In this study, traffic signalization by fuzzy logic according to number of vehicles, vehicle type, fuel and time parameters of 5 leg roundabouts were simulated in computer environment. For this purpose, city surveillance cameras (mobese) were used for the selected intersection. In the simulation, the Mamdani type fuzzy model was used. The results of the application are listed in tables. According to the vehicle density coming near the intersection, the transition times or stopping times applied to the intersection were optimized. Also, types of vehicles coming near the intersection are analyzed and vehicles with high fuel consumption are given priority. Thus, fuel consumption and environmental pollution can be reduced. The methods in this study are compared in terms of fuel saving, environmental effects and faster road flow. Accordingly, neutral fuel consumption with fuzzy logic method is averagely %15.9 less than classical method.