ABSTRACT

Robot car is a machine that has structure like a car and it has wheel actuator to move the body from one position to another position. The advantage robot car is easy to assemble.beside that, car robot can be developed for many necessery for example as campus car transportation.

Based on that necessery, in this final project will be created a prototype of robot car for campus car transportation.The microcontoller that used in car is Arduino UNO because it is more simple and reliable as controller of sytem.Mechanics system of car is like line follower robot with wheel actuator. the car robot using photodiode sensor in order to follow the track and to read the sign in the track.besides that, car has Reedswitch sensor to detect the magnet in track. Car has WiFi shield arduino to comunicate with server.

From the testing, robot car can following the track successfully from one station to another station with 90,47 % of ratio successful.Delay of data send and receive on car robot about 1.21 second.that delay still can be tolerant because car robot only need 1.98 second for reach the next sign from the sign that detected. Robot car can cover a distance of 60 cm or from one sign to the next sign at the maximum speed average is 0.28 m/s, whereas the minimum speed average is 0.12 m/s

Keywords : *Robot Car, Line Follower robot, Arduino UNO, WiFi shield arduino*