

Clean Up Inc Driver Report

UNF

DRIVER(driver_num, driver_licence_num, driver_name, driver_dob, driver_taxfile_num, (truck_vin, truck_rego_num, truck_make, truck_model, truck_year))

1NF

DRIVER(driver_num, driver_licence_num, driver_name, driver_dob, driver_taxfile_num)

Candidate Key:

1. driver_num
2. driver_licence_num
3. driver_taxfile_num

AUTHORISED_TRUCK(truck_vin, truck_rego_num, truck_make, truck_model, truck_year, driver_num)

Candidate Key:

1. truck_vin, driver_num
2. truck_rego_num, driver_num

Partial Dependency:

truck_vin → truck_rego_num, truck_make, truck_model, truck_year

2NF

DRIVER(driver_num, driver_licence_num, driver_name, driver_dob, driver_taxfile_num)

AUTHORISED_TRUCK(truck_vin, driver_num)

TRUCK(truck_vin, truck_rego_num, truck_make, truck_model, truck_year)

Transitive Dependency:

No transitive dependencies

3NF

DRIVER(driver_num, driver_licence_num, driver_name, driver_dob, driver_taxfile_num)

AUTHORISED_TRUCK(truck_vin, driver_num)

TRUCK(truck_vin, truck_rego_num, truck_make, truck_model, truck_year)

Full Dependency:

driver_num → driver_licence_num, driver_name, driver_dob, driver_taxfile_num

truck_vin, driver_num

truck_vin → truck_rego_num, truck_make, truck_model, truck_year

Clean Up Inc Collection Report

UNF

CONTRACT_WASTE(cont_num, waste_type_id, waste_type_desc,
contwaste_collection_frequency, (collection_date, driver_num, driver_contact_num,
truck_vin, (propbin_RFID_tag, colbin_collected_kgs, colbin_overweight)))

1NF

CONTRACT_WASTE(cont_num, waste_type_id, waste_type_desc,
contwaste_collection_frequency)
COLLECTION(collection_date, driver_num, driver_contact_num, truck_vin, cont_num,
waste_type_id)
COLLECTION_BIN(propbin_RFID_tag, colbin_collected_kgs, colbin_overweight,
collection_date, cont_num, waste_type_id)

Partial Dependency:

waste_type_id → waste_type_desc

2NF

CONTRACT_WASTE(cont_num, waste_type_id, contwaste_collection_frequency)
WASTE(waste_type_id, waste_type_desc)
COLLECTION(collection_date, driver_num, driver_contact_num, truck_vin, cont_num,
waste_type_id)
COLLECTION_BIN(propbin_RFID_tag, colbin_collected_kgs, colbin_overweight,
collection_date, cont_num, waste_type_id)

Transitive dependency:

driver_num → driver_contact_num

3NF

CONTRACT_WASTE(cont_num, waste_type_id, contwaste_collection_frequency)
WASTE(waste_type_id, waste_type_desc)
COLLECTION(collection_date, driver_num, truck_vin, cont_num, waste_type_id)
DRIVER(driver_num, driver_contact_num)
COLLECTION_BIN(propbin_RFID_tag, colbin_collected_kgs, colbin_overweight,
collection_date, cont_num, waste_type_id)

Full dependency:

cont_num, waste_type_id → contwaste_collection_frequency

waste_type_id → waste_type_desc

collection_date, cont_num, waste_type_id → driver_num, truck_vin

driver_num → driver_contact_num

propbin_RFID_tag, collection_date → colbin_collected_kgs, colbin_overweight, cont_num,
waste_type_id

Collected 3NF Relations

1. DRIVER(driver_num, driver_licence_num, driver_name, driver_dob, driver_taxfile_num)
2. AUTHORISED_TRUCK(truck_vin, driver_num)
3. TRUCK(truck_vin, truck_rego_num, truck_make, truck_model, truck_year)
4. CONTRACT_WASTE(cont_num, waste_type_id, contwaste_collection_frequency)
5. WASTE(waste_type_id, waste_type_desc)
6. COLLECTION(collection_date, driver_num, truck_vin, cont_num, waste_type_id)
7. DRIVER(driver_num, driver_contact_num)
8. COLLECTION_BIN(propbin_RFID_tag, colbin_collected_kgs, colbin_overweight, collection_date, cont_num, waste_type_id)

Attribute Synthesis

1 and 7

DRIVER(driver_num, driver_licence_num, driver_name, driver_dob, driver_taxfile_num, driver_contact_num)

2

AUTHORISED_TRUCK(truck_vin, driver_num)

3

TRUCK(truck_vin, truck_rego_num, truck_make, truck_model, truck_year)

4

CONTRACT_WASTE(cont_num, waste_type_id, contwaste_collection_frequency)

5

WASTE(waste_type_id, waste_type_desc)

6

COLLECTION(collection_date, driver_num, truck_vin, cont_num, waste_type_id)

8

COLLECTION_BIN(propbin_RFID_tag, colbin_collected_kgs, colbin_overweight, collection_date, cont_num, waste_type_id)