1. Pet Ownership Details

UNF

PET\_OWNER (owner\_id, owner\_fname, owner\_lname, add\_street, add\_town, add\_postcode, vet\_id, vet\_name, (animal\_id, animal\_gender, animal\_name, animal\_type, animal\_birhtdate, animal\_deceased))

1NF

PET\_OWNER (owner\_id, owner\_fname, owner\_lname, add\_street, add\_town, add\_postcode, vet\_id, vet\_name)

PET (owner\_id, animal\_id, animal\_gender, animal\_name, animal\_type, animal\_birhtdate, animal\_deceased)

Partial dependencies:

No partial dependencies present.

2NF

PET\_OWNER (owner\_id, owner\_fname, owner\_lname, add\_street, add\_town, add\_postcode, vet\_id, vet\_name)

PET (owner\_id, animal\_id, animal\_gender, animal\_name, animal\_type, animal\_birhtdate, animal\_deceased)

Transitive dependencies

vet\_id 🡪 vet\_name

3NF

PET\_OWNER (owner\_id, owner\_fname, owner\_lname, add\_street, add\_town, add\_postcode, vet\_id)

PET (owner\_id, animal\_id, animal\_gender, animal\_type, animal\_birhtdate, animal\_deceased)

VET (vet\_id, vet\_name)

Full dependencies

owner\_id 🡪 owner\_fname, owner\_lname, add\_street, add\_town, add\_postcode, vet\_id

animal\_id 🡪 owner\_id, animal\_gender, animal\_type, animal\_birhtdate, animal\_deceased

vet\_id 🡪 vet\_name

2. Visit Invoice

UNF

VISIT (animal\_id, animal\_name, vet\_id, vet\_name, visit\_datetime, payment\_method, (service\_code, service\_desc, service\_cost), (drug\_id, drug\_name, qty\_supplied, drug\_cost))

1NF

VISIT (animal\_id, animal\_name, vet\_id, vet\_name, visit\_datetime, visit\_payment\_method, visit\_payment\_total)

SERVICE (animal\_id, visit\_datetime, service\_code, service\_desc, service\_cost)

PRESCRIPTION (animal\_id, visit\_datetime, drug\_id, drug\_name, qty\_supplied, drug\_cost)

Partial dependencies

animal\_id 🡪 animal\_name

drug\_id 🡪 drug\_name, drug\_cost

2NF

VISIT (animal\_id, vet\_id, vet\_name, visit\_datetime, visit\_payment\_method, visit\_payment\_total)

SERVICE (animal\_id, visit\_datetime, service\_code, service\_desc, service\_cost)

PRESCRIPTION (animal\_id, visit\_datetime, drug\_id, qty\_supplied)

PET (animal\_id, animal\_name)

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

Transitive dependencies

vet\_id 🡪 vet\_name

3NF

VISIT (animal\_id, vet\_id, visit\_datetime, visit\_payment\_method, visit\_payment\_total)

SERVICE (animal\_id, visit\_datetime, service\_code, service\_desc, service\_cost)

PRESCRIPTION (animal\_id, visit\_datetime, drug\_id, qty\_supplied)

PET (animal\_id, animal\_name)

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

VET (vet\_id, vet\_name)

Full dependencies

animal\_id, visit\_datetime 🡪 vet\_id, visit\_payment\_method, visit\_payment\_total

service\_code 🡪 animal\_id, visit\_datetime, service\_desc, service\_cost

animal\_id, visit\_datetime, drug\_id 🡪 qty\_supplied

animal\_id 🡪 animal\_name

drug\_id 🡪 drug\_name, drug\_cost

vet\_id 🡪 vet\_name

Collected 3NF relations:

1. PET\_OWNER (owner\_id, owner\_fname, owner\_lname, add\_street, add\_town, add\_postcode, vet\_id)
2. PET (owner\_id, animal\_id, animal\_gender, animal\_type, animal\_birhtdate, animal\_deceased)
3. VET (vet\_id, vet\_name)
4. VISIT (animal\_id, vet\_id, visit\_datetime, visit\_payment\_method, visit\_payment\_total)
5. SERVICE (animal\_id, visit\_datetime, service\_code, service\_desc, service\_cost)
6. PRESCRIPTION (animal\_id, visit\_datetime, drug\_id, qty\_supplied)
7. DRUG (drug\_id, drug\_name, drug\_cost)
8. PET (animal\_id, animal\_name)
9. VET (vet\_id, vet\_name)

Attribute Synthesis:

1. PET\_OWNER (owner\_id, owner\_fname, owner\_lname, add\_street, add\_town, add\_postcode, vet\_id)

2. & 8. PET (owner\_id, animal\_id, animal\_gender, animal\_type, animal\_birhtdate, animal\_deceased)

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

4. VISIT (animal\_id, vet\_id, visit\_datetime, visit\_payment\_method, visit\_payment\_total)

5. SERVICE (animal\_id, visit\_datetime, service\_code, service\_desc, service\_cost, animal\_id, drug\_id)

6. PRESCRIPTION (animal\_id, visit\_datetime, drug\_id, qty\_supplied)

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