

## Sprint-6

| Backlog   | Estimation in hours (per person) | Total working hours | Status |
|---|----------------------------------|---------------------|--------|
| Install V-Rep Software From Coppeliarobotics Webpage              | 2                                | 10                  | Done   |
| Go Through Copellia Robotics Webpage To Learn V-Rep               | 10                               | 50                  | Done   |
| Get Used To V-Rep By Trying Simulation On Inbuilt Models Of V-Rep | 8                                | 40                  | Done   |
| Learning LUA Scripting  | 15                               | 75                  | Done   |

Installing V-Rep is an easy task. In the Coppelia Robotics webpage we find the download file. After downloading the file the setup is run. It takes almost thirty minutes to finish the setup process.

- After installing we need to study the manual of Vrep. We go through the scenes ,models and different environments and their working modules in the simulation environment.
- We need to understand the user interfaces, scene objects and calculation modules.
- We learn to write code inn vrep. This will be helpful for the further usage of the robots.
- Once we start learning how to write the code in vrep, Its time to play around with the inbuilt robots in the vrep.
- There are many models in vrep. Depending on mobile robots and immobile robots and also different backgrounds like households, mountain terraces to experiment the robot behaviour.
- Learning Lua scripting is also an important part in learning simulation with V-rep. We can use the robot for our intended purposes by modifying the script in lua. There are tutorial pages and Codes provided by the vrep manual to understand it better.
- Once we are done with learning Lua scripting we also have to look at the codes that are used to start the interface between different programming platforms like Java, Python, C++. Its hard to remember all the codes but understanding the code and intended purpose of usage is mostly preffered.
- Lets start the vrep. We see a empty scene in the V-rep page. So start using a mobile robot for example Pioneer 2dx robot. Drag the robot from the panel on to the scene. If needed add a primitive shapes like cuboid or sphere in the scene.
- Now run the simulation , by clicking the play button in the interface. Then the robot moves in the scene and avoids the cuboid as it has a predefined code written by V-rep.
- In order to customize the code of a robot, edit or modify the pre written lua script of the robot as per the requirement. Don't try to edit the movement code that is prewritten in the robot.