

VEHICLE REPORT-

UNF :

VEHICLE(vehicle_vin, vehicle_type, man_yr, vehicle_colour, (reg_date, reg_no, dereg_date))

MODEL(model_name, transmission, (engine_type), engine_size, ground_clearanceL,
ground_clearanceUL, man_code, man_name, man_country, iso_code)

1NF :

VEHICLE(vehicle_vin, vehicle_type, man_yr, vehicle_colour, man_code, man_name, man_country,
iso_code)

REGISTRATION(vehicle_vin, reg_no, reg_date, dereg_date)

MODEL(model_name, transmission, engine_size, ground_clearanceL, ground_clearanceUL,
man_code, man_name, man_country, iso_code)

ENGINE(model_name, engine_type)

Dependency:

reg_no -> reg_date PARTIAL

man_code -> man_name, man_country, iso_code TRANSITIVE

2NF :

VEHICLE(vehicle_vin, vehicle_type, man_yr, vehicle_colour)

REGISTRATION(vehicle_vin, reg_no, dereg_date)

REGISTRATION_START(reg_no, reg_date)

MODEL(model_name, transmission, engine_size, ground_clearance, ground_clearanceUL,
man_code, man_name, man_country, iso_code)

ENGINE(model_name, engine_type)

3NF :

VEHICLE(vehicle_vin, vehicle_type, man_yr, vehicle_colour)

MANUFACTURER(man_code, man_name, man_country, iso_code)

REGISTRATION(vin, reg_no, dereg_date)

REGISTRATION_START(reg_no, reg_date)

MODEL(model_name, transmission, engine_size, ground_clearanceL, ground_clearanceUL, man_code)

ENGINE(model_name, engine_type)

LICENCED DRIVER REPORT-

UNF :

DRIVER(licence_no, licence_status, d_fname, d_lname, date_of_birth, licence_expiry, add_street, add_town, add_postcode, (licence_type_held), (suspension_start, suspension_end), (date_cancelled, period_cancellation, reason_cancelled))

1NF :

DRIVER(licence_no, licence_status, d_fname, d_lname, dob, licence_expiry, add_street, add_town, add_postcode)

LICENCE_TYPE(licence_no, licence_type_held)

SUSPENSION(licence_no, suspension_start, suspension_end)

CANCELLATION(licence_no, date_cancelled, period_cancellation, reason_cancelled)

Dependency:

suspension_start -> suspension_end PARTIAL

NO TRANSITIVE DEPENDENCY

2NF :

DRIVER(licence_no, licence_status, d_fname, d_lname, date_of_birth, licence_expiry, add_street, add_town, add_postcode)

LICENCE_TYPE(licence_no, licence_type_held)

SUSPENSION(licence_no, suspension_start)

SUSPENSION_PERIOD(suspension_start, suspension_end)

CANCELLATION(licence_no, date_cancelled, period_cancellation, reason_cancelled)

3NF :

DRIVER(licence_no, licence_status, d_fname, d_lname, date_of_birth, licence_expiry, add_street, add_town, add_postcode)

LICENCE_TYPE(licence_no, licence_type_held)

SUSPENSION(licence_no, suspension_start)

SUSPENSION_PERIOD(suspension_start, suspension_end)

CANCELLATION(licence_no, date_cancelled, period_cancellation, reason_cancelled)

DRIVER LICENCE CANCELLATION REPORT –

UNF :

DRIVER_REPORT(licence_no, d_fname, d_lname, (date_cancelled, reason_cancelled, court_hearing_date, licence_reinstatement_date))

1NF :

DRIVER_REPORT(licence_no, d_fname, d_lname)

CANCELLATION_REPORT(licence_no, date_cancelled, reason_cancelled, court_hearing_date, licence_reinstatement_date)

Dependency :

NO PARTIAL DEPENDENCY

NO TRANSITIVE DEPENDENCY

2NF :

DRIVER_REPORT(licence_no, d_fname, d_lname)

