Ryan Li Jian Tang

<div align="center">Normalisation Process</div>

1. Pet Ownership Details

UNF:

OWNER(owner_id, owner_givenName, owner_familyName, owner_street, owner_town, owner_postcode, vet_id, vet_name, (pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_deceased))

Repeating group -> (pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_deceased)

1NF:

OWNER(owner_id, owner_givenName, owner_familyName, owner_street, owner_town, owner_postcode, vet_id, vet_name)

PET(pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_deceased, owner_id)

Partial Dependencies:

No partial dependencies present

2NF:

OWNER(owner_id, owner_givenName, owner_familyName, owner_street, owner_town, owner_postcode, vet_id, vet_name)

PET(pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_deceased, owner_id)

Transitive Dependencies:

vet_id -> vet_name

3NF:

OWNER(owner_id, owner_givenName, owner_familyName, owner_street, owner_town, owner_postcode, vet_id)

VET(vet_id, vet_name)

PET(pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_deceased, owner_id)

Full Dependencies:

Owner_id -> owner_givenName, owner_familyName, owner_street, owner_town, owner_postcode, vet_id

Vet_id -> vet_name

Pet_id -> pet_gender, pet_name, pet_type, pet_dob, pet_deceased, owner_id

2. Visit Invoice

UNF:

VISIT(pet_id, pet_name, vet_id, vet_name, visit_dateTime, (service_code, service_desc, service_provided_cost), (drug_id, drug_name, drug_given_qty, drug_given_cost), visit_cost, visit_paidBy)

Repeating Relationships:

(service_code, service_desc, service_provided_cost)

(drug_id, drug_name, drug_qty, drug_cost)

1NF:

VISIT(pet_id, pet_name, <u>vet_id</u>, vet_name, <u>visit_dateTime</u>, visit_cost, visit_paidBy)

SERVICE_PROVIDED(<u>service_code</u>, <u>vet_id</u>, <u>visit_dateTime</u>, service_desc, service_provided_cost)

DRUG_GIVEN(<u>drug_id</u>, <u>vet_id</u>, <u>visit_dateTime</u>, drug_name, drug_given_qty, drug_given_cost)

Partial Dependencies:

vet_id -> pet_name

service_code -> service_desc

drug_id -> drug_name

2NF:

VISIT(<u>vet_id</u>, <u>visit_dateTime</u>, pet_id, vet_name, visit_cost, visit_paidBy)

VET(<u>vet_id</u>, vet_name)

SERVICE_PROVIDED(<u>service_code</u>, <u>vet_id</u>, <u>visit_dateTime</u>, service_provided_cost)

SERVICE(<u>service_code</u>, service_desc)

DRUG_GIVEN(<u>drug_id</u>, <u>vet_id</u>, <u>visit_dateTime</u>, drug_given_qty, drug_given_cost)

DRUG(<u>drug_id</u>, drug_name)

Transitive Dependencies:

pet_id -> pet_name

3NF:

VISIT(<u>vet_id</u>, <u>visit_dateTime</u>, pet_id, visit_cost, visit_paidBy)

PET(<u>pet_id</u>, pet_name)

VET(<u>vet_id</u>, vet_name)

SERVICE_PROVIDED(<u>service_code</u>, <u>vet_id</u>, <u>visit_dateTime</u>, service_provided_cost)

SERVICE(<u>service_code</u>, service_desc)

DRUG_GIVEN(<u>drug_id</u>, <u>vet_id</u>, <u>visit_dateTime</u>, drug_given_qty, drug_given_cost)

DRUG(<u>drug_id</u>, drug_name)

Full Dependencies:

vet_id, visit_dateTime -> visit_cost, vist_paidBy, pet_id

pet_id -> pet_name

vet_id -> vet_name

service_code, vet_id, visit_dateTime -> service_provided_cost

service_code -> service_desc

drug_id, vet_id, visit_dateTime -> drug_given_qty, drug_given_cost

drug_id -> drug_name

Collected 3NF Relations:

1. OWNER(<u>owner_id</u>, owner_givenName, owner_familyName, owner_street, owner_town, owner_postcode, vet_id)
2. VET(<u>vet_id</u>, vet_name)
3. PET(<u>pet_id</u>, pet_gender, pet_name, pet_type, pet_dob, pet_deceased, owner_id)
4. VISIT(<u>vet_id</u>, <u>visit_dateTime</u>, pet_id, visit_cost, visit_paidBy)
5. PET(<u>pet_id</u>, pet_name)
6. VET(<u>vet_id</u>, vet_name)
7. SERVICE_PROVIDED(<u>service_code</u>, <u>vet_id</u> <u>visit_dateTime</u>, service_provided_cost)
8. SERVICE(<u>service_code</u>, service_desc)
9. DRUG_GIVEN(<u>drug_id</u>, <u>vet_id</u>, <u>visit_dateTime</u>, drug_given_qty, drug_given_cost)
10. DRUG(<u>drug_id</u>, drug_name)

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Attribute Synthesis:

1.

OWNER(owner_id, owner_givenName, owner_familyName, owner_street, owner_town, owner_postcode, vet_id)

2. & 6.

VET(vet_id, vet_name)

3. & 5.

PET(pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_deceased, owner_id)

4.

VISIT(vet_id, visit_dateTime, pet_id, visit_cost, visit_paidBy)

7.

SERVICE_PROVIDED(service_code, vet_id, visit_dateTime, service_provided_cost)

8.

SERVICE(service_code, service_desc)

9.

DRUG_GIVEN(drug_id, vet_id, visit_dateTime, drug_given_qty, drug_given_cost)

10.

DRUG(drug_id, drug_name)