Part1:

Report Summarize your findings regarding the pros and cons for each of these three motion planning algorithms.

RRT:

Pro: It is suitable for exploration of detecting various working path.
Cons: In the case of RRT, it takes the random sample too much and converge much later than BiRRT. Moreover, the generated paths are usually longer than BiRRT.

BiRRT:
Pro: It converges much faster than RRT. In addition, the resultant path are usually shorter than RRT.
Cons: In the case of RRT, it takes the random sample too much and converge much later than BiRRT. Moreover
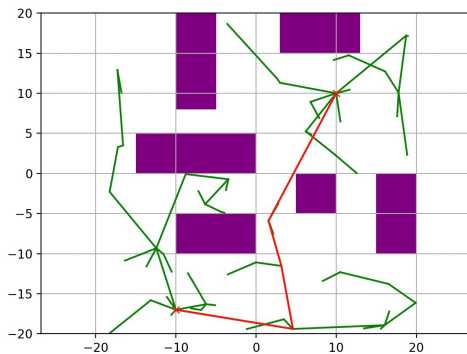
BiRRT:
Pro: It results in much simpler and direct path than BiRRT.
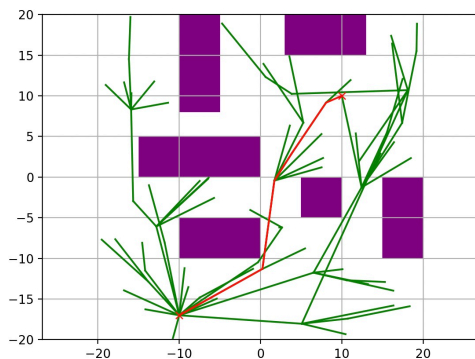Cons: It takes the extra computation to remove the unnecessary intermediate nodes.

Part2:

Q4:

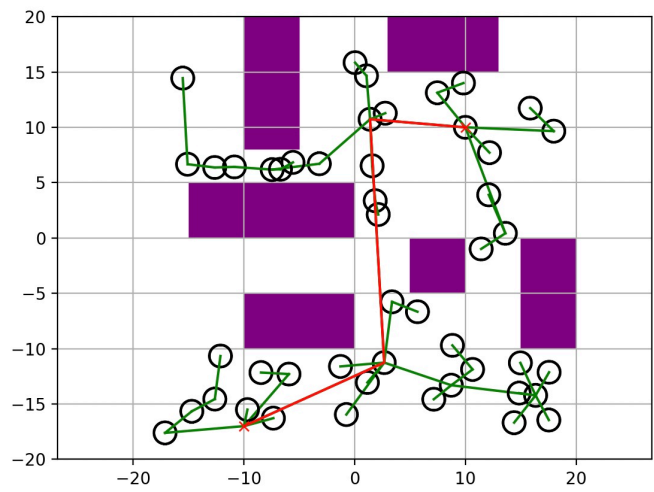RRT: Average Cost: 50.31796 || Average Computation time: 0.08sec

RRT*: Average Cost: 42.02298 || Average Computation time: 1.22sec
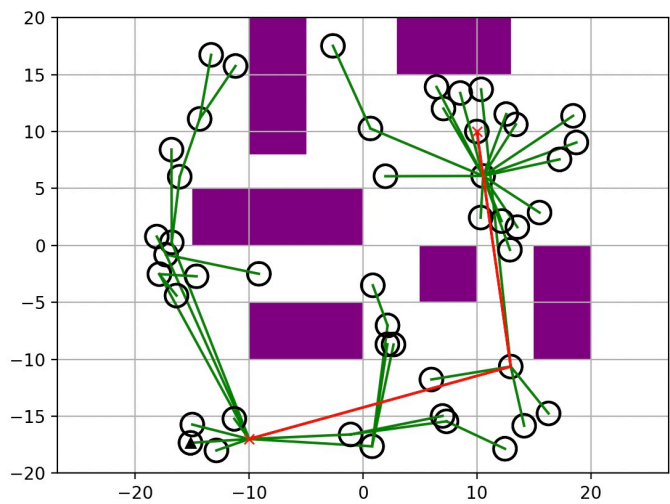
Q5:

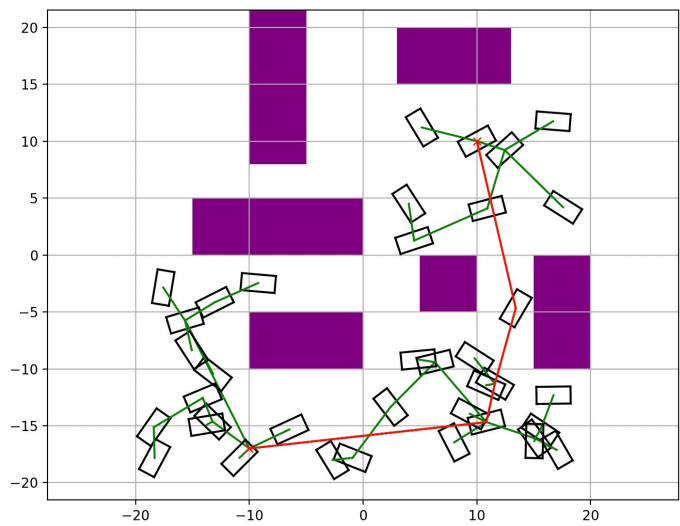RRT: Average Cost: 47.57319 || Average Computation time: 1.16sec

RRT*: Average Cost: 41.25241 || Average Computation time: 11.87sec

Q6:

RRT: Average Cost: 53.56179 || Average Computation time: 1.12sec

RRT*: Average Cost: 42.16621 || Average Computation time: 10.81sec