FIT3171 A1B – Normalisation

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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)

OWNERSHIP\_RECORD (owner\_id,pet\_id, pet\_gender, pet\_name, pet\_type, pet\_dob, pet\_status)

Partial Dependencies:

pet\_id —> pet\_gender, pet\_name, pet\_type, pet\_dob, pet\_status

## 2NF

OWNER (owner\_id, owner\_gname, owner\_fname, prefvet\_id, prefvet\_name, owner\_address)

OWNERSHIP\_RECORD (owner\_id, pet\_id)

PET (pet\_id, pet\_gender, pet\_name, pet\_type, pet\_dob, pet\_status)

Transitive Dependencies:

prefvet\_id → prefvet\_name

## 3NF

OWNER (owner\_id, owner\_gname, owner\_fname, prefvet\_id, owner\_address)

PET (pet\_id, pet\_gender, pet\_name, pet\_type, pet\_dob, pet\_status)

VET (prefvet\_id, prefvet\_name)

OWNERSHIP\_RECORD (owner\_id, pet\_id)

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,drug\_qty\_supplied,drug\_cost))

## 1NF

INVOICE (pet\_id, vet\_id, serv\_time, serv\_date pet\_name, vet\_name, amount\_due, payment\_method)

SERVICE\_RECORD (pet\_id, serv\_date, serv\_time,serv\_code, serv\_desc,serv\_cost)

DRUG\_RECORD (pet\_id,serv\_date,serv\_time,drug\_id, drug\_name,drug\_qty\_supplied,drug\_cost)

Partial Dependencies:

pet\_id → pet\_name

vet\_id → vet\_name

serv\_code —> serv\_desc, serv\_cost

drug\_id —> drug\_name, drug\_cost

## 2NF

INVOICE (pet\_id, vet\_id, serv\_time, serv\_date, amount\_due, payment\_method)

SERVICE (serv\_code, serv\_desc, serv\_cost)

SERVICE\_RECORD (pet\_id, serv\_date, serv\_time,serv\_code)

DRUG\_RECORD (pet\_id,serv\_date,serv\_time,drug\_id, drug\_name,drug\_qty\_supplied)

PET (pet\_id, pet\_name)

VET (vet\_id, vet\_name)

DRUG (drug\_id, drug\_name, drug\_cost)

Transitive Dependencies:

No transitive dependencies

## 3NF

INVOICE (pet\_id, vet\_id, serv\_time, serv\_date, amount\_due, payment\_method)

SERVICE\_RECORD (pet\_id, serv\_date, serv\_time,serv\_code,)

DRUG (drug\_id, drug\_name, drug\_cost)

DRUG\_RECORD (pet\_id, invoice\_date, invoice\_time, drug\_id, drug\_qty\_supplied)

SERVICE (serv\_code, serv\_desc, serv\_cost)

PET (pet\_id, pet\_name)

VET (vet\_id, vet\_name)

Full Dependencies:

# pet\_id, invoice\_date, invoice\_time —> serv\_total\_due, serv\_pay\_method

# vet\_id —> vet\_name

# pet\_id —> pet\_name

# serv\_code —> serv\_desc, serv\_cost

# pet\_id, invoice\_date, invoice\_time, drug\_id —> drug\_qty\_supplied

# drug\_id —> drug\_name, drug\_cost

# **COLLECTED 3NF RELATIONS.**

1. OWNER (owner\_id, owner\_gname, owner\_fname, prefvet\_id, owner\_address)

2. PET (pet\_id, pet\_gender, pet\_name, pet\_type, pet\_dob, pet\_status)

3. VET (prefvet\_id, prefvet\_name)

4. INVOICE (pet\_id, vet\_id, serv\_time, serv\_date, amount\_due, payment\_method)

5. SERVICE (serv\_code, serv\_desc,serv\_cost)

6. DRUG (drug\_id, drug\_name,drug\_qty\_supplied,drug\_cost)

7. PET (pet\_id, pet\_name)

8. VET (vet\_id, vet\_name)

9. SERVICE\_RECORD (pet\_id, invoice\_date, invoice\_time, serv\_code)

10. DRUG\_RECORD (pet\_id, invoice\_date, invoice\_time, drug\_id, drug\_qty\_supplied)

11. OWNERSHIP\_RECORD (owner\_id,pet\_id)

# **ATTRIBUTE SYNTHESIS**

1. OWNER (owner\_id, owner\_gname, owner\_fname, prefvet\_id, owner\_address)

2 & 7 PET (pet\_id, pet\_name, pet\_gender, pet\_type, pet\_dob, pet\_status)

3 & 8. VET (vet\_id, vet\_name)

4. INVOICE (pet\_id, vet\_id, serv\_time, serv\_date, amount\_due, payment\_method)

5. SERVICE (serv\_code, serv\_desc,serv\_cost)

6. DRUG (drug\_id, drug\_name,drug\_qty\_supplied,drug\_cost)

9. SERVICE\_RECORD (pet\_id, invoice\_date, invoice\_time, serv\_code)

10. DRUG\_RECORD (pet\_id, invoice\_date, invoice\_time, drug\_id, drug\_qty\_supplied)

11. OWNERSHIP\_RECORD (owner\_id,pet\_id)