Group A12_Group184

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FORM 1: Driver Details

UNF

DRIVER (driver_num, driver_lic, driver_fname, driver_lname, driver_dob, driver_tax_num,

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

1NF

DRIVER (**driver_num**, driver_lic, driver_fname, driver_lname, driver_dob, driver_tax_num)

AUTH_TRUCK (**truck_vin**, truck_rego, truck_make, truck_model, truck_year, **driver_num**)

Partial Dependencies:

truck_vin -> truck_rego, truck_make, truck_model, truck_year

2NF

DRIVER (**driver_num**, driver_lic, driver_fname, driver_lname,, driver_dob, driver_tax_num)

AUTH_TRUCK (**truck_vin**, **driver_num**)

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

Transitive Dependencies:

No transitive dependencies present

3NF

DRIVER (**driver_num**, driver_lic, driver_fname, driver_lname, driver_dob, driver_tax_num)

AUTH_TRUCK (**truck_vin**, **driver_num**)

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

Full dependencies:

driver_num -> driver_lic, driver_fname, driver_lname, driver_dob, driver_tax_num

truck_vin -> truck_rego, truck_make, truck_model, truck_year

FORM 2: MADECOLLECTION Contract

UNF

CONTRACT (con_num, waste_type_id, waste_type_desc, coll_freq,

       (coll_date, driver_num, driver_cont_num, truck_vin,

           (bin_rfid, coll_weight, coll_over_weight)))

1NF

CONTRACT (**con_num**, **waste_type_id**, waste_type_desc, coll_freq)

COLLECTION (**coll_date**, driver_num, driver_cont_num, truck_vin, **con_num**, **waste_type_id**)

MADECOLLECTION (**bin_rfid**, coll_weight, coll_over_weight, **coll_date**)

Partial Dependencies:

waste_type_id -> waste_type_desc

2NF

CONTRACT (**con_num**, **waste_type_id**, coll_freq)

WASTETYPE (**waste_type_id**, waste_type_desc)

COLLECTION (**coll_date**, driver_num, driver_cont_num, truck_vin, **con_num**, **waste_type_id**)

MADECOLLECTION (**bin_rfid**, coll_weight, coll_over_weight, **coll_date**)

Transitive Dependencies:

driver_num -> driver_cont_num

3NF

CONTRACT (**con_num**, **waste_type_id**, coll_freq)

WASTETYPE (**waste_type_id**, waste_type_desc)

COLLECTION (**coll_date**, driver_num, truck_vin, **con_num**, **waste_type_id**)

MADECOLLECTION (**bin_rfid**, coll_weight, coll_over_weight, **coll_date**)

DRIVER (**driver_num**, driver_cont_num)

Full Dependencies:

con_num, waste_type_id -> coll_freq

waste_type_id -> waste_type_desc

coll_date, con_num, waste_type_id -> driver_num, truck_vin

bin_rfid, coll_date -> coll_weight, coll_over_weight

driver_num -> driver_cont_num

MADECOLLECTION of 3NF Relation

1. DRIVER (**driver_num**, driver_lic, driver_fname, driver_lname, driver_dob, driver_tax_num)

2. AUTH_TRUCK (**truck_vin**, **driver_num**)

3. TRUCK(**truck_vin**, truck_rego, truck_make, truck_model, truck_year)

4. CONTRACT (**con_num**, **waste_type_id**, coll_freq)

5. WASTETYPE (**waste_type_id**, waste_type_desc)

6. COLLECTION (**coll_date**, driver_num, truck_vin, **con_num**, **waste_type_id**)

7. MADECOLLECTION (**bin_rfid**, coll_weight, coll_over_weight, **coll_date**)

8. DRIVER (**driver_num**, driver_cont_num)

Attribute Synthesis

1 & 8. DRIVER (**driver_num**, driver_lic, driver_fname, driver_lname, driver_dob, driver_tax_num, driver_cont_num)

2. AUTH_TRUCK (**truck_vin**, **driver_num**)

3. TRUCK(**truck_vin**, truck_rego, truck_make, truck_model, truck_year)

4. CONTRACT (**con_num**, **waste_type_id**, coll_freq)

5. WASTETYPE (**waste_type_id**, waste_type_desc)

6. COLLECTION (**coll_date**, driver_num, truck_vin, **con_num**, **waste_type_id**)

7. MADECOLLECTION (**bin_rfid**, coll_weight, coll_over_weight, **coll_date**)