reflections

in this project, I implemented MPC in order to drive the car around the track in the simulation.

MPC is basically converting the problem to an optimization problem. according to that, we need to define the equations (the transition functions), the cost function, and the constraints.

hyperparameters: N and dt: I tried to set N = 25, dt = 0.05, but the results were worse since the complexity is quite big.

I also transform the x, y, psi values before the insertion to model to the car's coordinates.

In order to deal with the latency, I just updated x, v, epsi as they were supposed to be latency time into future.