

## User Manual for new Students:

### 1. How to start B.ob

- Connect Battery to B.ob
  - Ensure your Laptop is connected to the "GRP-Wifi-Pub" network
  - connect via ssh with the command: "ssh ubuntu@<ip-address>" with your Laptop
  - when asked for Password type:"bertrandt"
  - navigate to the BOB project Directory or Download a new Project from <https://github.com/lukasholtkamp/b.ob.git>
  - navigate to the Projects workspace -> `cd ~/BOB/src/catkin_ws`
  - to compile the project use -> `catkin_make`
  - to run the project use -> `roslaunch bob XboxLauncher.launch`
- To stop the Program use -> Strg+C

### 2. Important Information

- to change the driving behaviour itself look into the MotorDriver class there you can find the functions to set the Speed and to set the direction of both wheels
- to change the behaviour of the Gyroscope use the function inside the RunMotor class there you can find a function to use the Gyroscope values received from the gyroscope node
- to change the behavior of the LIDAR look into the RunMotor class there you can find a loopback function to read the Data from the LIDAR
  - > there you can also find a function to move Bob which also includes the LIDAR Data to keep a set distance to the Wall
- the Camera functions can be found inside the scripts Subdirectory inside the project
  - > right now there is only a python script to read a QR-Code
- if there are problems with the installation or with running the Program please use the Q&A which you can find in the Github mentioned above
- Also please don't change the Maximum Speed of Bob without being sure that it is safe to run the Program that way (Bob has a lot of Power)

-If Bob shows unexpected behaviour please immediately press the emergency button which can be found on top of Bob