Assignment 1B Normalisation

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Pet Ownership Details form

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OWNER(owner_id, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, vet_id, vet_gname, vet_fname, (animal_id, animal_gen, animal_name, animal_type, animal_dob, animal_deceased))

1NF

OWNER(<u>owner_id</u>, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, vet_id, vet_gname, vet_fname)

PET_OWNER(<u>owner_id</u>, <u>animal_id</u>, animal_gen, animal_name, animal_type, animal_dob, animal_deceased)

partial dependencies:

animal_id → animal_gen, animal_name, animal_type, animal_deceased

2NF

OWNER(<u>owner_id</u>, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, vet_id, vet_gname, vet_fname)

PET_OWNER(<u>owner_id</u>, <u>animal_id</u>)

PET(<u>animal_id</u>, animal_gen, animal_name, animal_type, animal_deceased)

Transitive Dependencies:

vet_id → vet_gname, vet_fname

FINAL 3NF

OWNER(<u>owner_id</u>, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, vet_id)

PET_OWNER(<u>owner_id</u>, <u>animal_id</u>)

PET(<u>animal_id</u>, animal_gen, animal_name, animal_type, animal_deceased)

VET(<u>vet_id</u>, vet_gname, vet_fname)

Full dependencies:

owner_id → owner_gname, owner_fname, owner_street, owner_town, owner_postcode, vet_id, animal_id

animal_id → animal_gen, animal_name, animal_type, animal_deceased

vet_id → vet_gname, vet_fname

Visit invoice form

UNF

Changed Patient to Animal to make logical design and normalization the same.

VISIT(animal_id, animal _name, vet_id, vet_gname, vet_fname, visit_date (service_code, service_desc, service_cost), (drug_id, drug_name, drug_qty, drug_cost), pay_total, pay_by)

1NF

VISIT(animal_id, visit_date, vet_id, animal _name, vet_gname, vet_fname, pay_total, pay_by)

SERVICE(service_code, service_desc, service_cost)

DRUG(drug_id, drug_name, drug_qty, drug_cost)

Partial dependencies:

animal_id → animal _name

2NF

VISIT(animal_id, visit_date, vet_id, vet_gname, vet_fname, pay_total, pay_by)

SERVICE(service_code, service_desc, service_cost)

DRUG(drug_id, drug_name, drug_qty, drug_cost)

ANIMAL(animal_id, animal _name)

Transitive dependencies:

vet_id → owner_gname, owner_fname

3NF

VISIT(<u>animal_id</u>, <u>visit_date</u>, vet_id, pay_total, pay_by)

SERVICE(<u>service_code</u>, service_desc, service_cost)

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

ANIMAL(<u>animal_id</u>, animal _name)

VET(<u>vet_id</u>, vet_gname, vet_fname)

Full dependencies:

animal _id, visit_date → vet_id, pay_total, pay_by

service_code → service_desc, service_cost

drug_id → drug_name, drug_qty, drug_cost

animal _id → animal _name

vet_id → vet_gname, vet_fname

Collected 3NF RELATIONS:

1. OWNER(<u>owner_id</u>, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, vet_id)
2. PET_OWNER(<u>owner_id</u>, <u>animal_id</u>)
3. PET(<u>animal_id</u>, animal_gen, animal_name, animal_type, animal_deceased)
4. VET(<u>vet_id</u>, vet_gname, vet_fname)
5. VISIT(<u>animal_id</u>, <u>visit_date</u>, vet_id, pay_total, pay_by)
6. SERVICE(<u>service_code</u>, service_desc, service_cost)
7. DRUG(<u>drug_id</u>, drug_name, drug_qty, drug_cost)
8. ANIMAL(<u>animal_id</u>, animal _name)
9. VET(<u>vet_id</u>, vet_gname, vet_fname)

Attribute synthesis:

1. OWNER(<u>owner_id</u>, owner_gname, owner_fname, owner_street, owner_town, owner_postcode, vet_id)
2. PET_OWNER(<u>owner_id</u>, <u>animal_id</u>)
3. & 8. PET(<u>animal_id</u>, animal_gen, animal_name, animal_type, animal_deceased)
4. & 9. VET(<u>vet_id</u>, vet_gname, vet_fname)
5. VISIT(<u>animal_id</u>, <u>visit_date</u>, vet_id, pay_total, pay_by)
6. SERVICE(<u>service_code</u>, service_desc, service_cost)
7. DRUG(<u>drug_id</u>, drug_name, drug_qty, drug_cost)