DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ANNA UNIVERSITY

B.E. COMPUTER SCIENCE AND ENGINEERING (BATCH – Q)

FOURTH SEMESTER

(DECEMBER 2025 TO APRIL 2026)

CS23401: DATABASE MANAGEMENT SYSTEMS

ACTIVITY – IV (07.01.2026)

1.	Using Dia Diagram Editor open-source tool create an Entity-Relationship Diagram for the Company Database Schema presented below:
	An international airport requires a system to keep track of flight details for customers. For each flight the system needs to store the flight number, destination, departure time, departure gate, airline and flight cost. Some flights are direct flights, i.e. they fly non-stop to the destination and some fly via another airport to their destination. We will call these flights indirect flights. In this case the flight stops at an airport en route to its destination to refuel. In the case of indirect flights information regarding the transit airport must also be stored. The flight cost is calculated to be the cost charged by the airline per customer plus a percentage of this amount (the profit rate). In the case of indirect flights an additional levy must be added to this amount per customer in order to cover refueling levies at the transit airport. Furthermore, on some flights additional passengers can board the plane at the transit airport. The system needs to keep track of whether boarding will take place at the transit airport or not. The system also needs to store details of the aircraft used for a flight. The aircraft make, model and capacity (number of passengers that it can carry), must be stored for each aircraft.

2.	Using Dia Diagram Editor open-source tool create an Entity-Relationship Diagram for the Company Database Schema presented below:
	A General Hospital consists of a number of specialized WARDS. The attributes of each WARD are WARD_NO and WARD_NAME. The system records the following attributes about patients: PATIENT_ID, NAME, and DATE_OF_BIRTH. Each ward may host more patients and each patient is admitted in only one ward. Each patient is assigned to one leading CONSULTANT but may be examined by other CONSULTANTS, if required. Each CONSULTANT may be assigned a set of patients and may examine a set of patients. The attributes of CONSULTANTS are CONSULTANT_ID and CONSULTANT_NAME. The system has to record all required data each time the NURSE gives a patient a certain DRUG with specified DOSAGE at certain DATE and TIME. The attributes of DRUG include DRUG_CODE, DRUG_NAME, RECOMMENDED_DOSAGE and more than one BRAND_NAME. Each WARD is under supervision of one NURSE and a NURSE may supervise only one WARD. Each NURSE must serve in one WARD and a WARD can have many NURSES. The attributes of NURSE include NURSE_ID and NURSE_ NAME.