

1. Pet Ownership Details

UNF

OWNERSHIP(owner_id, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, pre_vet_id, pre_vet_title, pre_vet_gname, pre_vet_fname (pet_id, pet_gender, pet_name, pet_type, pet_dob, pet_deceased))

1NF

OWNERSHIP(owner_id, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, pre_vet_id, pre_vet_title, pre_vet_gname, pre_vet_fname)

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

Partial dependencies:

No partial dependencies present

2NF

OWNERSHIP(owner_id, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, pre_vet_id, pre_vet_title, pre_vet_gname, pre_vet_fname)

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

Transitive dependencies:

pre_vet_id → pre_vet_title, pre_vet_gname, pre_vet_fname

3NF

OWNERSHIP(owner_id, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, pre_vet_id)

PREFERRED_VET(pre_vet_id, pre_vet_title, pre_vet_gname, pre_vet_fname)

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

Full dependencies:

owner_id → owner_gname, owner_fname, owner_street, owner_town, owner_postcode, pre_vet_id

pre_vet_id → pre_vet_title, pre_vet_gname, pre_vet_fname

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

2. Visit Invoice

UNF

VISIT(pet_id, pet_name, vet_id, vet_title, vet_gname, vet_fname, visit_date_time, (service_code, service_desc, service_cost), (drug_id, drug_name, drug_qty, drug_cost), total_amount, paid_by)

1NF

VISIT(pet_id, visit_date_time, pet_name, vet_id, vet_title, vet_gname, vet_fname, total_amount, paid_by)

SERVICE_PERFORMED(service_code, pet_id, visit_date_time, service_desc, service_cost)

DRUG_USED(drug_id, pet_id, visit_date_time, drug_name, drug_qty, drug_cost)

Partial dependencies:

pet_id → pet_name

service_code → service_desc

drug_id → drug_name

2NF

VISIT(pet_id, visit_date_time, vet_id, vet_title, vet_gname, vet_fname, total_amount, paid_by)

PET(pet_id, pet_name)

SERVICE_PERFORMED(service_code, pet_id, visit_date_time, service_cost)

SERVICE(service_code, service_desc)

DRUG_USED(drug_id, pet_id, visit_date_time, drug_qty, drug_cost)

DRUG(drug_id, drug_name)

Transitive dependencies:

vet_id → vet_title, vet_gname, vet_fname

3NF

VISIT(pet_id, visit_date_time, vet_id, total_amount, paid_by)

VET(vet_id, vet_title, vet_gname, vet_fname)

PET(pet_id, pet_name)

SERVICE_PERFORMED(service_code, pet_id, visit_date_time, service_cost)

SERVICE(service_code, service_desc)

DRUG_USED(drug_id, pet_id, visit_date_time, drug_qty, drug_cost)

DRUG(drug_id, drug_name)

Full dependencies:

pet_id, visit_date_time → vet_id, total_amount, paid_by

vet_id → vet_title, vet_gname, vet_fname

pet_id → pet_name

service_code, pet_id, visit_date_time → service_cost

service_code → service_desc

drug_id, pet_id, visit_date_time → drug_qty, drug_cost

drug_id → drug_name

Results:

OWNERSHIP(owner_id, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, pre_vet_id)

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

VISIT(pet_id, visit_date_time, vet_id, total_amount, paid_by)

VET(vet_id, vet_title, vet_gname, vet_fname)

SERVICE_PERFORMED(service_code, pet_id, visit_date_time, service_cost)

SERVICE(service_code, service_desc)

DRUG_USED(drug_id, pet_id, visit_date_time, drug_qty, drug_cost)

DRUG(drug_id, drug_name)