# Robot Manipulation - Assignment 01

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## 1 Lab Class

- Introduction to ROS.

- Concept of URDF (Universal Description Format).

- Launching Robot and Related Topics.

- Introduction to TF.

## 2 Mind Map

- Provide a mind-map for the Chapter " Spatial descriptions and transformations " of [1].

- For participants who have not been introduced to Frames, the video lecture from Prof. Khatib is recommended [1].

- The e-book is available in the Resources Section of LEA.

## 3 ROS

- Review through the concepts of ROS (nothing to be submitted for this item).

- Compare the values listed down in youbot-store [2] and compare how is it related to URDF. Relate in terms of a table.

## References

[1] J. J. Craig. *Introduction to Robotics: Mechanics and Control.* Addison-Wesley Longman Publishing Co., Inc., Boston, MA, USA, 2nd edition, 1989.

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[1] Video Lectures can be found in the LEA Resources Section

[2] http://www.youbot-store.com/youbot-developers/software/simulation/ kuka-youbot-kinematics-dynamics-and-3d-model