## **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)

1. & 5.:

PET(pet\_id, owner\_id, pet\_gender, pet\_name, pet\_type, pet\_birthdate, pet\_deceased)

1. & 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)