The code does the following:

1. Run the main.m file. It calls all the functions from other files. Keep them in the same folder. Also the ‘robomaster.urdf’ and ‘untitled.stl’ file.
2. First, it displays the warehouse layout, the whole design of the warehouse layout is in the warehouse\_layout.m file.
3. I have also defined function files for the obstacles and the goal positions. The start positions are there in the main.m file and the goal positions are in the random\_unloading\_stations.m file. In the obstacle\_map.m, I have defined obstacles similar to the dimensions as in the warehouse layout.
4. The astar\_path.m file uses the A\* algorithm for path planning and obstacle avoidance. I researched that the inbuilt MATLAB function plannerAStarGrid is not compatible with obstacle avoidance, so I didn’t use it. The A\* function also calculates costs and optimizes the path.
5. There is file trajectory\_animation.m which gives an animation as output of the robots travelling from start to goal positions. It will save a mp4 video in the same folder. Everytime you run it, the file will get replaced.
6. Finally, there is communication in wifi\_communication.m file. I can still refine it more. Currently, it gives result of RSSI vs time(s) for all the 5 robots. It uses the WLAN Toolbox from MATLAB, you can check the code for it. There is also the graphs for handover in this. It shows at what time the handover takes place for each robot, there will be graphs for each robot.
7. There is also a file visualize\_paths.m which will give a path as output the robot took

I still have to do cost calculation and optimization but I am confused as to how to do it. Maybe we can discuss whenever you are back next week. Till then, you can check the code, where and how exactly can I refine it. And if there results I am getting right now are correct or not.