**Task:**

World Environment:

Planning Algorithm

Robot Model:

***Takeaways of todays Q&A***

TA showed what they expect from us:

* 2d representation and comparison of two differnet variants of RRT, with computational time and time to get to the goal
* Others prepared a 3d visual for a parking lot
* ROS/ is not required.

General Guidelines

* **Start with something simple and get it done ASAP, then extend it.**
* explain why and list all Shortcomings of our algorithms, i.e. test on different maps
* Understand and justfiy why we took certain decisions.
* **Planning is the core of the prject, the visualization is not important.**
* Balance simplicity / execution
* **Thorough analytical analysis after the work is done**
* Modify the baseline algorithm (e.g. steering functions)
* Multi agent is too difficult

Example: MPC are bettter at moving obstacles, RRT to compute with longer orizon

***Resarch on Simulation Environment***

Having experienced with both gazebo and v-rep for a small amount of time, I think that gazebo is by far the better choice in terms of ease of use, ros integration capabilities and documentation. v-rep has a vast variety of ready to use robots and has more options than gazebo (at least gazebo 5 that I have used) when it comes to simulations but apart from that integrating with ros is not considered to be a trivial task.

Car

<https://www.mathworks.com/help/nav/ug/plan-mobile-robot-paths-using-rrt.html?s_eid=PSM_15028>

3d world (MIT)

<https://www.youtube.com/watch?v=gP6MRe_IHFo>

V-REP

<https://www.youtube.com/watch?v=OfpB87pRoUk>

drone

<https://www.youtube.com/watch?v=dND4oCMqmRs>

matlab + v-rep

<https://www.youtube.com/watch?v=mal48Vd-DQY&list=PL38P7Q24q4XA7c0uNj0kO4or-bKhFYdIg&index=8>