

**Draw an E-R Diagram for the following:**

A bus company owns a number of buses. Each bus is allocated to a particular route. Although some routes may have several buses, each route passes through a number of towns. One or more drivers are allocated to each stage of a route, which corresponds to a journey through some or all of the towns on a route. Some of the towns have a garage, where buses are kept and each of the buses are identified by the registration number and can carry different numbers of passengers, since the vehicles vary in size and can be single or double decked, each route is identified by a route number and information is available on the average number of passengers carried per day for each route. Drivers have an employee number, name, address and sometimes a telephone number.

**Draw an ER Diagram using the following statements.**

A college contains many departments. Each department can offer any number of courses. Many instructors can work in a department. An instructor can work only in one department. For each department there is a Head. An instructor can be head of only one department. Each instructor can take any number of courses. A course can be taken by only one instructor. A student can enroll for any number of courses. Each course can have any number of students

**Draw an ER Diagram Hotel Management System.**

A hotel has different types of room. Customers check in for a room. They pay bills against the usage of rooms. Hotel has service desk from where registration and housekeeping services are provided to the customers. Hotel has a restaurant that provides food to the customers for their order.

**Draw an ER Diagram using the following statements.**

In a hospital there are three different types of doctors (trainee, visitor and permanent) are there to checkup the patients admitted in the hospital. There are rooms in the hospital where patients are admitted and looked after by the nurse. Recipient maintains the records for each patient. Patient has to pay the bill against the medicines prescribed by the doctor and room changes.

**Draw an ER Diagram for the Library Management System.**

In Library different types of books are purchased for the students to refer. Books are categorized by different authors and publishers. Student registers in the library and can issue books. Librarian manages student details.

**Draw an ER Diagram for the Train Booking System.**

A passenger books a ticket for a Train. Train has its unique number, seating capacity, arrival time and departure time at a particular station. Train travels by different stations. Station has its number and platform number. Train has a ticket collector assigned, who checks the ticket of a passenger.