The NPD (Number Plate Detection) system is an image processing technology. Such systems are widely used for Traffic control, tolling (for e.g., fastag), in parking area etc. The primary objective of the system is to design a vehicle identification system by using the number plate of the vehicle. The development of this system makes it easier to keep a track of the increasing number of vehicles and use it whenever required. The system inputs a vehicle image and separates the number plate from the rest of the image. The resulting images are extracted by using the segmentation processes. Optical character reading is used to convert images to machine encoded text. The system is simulated and implemented on MATLAB and performance is tested on real images.