

Pet Ownership Form

UNF:

OWNER(owner_id, owner_givname, owner_famname, owner_street, owner_town, owner_postcode, vet_id, vet_name, (pet_id, pet_gender, pet_name, pet_type, pet_birthdate, pet_deceased))

1NF:

OWNER(owner_id, owner_givname, owner_famname, owner_street, owner_town, owner_postcode, vet_id, vet_name)

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

Partial Dependencies: No partial dependencies present

2NF:

No partial dependencies to remove.

OWNER(owner_id, owner_givname, owner_famname, owner_street, owner_town, owner_postcode, vet_id, vet_name)

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

Transitive Dependencies: vet_id → vet_name

3NF:

Removed vet_id → vet_name transitive dependency

OWNER(owner_id, owner_givname, owner_famname, owner_street, owner_town, owner_postcode, vet_id)

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

VET(vet_id, vet_name)

Full Dependencies:

owner_id → owner_givname, owner_famname, owner_street, owner_town, owner_postcode, vet_id

pet_id → owner_id, pet_gender, pet_name, pet_type, pet_birthdate, pet_deceased

vet_id → vet_name

Visit Invoice Form

UNF:

INVOICE(pet_id, pet_name, vet_id, vet_name, visit_date, visit_time, (service_code, service_desc, sl_cost), (drug_id, drug_name, dl_qty, dl_cost), invoice_cost, invoice_payment_type)

1NF:

INVOICE(vet_id, visit_date, visit_time, pet_id, pet_name, vet_name, invoice_cost, invoice_payment_type)

SERVICE_LINE(vet_id, visit_date, visit_time, service_id, service_desc, sl_cost)

DRUG_LINE(vet_id, visit_date, visit_time, drug_id, drug_name, dl_qty, dl_cost)

Partial Dependencies:

vet_id → vet_name

service_id → service_desc

drug_id → drug_name

2NF:

Remove partial dependencies

INVOICE(vet_id, visit_date, visit_time, pet_id, pet_name, invoice_cost, invoice_payment_type)

VET(vet_id, vet_name)

SERVICE_LINE(vet_id, visit_date, visit_time, service_id, sl_cost)

SERVICE(service_id, service_desc)

DRUG_LINE(vet_id, visit_date, visit_time, drug_id, dl_qty, dl_cost)

DRUG(drug_id, drug_name)

Transitive Dependencies:

pet_id → pet_name

3NF:

Removed transitive dependencies

INVOICE(vet_id, visit_date, visit_time, pet_id, invoice_cost, invoice_payment_type)

PET(pet_id, pet_name)

VET(vet_id, vet_name)

SERVICE_LINE(vet_id, visit_date, visit_time, service_id, sl_cost)

SERVICE(service_id, service_desc)

DRUG_LINE(vet_id, visit_date, visit_time, drug_id, dl_qty, dl_cost)

DRUG(drug_id, drug_name)

Full Dependencies:

vet_id, visit_date, visit_time → pet_id, invoice_cost, invoice_payment_type

pet_id → pet_name

vet_id → vet_name

vet_id, visit_date, visit_time, service_id → sl_cost

service_id → service_desc

vet_id, visit_date, visit_time, drug_id → dl_qty, dl_cost

drug_id → drug_name

COLLECTED 3NF RELATIONS:

1. OWNER(owner_id, owner_givname, owner_famname, owner_street, owner_town, owner_postcode, vet_id)
2. PET(pet_id, owner_id, pet_gender, pet_name, pet_type, pet_birthdate, pet_deceased)
3. VET(vet_id, vet_name)
4. INVOICE(vet_id, visit_date, visit_time, pet_id, invoice_cost, invoice_payment_type)
5. PET(pet_id, pet_name)
6. VET(vet_id, vet_name)
7. SERVICE_LINE(vet_id, visit_date, visit_time, service_id, sl_cost)
8. SERVICE(service_id, service_desc)
9. DRUG_LINE(vet_id, visit_date, visit_time, drug_id, dl_qty, dl_cost)
10. DRUG(drug_id, drug_name)

ATTRIBUTE SYNTHESIS:

1.:

OWNER(owner_id, owner_givname, owner_famname, owner_street, owner_town,
owner_postcode, vet_id)

2. & 5.:

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

3. & 6.:

VET(vet_id, vet_name)

4.:

INVOICE(vet_id, visit_date, visit_time, pet_id, invoice_cost, invoice_payment_type)

7.:

SERVICE_LINE(vet_id, visit_date, visit_time, service_id, sl_cost)

8.:

SERVICE(service_id, service_desc)

9.:

DRUG_LINE(vet_id, visit_date, visit_time, drug_id, dl_qty, dl_cost)

10.:

DRUG(drug_id, drug_name)