Database Management System – IT615 Group – 13

Title: Database for keeping Track of Regional Transport Office(RTO) Services.

Scope Of Database:

RTO (The Regional Transport Office) management system is a government
organization whose primary purpose is to issue the Driving License, Vehicle
Registration, etc. RTO Management System is designed to make the process of
registration of information regarding Licenses and retrieving information about it easier and
faster. Users can choose the test date for their driving test.
These are some modules that RTO provides:
● Driving License
● Learner's License
● International Driving License
● Vehicle Registration
● Issue of Permits
● E-Challan
RTO keeps track of different vehicles and other services. It mandates that all the
vehicles that are driven on public roads are registered with an RTO. Our task is to provide
Vehicle Registration, Driving License and various permits to authorized users. Application
side constraint is that the user can only get a Driving License or an International License if
the user already has a learner's license.

Application side constraint :

- The user can only get a Driving License or an International License if the user already
  has a learner's license.
- After the user has provided the required forms only then will he/she become a
  registered user.

Database Requirements:

1. Employees have a PAN number, fname, lname, dob,salary, and contact number.
2. An RTO has several departments identified by unique department numbers. Department also has a name and it's office location (city and Pincode).
3. Each office can have many department and each department is present in one office.
4. Every employee works for only one department but the department can have zero or more employees.
5. A user has a Pan number, fname, lname,city, dob and contact number.
6. Any authorized User can apply for one or more services. Each service requires filling out an application form and uploading one or more documents with requirements like address proof, age proof, identity proof, passport size photograph and a signature.
7. Users can choose the timing for various service appointments by selecting the date and time when they can visit the nearest RTO office.
8. The request is approved by one employee and an employee can approve one or more appointment requests.
9. An employee can reject an application if the user does not appear on the allotted day and might be asked to reschedule.
10. A user can apply for zero or more vehicle registration and each vehicle registration will be associated with only one user.
11. Vehicle type can be LMV(Light Motor Vehicle),HMV(Heavy Motor Vehicle) and Trans.
12. An employee can accept or reject the registration request (if the user does not satisfy the required conditions) and each registration is allotted a unique id.
13. A user applying for a License must select any one of the license types (Learner's, Driving, International) for application process.
14. Each User can attempt the Driving License test one or more times. A user can reapply after a 6 months waiting period after the third trial.
15. Learner's License is valid for 6 months and then a user can apply for the Driving License.
16. Driving and International License are valid for 10 years and then the user can reapply for them.
17. After each License appointment a test result is generated for each user and each user receives only one test result at a time.
18. Each registered vehicle can have atmost one permits (TRANS(LGV, HGV)). Each of these permits is valid for 5 years and then a user can reapply for the permit and a permit may be received by many vehicle.

19. A user if found violating any of the traffic rules will have to pay an E-challan.
20. An E-challan entity has a E-challan id, amount to be paid and the type of challan . A user can receive one or more E-challan per vehicle.
21. An employee can allot one or more driving license and vehicle goods permit.
22. A user can make one or more payments for one or more services, and each payment must be associated with a user.

Queries:

1. Find all the users whose license type is learning license.
2. Count the number of permits where permit type is "LGV".
3. Find all the users whose vehicle type is LMV and who have paid the echallan.
4. Find all the users having a driving license and whose age is above 18 years.
5. List the RTO office which has the maximum number of driving license tests scheduled.
6. List all the users who have passed the test for a driving license in Surat.
7. Find all the employees working in "PERMIT" department.
8. List all the users whose appointment have been cancelled more than two times.
9. Find the users who have not paid e-challan and how many times have they not paid the e-challan.
10. Find the department which has received the maximum payment amount.
11. Find the department name where the numbers of employees are more than five.
12. Find the names of the employees whose salary is greater than average salary.
13. Count the number of users who have registered move than two vehicles.
14. Find the users who have international license which is expiring in the year 2020.
15. Find the users whose appointment has been rescheduled more than 3 times.
16. Find name of user who have paid e-challan at least two times.
17. List all the users who have failed the driving license test three times.
18. List all the users who have applied for vehicle registration for HMV in Vadodara and in Ahmedabad.
19. Find names of users who have paid E-challan atleast once and belong to the city of Rajkot.
20. Get details of all the user whose name starts with A and has a driving license.
21. List details of all the users who have registered at least one vehicle.
22. Find out employee who have salary greater than some employees of department 'ECHALLAN'.
23. List details of all the user details who have all the types of driving license.

24. List all the users whose age is not between 25 to 40.
25. Find the details of users who don't have a permit and are eligible for one.