Details

This is an individual assignment. Use the ERM knowledge from the lectures and textbook to complete this assignment.

Weight: 5% of total course marks

Due: 4pm, Friday 15th July 2022

Submit via the submission link on Moodle.

Late submission of assignments carries a penalty of 5% of the awarded marks for that assignment per day of lateness (including weekends and public holidays) unless an extension of time has been granted.

Deliverable

Create an ER diagram using Crow's foot notation to model the scenario below. You are allowed to make reasonable assumptions to justify your model, but you must include these assumptions in your submission. Use your ERD (and Normalisation) knowledge to complete this assignment.

Submit your ER diagram in Word document format, along with any assumptions with a signed coversheet.

Your ER model should be clear, and the text can be read. A tip here is to draw on a landscape and you might want to change to an A3 page size. The list of assumptions should not exceed one A4 page (using 12point font).

Database Expert

You are the Database Expert working at Fly High Airlines, and your role is to design their database based on the following business requirements. Fly High Airlines would like you to model the scenario.

Scenario

Fly High Airlines is a leading airline organisation that provides commercial and freight flight services across the globe. They have a fleet of passenger aircraft and a fleet of commercial freight aeroplanes. Passenger and freight planes are different from each other. That is, a passenger plane will not fly for freight goods and a freight plane will not carry passengers. Each plane has a unique identifier and includes details such as weight, types of aircraft (e.g., Boeing 737 Max or Airbus 380), year of construction, year of purchase and passenger/freight capacity.

Each flight has a unique identifier, and other attributes such as departure date and time, departure airport, arrival airport, type of flight (domestic/international and passenger/freight). Each destination has a unique identifier, and other information includes its name, country, population, whether a Covid Vaccine is required for passengers. [Note: you can assume there is no stopover for flight.] Passenger flight includes total number of seats, and number of seats for each of the classes (such as economy, premium economy, business and first), whereas freight flight requires a maximum take-off weight.

Customer details includes unique identifier, name, address, contact number, date of birth, nationality, which flight they are booking for, name of emergency contact. A customer may have booked several flights in the past or may have booked for several flights in future. The fare each customer pays for each flight booking is also stored in this database. Food and drinks are served during the passenger flight but the customer must order before flight (due to Covid-19). The details of the orders include product number, product name, product category, and price.

For freight services, customers are organisations. So, for each freight booking, you need the details of the organisation name, weight to be carried for each booking, type of shipping (ordinary/express/next day delivery etc), departure location, destination location, etc.

For this assessment, you do not need to address employees such as pilot and crew members.

Remember: you are allowed to make reasonable assumptions when designing your model. You must submit your assumptions along with your ERD.

Marking Scheme

- ERD: Technique is correctly used and demonstrated; assignment scenario is appropriately modelled
- Context: Business requirements are appropriately modelled; assumptions are justified
- Presentation: Submission is within the page limit
- References: Sources (if any used) are correctly acknowledged and referenced