# FIT3171 A1B – Normalization

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## PET OWNERSHIP DETAILS

### UNF

OWNER (owner_id, owner_gname, owner_fname, prefvet_id, prefvet_name, owner_address,

(pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_status))

### 1NF

OWNER (owner_id, owner_gname, owner_fname, prefvet_id, prefvet_name, owner_address)

PET (pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_status)

Partial Dependencies:

No Partial Dependency

### 2NF

OWNER (<u>owner_id</u>, owner_gname, owner_fname, prefvet_id, prefvet_name, owner_address)

PET (<u>pet_id</u>, pet_gender, pet_name, pet_type, pet_dob, pet_status)

Transitive Dependencies:

prefvet_id → prefvet_name

### 3NF

OWNER (<u>owner_id</u>, owner_gname, owner_fname, prefvet_id, owner_address)

PET (<u>pet_id</u>, pet_gender, pet_name, pet_type, pet_dob, pet_status)

VET (<u>prefvet_id</u>, prefvet_name)

Full Dependencies:

owner_id → owner_gname, owner_fname, prefvet_id, owner_address

pet_id → pet_gender, pet_name, pet_type, pet_dob, pet_status

prefvet_id → prefvet_name

## VISIT INVOICE

### UNF
INVOICE (pet_id, pt_name, vet_id, vet_name, amount_due, payment_method, serv_date, serv_time, (serv_code,serv_desc,serv_cost), (drug_id,drug_name,qty_supplied,drug_cost))

### 1NF
INVOICE (pet_id, vet_id, serv_time, serv_date pet_name, vet_name, amount_due, payment_method)

SERVICE (serv_code, serv_desc,serv_cost)

DRUG (drug_id, drug_name,qty_supplied,drug_cost)

Partial Dependencies:

pet_id → pet_name

vet_id → vet_name

### 2NF
INVOICE (pet_id, vet_id, serv_time, serv_date, amount_due, payment_method)

SERVICE (serv_code, serv_desc,serv_cost)

DRUG (drug_id, drug_name,qty_supplied,drug_cost)

PET (pet_id, pet_name)

VET (vet_id, vet_name)

Transitive Dependencies:

No transitive dependencies

## 3NF

INVOICE (<u>pet_id</u>, <u>vet_id,</u> <u>serv_time</u>, <u>serv_date</u>, amount_due, payment_method)

SERVICE (<u>serv_code</u>, serv_desc,serv_cost)

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

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

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

Full Dependencies:

Pet_id, vet_id, serv_time, serv_date → amount_due, payment_method

serv_code → serv_desc,serv_cost

drug_id → drug_name,qty_supplied,drug_cost

Pet_id → pet_name

vet_id → vet_name

## COLLECTED 3NF RELATIONS

1. OWNER (<u>owner_id</u>, owner_gname, owner_fname, prefvet_id, owner_address)

2. PET (<u>pet_id</u>, pet_gender, pet_name, pet_type, pet_dob, pet_status)

3. VET (<u>prefvet_id</u>, prefvet_name)

4. INVOICE (<u>pet_id, vet_id</u>, <u>serv_time</u>, <u>serv_date</u> , amount_due, payment_method)

5. SERVICE (<u>serv_code</u>, serv_desc,serv_cost)

6. DRUG (<u>drug_id</u>, drug_name,qty_supplied,drug_cost)

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

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


## ATTRIBUTE SYNTHESIS

1. OWNER (<u>owner_id</u>, owner_gname, owner_fname, prefvet_id, owner_address)

2 & 7 PET (<u>pet_id</u>, pet_name, pet_gender, pet_type, pet_dob, pet_status)

3 & 8. VET (<u>vet_id</u>, vet_name)

4. INVOICE (<u>pet_id</u>, <u>vet_id</u>, <u>serv_time</u>, <u>serv_date</u>, amount_due, payment_method)

5. SERVICE (<u>serv_code</u>, serv_desc,serv_cost)

6. DRUG (<u>drug_id</u>, drug_name,qty_supplied,drug_cost)