# Project 3: Vehicles chasing each other around a closed course with varying properties

At this project, there are two robots and these robots try to catch each other. Then, it which catches other wins. Robots will compete on a road. This road is not a straight road. This road has elliptical shape and width of the road is variable. The aim of the project is that a robot should approach the other around 5 cm. While a robot tries to catch the other, it should not get out of line. If it is, it will lose the race.

Moreover, they who control the motor properly will win since if they control the motor properly, the robot does not get out of line and robot goes faster. Because of this, I think PID controller should be used well. Also, to distinguish the road, image processing should be used. Moreover, to finish the road, while the robot is turning the upper part of the ellipse, it should slow down since if it is not, it can be driven away. Also, we will be familiar with some microcontroller.

Finally, we will learn a lot of things. These are image processing algorithm, PID controller, usage of the microcontroller with some peripheral.