CANCELLATION_REPORT(licence_no, date_cancelled, reason_cancelled, court_hearing_date, licence_reinstatement_date)

3NF :

DRIVER_REPORT(licence_no, d_fname, d_lname)

CANCELLATION_REPORT(licence_no, date_cancelled, reason_cancelled,
court_hearing_date, licence_reinstatement_date)

COLLECTED 3NF RELATIONS:

1.VEHICLE(vehicle_vin, vehicle_type, man_yr, vehicle_colour)

2.MANUFACTURER(man_code, man_name, man_country, iso_code)

3.REGISTRATION_START(reg_no, reg_date)

4.REGISTRATION(vehicle_vin, reg_no, dereg_date)

5.MODEL(model_name, transmission, engine_size, ground_clearanceL, ground_clearanceUL)

6.ENGINE(model_name, engine_type)

7.DRIVER(licence_no, licence_status, d_fname, d_lname, date_of_birth, licence_expiry, add_street,
add_town, add_postcode)

8.LICENCE_TYPE(licence_no, licence_type_held)

9.SUSPENSION(licence_no, suspension_start)

10.SUSPENSION_PERIOD(suspension_start, suspension_end)

11.CANCELLATION(licence_no, date_cancelled, period_cancellation, reason_cancelled)

12.DRIVER_REPORT(licence_no, d_fname, d_lname)

13.CANCELLATION_REPORT(licence_no, date_cancelled, reason_cancelled,
court_hearing_date, licence_reinstatement_date)

ATTRIBUTE SYNTHESIS :

- 1.VEHICLE(vehicle_vin, vehicle_type, man_yr, vehicle_colour)
- 2.MANUFACTURER(man_code, man_name,man_country, iso_code)
- 3.REGISTRATION_START(reg_no, reg_date)
- 4.REGISTRATION(vehicle_vin, reg_no, dereg_date)
- 5.MODEL(model_name, transmission, engine_size, ground_clearanceL, ground_clearanceUL)
- 6.ENGINE(model_name, engine_type)
7. & 12 – DRIVER(licence_no, licence_status,d_fname, d_lname, date_of_birth, licence_expiry, add_street, add_town, add_postcode)
- 8.LICENCE_TYPE(licence_no, licence_type_held)
- 9.SUSPENSION(licence_no, suspension_start)
- 10.SUSPENSION_PERIOD(suspension_start, suspension_end)
11. & 13 - CANCELLATION(licence_no,date_cancelled,reason_cancelled,period_cancellation, court_hearing_date, licence_reinstatement_date)

CONSOLIDATION:

1. VEHICLE(vehicle_vin, vehicle_type, man_yr, vehicle_colour)
2. MANUFACTURER(man_code, man_name,man_country, iso_code)
3. REGISTRATION_START(reg_no, reg_date)
4. REGISTRATION(vehicle_vin, reg_no, dereg_date)
5. MODEL(model_id,model_name,transmission,engine_size,ground_clearanceL,ground_clearanceUL)
6. ENGINE(model_id, engine_type)

7. DRIVER(licence_no, licence_status, d_fname, d_lname, date_of_birth, licence_expiry, add_street, add_town, add_postcode)
8. LICENCE_TYPE(licence_no, licence_type_held)
9. SUSPENSION(licence_no, suspension_start)
10. SUSPENSION_PERIOD(suspension_start, suspension_end)
11. CANCELLATION(licence_no, date_cancelled, reason_cancelled, period_cancellation, court_hearing_date, licence_reinstatement_date)
12. OFFENCE(offence_no, offence_date, offence_location, offence_time)
13. DEMERIT(demerit_code, demerit_points, demerit_description)
14. OFFICER(officer_id, officer_fname, officer_lname, officer_rank)
15. STATION(st_no, st_address, st_phone, st_timings)
16. ALLOCATION(assign_date, st_no, officer_id)

[In the model table, model_id is taken as a surrogate key and 12,13,14,15,16 are the tables in continuation from assignment 1]