Problem 1

# Draw an EER diagram for the following situation:

City Transportation Authority needs to keep track of the traffic through and the toll revenues collected from the toll bridges, tunnels, and road toll stops (all of these are toll collection points) managed by the authority.

Each toll collection point has a unique name. Toll collection point data that should be maintained are a description, the day operations started at the collection point, and location coordinates. Each toll collection point has several toll booths identified by a toll booth number, some of which are manned and some unmanned (using the city’s QuickLane collection system). The city wants to separately track passenger vehicles, trucks, buses, and motorcycles. Each of these categories has a different toll amount at each toll collection point. At the vehicle level, only those vehicles using the QuickLane system can be identified with their license plate number; the make and model of each vehicle are also maintained in the database. There are two types of employees: toll collectors and supervisors. Each supervisor is responsible for specific toll booths at a moment, and at this point, the system does not need to keep track of historical data regarding supervisory assignments.

Each toll collector reports to a specific supervisor. The city wants to maintain records about the employees’ names, addresses, phone numbers, and their years of service. A managerial capability rating (MCR) is maintained for the supervisors and a textual performance evaluation for each toll collector