tasks.
- The final report should be submitted through GitHub by Making a folder Task 3 in your forked folder from ERA-IITK/learning101
- For shell Tasks, submit .sh files in a seperate folder.
- For ROS tasks, Submit a Work-space <yourname>_ws with package name ERA_Ta sk3
- The final Repo should include all your results, code snippets and necessary information of the task.
- Relevant links can be found at ERA-IITK/res

Introduction to Linux Ecosystem- Part 2

Getting into Linux Eco-System

- Kernel vs. Operating System
- What is a Daemon
- Difference Between Bash and sh
- What is Gnome
- What is Shell
- Complete the chapters 1-5 of the book “Linux Shell Scripting Tutorial - written by Vivek Gite - Found at ERAIITK/res
- Complete Challenges 1-10 (up to Functions and Fractals) on Hackerrank (https://www.hackerrank.com/domains/shell)

Getting into ROS Eco-System

Installing and Using ROS

- Installation - one line, Desktop- full, kinetic,
- Read through Section 1.1 of Mahtani - found at ERAIITK/res

ROS System Levels

- Understand the Filesystem level and The Computation Graph level, and draw flow diagram, illustrating your understanding of each of these

Introduction to Nodes and Topics

- Use Turtle Sim simulator, and use the built-in teleop, Use the RQT graph to see the active nodes and topics.
- Write a node that moves the turtle forward when the input is 'f' and backward when input is 'b'
- Write a node that takes an input 'r' from the user and makes the turtle move in c circle of radius 'r'
