UNIVERSITY OF PADUA

INFORMATION ENGINEERING DEPARTMENT (DEI)

MASTER'S DEGREE IN COMPUTER ENGINEERING

Report Assignment 1

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1 Introduction

This report aims to elucidate the operational framework of our assignment solution. Specifically, we will delve into the following aspects:

- The architecture of our codebase.
- Our approach to detecting obstacles, encompassing the identification of walls and circular movable obstacles within the environment.
- Our strategy for navigating through narrow corridors by leveraging laser data.

2 Code Structure

The structure of our code is based on a simple action client-server architecture where the client sends the goal to the server and the server does all the tasks. The main components that we developed are:

- the Action Message (MoveDetectAction)
- the Action Client (TiagoClient)
- the Action Server (TiagoServer)

2.1 Action Message (MoveDetectAction)

2.2 Action Client (TiagoClient)

2.3 Action Server (TiagoServer)

3 Detection

4 Narrow Passages

5 References