

(i) Driver Details:

Clean Up Inc Driver report

Driver Number:	12
Licence Number:	123456789
Name	Mary Xiue
Date of Birth	11 Apr 1993
Taxfile Number	987645132

AUTHORISED TRUCKS

VIN	Rego Number	Make	Model	Year
1HSJRSCR9EJ419702	TRK123456	Hino	300 816 Auto	2020
YV5F4B3D8WD563753	TRK278901	Iveco	Acco	2022

... partial and representative data shown ...

(i) Driver Details:

UNF (List all attributes and identify repeating groups)

DRIVER_REPORT(driver_no, driver_licenceNo, driver_name, driver_dob, driver_tfn,
(truck_vin, truck_rego, truck_make, truck_model, truck_year))

1NF (Remove repeating groups, identify PK for each relation and identify partial dependencies)

DRIVER(driver_no, driver_licenceNo, driver_name, driver_dob, driver_tfn)
CK:(driver_no)
(driver_licenceNo)
(driver_tfn)

DRIVER_TRUCK (driver_no, truck_vin, truck_rego, truck_make, truck_model, truck_year)
CK: (driver_no, truck_vin),
(driver_no, truck_rego)

Partial dependencies (a non-key attribute depends only part of candidate key(s)).
truck_vin -> truck_rego, truck_make, truck_model, truck_year

2NF (Remove partial dependencies and identify transitive dependencies)

DRIVER(driver_no, driver_licenceNo, driver_name, driver_dob, driver_tfn)

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

DRIVER_TRUCK(driver_no, truck_vin)

Transitive dependencies (a non-key attribute determines another non-key attribute/s).

No transitive dependencies present

3NF (Remove transitive dependencies)

DRIVER(driver_no, driver_licenceNo, driver_name, driver_dob, driver_tfn)

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

DRIVER_TRUCK(driver_no, truck_vin)

Full dependencies

driver_no -> driver_licenceNo, driver_name, driver_dob, driver_tfn

truck_vin -> truck_rego, truck_make, truck_model, truck_year

(ii) Collection Report

Clean Up Inc Collection Report

Contract Number: 123
Waste Type ID: GW
Waste Type Description: Green Waste
Collection Frequency: Fortnightly

Date of collection: 15th March 2023
Driver No: 12
Driver Contact Number: 0426123456
Collection Truck VIN: 1HSJRSCR9EJ419702
Collections Made:

Bin RFID	Collected Kgs	Overweight
B724E7D504B19A9B		Y
294CEEFD3435F15D	56	N
56EB9899AA5EE944	45	N
B5E79C8D3DD0394E	60	N
C19D7652AB78E157	54	N
3DA18BA44CC14795	67	N
4DBAE5111FA74C42	32	N

... partial and representative data shown ...

Date of collection: 29th March 2023
Driver No: 8
Driver Contact Number: 0123456789
Collection Truck VIN: YV5F4B3D8WD563753
Collections Made:

Bin RFID	Collected Kgs	Overweight
B724E7D504B19A9B	65	N
56EB9899AA5EE944		Y
B5E79C8D3DD0394E	69	N
C19D7652AB78E157	45	N
3DA18BA44CC14795	42	N
4DBAE5111FA74C42	56	N

... partial and representative data shown ...

(ii) Collection Report:

UNF (List all attributes and identify repeating groups)

COLLECTION(contract_no, wt_id, wt_desc, cc_freq, (collection_date, driver_no, driver_contactNo, truck_vin, (bin_rfid, bc_weght, bc_overweight)))

1NF (Remove repeating groups, identify PK for each relation and identify partial dependencies)

CONTRACT_COLLECTION(contract_no, wt_id, wt_desc, cc_freq)

CK: None except primary key

COLLECTION(contract_no, wt_id, collection_date, driver_no, truck_vin, driver_contactNo)

CK: None except primary key

BIN_COLLECTED(contract_no, wt_id, collection_date, bin_rfid, bc_weight, bc_overweight)

CK: None except primary key

Partial dependencies (a non-key attribute depends only part of candidate key(s)).

wt_id -> wt_desc

2NF (Remove partial dependencies and identify transitive dependencies)

CONTRACT_COLLECTION(contract_no, wt_id, cc_freq)

COLLECTION(contract_no, wt_id, collection date, driver_no, truck_vin, driver_contactNo)

BIN_COLLECTED(contract_no, wt_id, collection date, bin_rfid, bc_weight, bc_overweight)

WASTE_TYPE(wt_id, wt_desc)

Transitive dependencies (a non-key attribute determines another non-key attribute/s).

driver_no -> driver_contactNo

3NF (Remove transitive dependencies)

CONTRACT_COLLECTION(contract_no, wt_id, cc_freq)

COLLECTION(contract_no, wt_id, collection date, driver_no, truck_vin)

BIN_COLLECTED(contract_no, wt_id, collection date, driver_no, truck_vin, bin_rfid,
bc_weight, bc_overweight)

DRIVER(driver_no, driver_contactNo)

WASTE_TYPE(wt_id, wt_desc)

Full dependencies

contract_no, wt_id -> cc_freq

contract_no, wt_id, collection date -> driver_no, truck_vin

contract_no, wt_id, collection date, bin_rfid -> bc_weight, bc_overweight

driver_no -> driver_contactNo

wt_id -> wt_desc

Attribute Synthesis

CONTRACT_COLLECTION(contract_no, wt_id, cc_freq)

COLLECTION(contract_no, wt_id, collection_date, driver_no, truck_vin)

BIN_COLLECTED(contract_no, wt_id, collection_date, bin_rfid, bc_weight, bc_overweight)

DRIVER(driver_no, driver_licenceNo, driver_name, driver_dob, driver_tfn, driver_contactNo)

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

DRIVER_TRUCK(driver_no, truck_vin)

WASTE_TYPE(wt_id, wt_desc)