COURIER DATABASE MANAGEMENT SYSTEM

Title: Database for keeping information on staff and services of Tej courier company Scope of Database:

Tej courier company records the data of their staff and services manually. Our task to create a database management system platform that tracks and manages all information of staff and day to day courier transactions systematically. The database requirements for the same are given below.

- Database management system will be accessible by Tej courier company only and not by end user which means sender and receiver won't be able to add any feedback or review.

Description/Requirement

- Our database consists of Branch details of Tej courier company, Courier-sender, Courier-receiver, Employee, Employee designation information, Dependent, Courier-information, Payment information, Rate of the courier, and transport details.
- Employees have a name, contact number, gender, date of birth, and Id number.
- Employees may have dependent information for uncertain times, which includes name, type of relationship and contact.
- Employees are assigned designation which includes name of position and salary.
- Employees manage couriers. Couriers include courier ID, name of the courier, delivery date, status, dispatched date.
- The rate of courier is calculated with the parameters of weight, distance, and type.
- Payment of courier includes payment ID, mode of payment, and transaction information.
- Further transaction information includes transaction ID, Date of transaction, and the amount paid.
- Company have several branches that can be identified by branch name and ID. Branch also have a location (Address) and contact information.
- The Courier sender have a unique ID, Name (first name and last name), contact information, and address.
- There is a courier receiver's ID, name (first name and last name), contact, and address.
- Employee relationship with dependent is one to many. One employee can choose one or more dependents and their contact details.
- Branch and employees have one to many relationships, as many employees together manage one branch or vice-e-versa.
- The branch has one to many relationships with the courier, as a branch can supervise one or more couriers.
- A sender has one to many relationships with the courier, as a sender can send multiple couriers.
- A receiver has one to many relationships with couriers. A receiver can receive multiple couriers at a time.
- The branch has one to many relationships with transportation as a branch manages different transportation sources.
- A branch calculates a uniform rate for each distance, weight, and type of courier.
- Branch and courier have one to many relationships. So, that if the courier is not delivered to receiver then it is returned to the branch and is sent back to the sender.

- Branch and payment have one to many relationships. Branch generates payment details which consists of mode of payment and other transaction related details.

Queries that the database system should be able to answer

1. Information about all the couriers sent more than 500km away.
2. Name of the branch which sent the maximum number of courier in month of August.
3. The average cost of couriers in September.
4. To retrieve the status of couriers that are delivered.
5. To retrieve the couriers which have been dispatched.
6. To retrieve the Employee's name and his/her Designation.
7. To Retrieve payment mode and Transaction Details.
8. To retrieve info about courier id no C005 (Weight, Distance and type).
9. Total no. of fragile products sent for each of the year from 2016 to 2020
10. To find payable amount of courier which has 10 kg or less weight.
11. Total no. of Employee working in Ahmedabad branch.
12. To retrieve name of employees who are male and working in branch Mumbai.
13. To select name of customer who has sent courier between 1st August 2020 to 30 September 2020.
14. To retrieve name of branch manager of Ahmedabad branch
15. Retrieve the name of the employee who have salary more than 20,000 but less than 70,000
16. Find the courier ID whose Delivery status is FAILED.
17. Total number of courier delivered in Maharashtra In Year 2020.
18. To retrieve courier's sender and receiver name whose STATUS is SUCCESSFUL.
19. Select name of customers whose mode of payment is offline and courier status is In transit.
20. Select all the courier whose cost is greater than Rs 100 and less than Rs 500 & mode of payment is online.