Pets First Normalisation 2023 S2

Training Course				Run By		
Course ID	256			Vet ID	45	
Title	Heart UltraSound Imaging			Name	Graham Sharp	
Duration	2.5 Hrs					
When	22nd August 2023 10 AM					
Where	Clinic ID: 12 Name: Clayton Small Animal Clinic					

Participants

Vet ID	Home Clinic ID	Given Name	Family Name	Completed	Expiry (if Applicable)
12	12	Vivianna	Drayton	Y	22 August 2024
23	12	Paulie	Furst	Y	22 August 2024
34	12	Booth	Darnell	Y	22 August 2024
56	12		Willshire	N	
57	10	Drayton	Horning	Y	22 August 2024
62	10	Ruthanne	Middleton	Y	22 August 2024

... not all rows necessarily shown ...

Training Course				Run By		
Course ID	257			Vet ID	13	
Title	Heartworm Treatment/Prevention			Name	Marian Wu	
Duration	1 hr					
When	22nd August 2023 10 AM					
Where	Clinic ID: 12 Name: Clayton Small Animal Clinic					

Participants

Vet ID	Home Clinic ID	Given Name	Family Name	Completed	Expiry (if Applicable)
14	12	Carree	Najera	Y	
15	12	Kelly	Cresar	Y	
16	12	Brittani	Sellwood	Y	
17	12	Cory	Esome	Y	

... not all rows necessarily shown ...

UNF

TRAINING (train_id, vet_id, vet_givenname, vet_familyname, train_title, train_duration, train_date_time, clinic_id, clinic_name (pvet_id, pclinic_id, pvet_givenname, pvet_familyname, train_attend_cmpltd, train_attend_expiry))

Note: p prefix being used here to differentiate participant eg. pvet_id from trainer eg. vet_id

1NF

TRAINING (train_id, vet_id, vet_givenname, vet_familyname, train_title, train_duration, train_date_time, clinic_id, clinic_name)

CK TRAINING
- train_id
- vet_id, train_date_time

TRAIN_ATTEND (train_id, pvet_id, pclinic_id, pvet_givenname, pvet_familyname, train_attend_cmpltd, train_attend_expiry)

CK TRAIN_ATTEND
- train_id, pvet_id

Partial Dependencies

vet_id -> vet_givenname, vet_familyname
pvet_id -> pclinic_id, pvet_givenname, pvet_familyname

2NF

TRAINING (train_id, vet_id, train_title, train_duration, train_date_time, clinic_id, clinic_name)

TRAIN_ATTEND (train_id, pvet_id, train_attend_cmpltd, train_attend_expiry)

VET (vet_id, vet_givenname, vet_familyname)
PVET (pvet_id, pclinic_id, pvet_givenname, pvet_familyname)

Transitive Dependencies:
clinic_id -> clinic_name

3NF

TRAINING (train_id, vet_id, train_title, train_duration, train_date_time, clinic_id)

TRAIN_ATTEND (train_id, vet_id, train_attend_cmpltd, train_attend_expiry)

VET (vet_id, vet_givenname, vet_familyname)
PVET (pvet_id, pclinic_id, pvet_givenname, pvet_familyname)

CLINIC (clinic_id, clinic_name)

Amalgamate VET and PVET, both represent vets, same PK vet id, must not have two relations with the same PK

Final 3NF

TRAINING (train_id, vet_id, train_title, train_duration, train_date_time, clinic_id)

TRAIN_ATTEND (train_id, vet_id, train_attend_cmpltd, train_attend_expiry)

VET (vet_id, vet_givenname, vet_familyname, clinic_id)

CLINIC (clinic_id, clinic_name)

Full dependencies:

train_id -> vet_id, train_title, train_duration, train_date_time, clinic_id
train_id, vet_id -> train_attend_cmpltd, train_attend_expiry
vet_id -> vet_givenname, vet_familyname, clinic_id
clinic_id -> clinic_name

Pets First

Invoice for Professional Services

Patient   **Owner**

      Animal ID 567   Owner Id   212

      Name Forrest   Given name Catherine

Attending Vet   Family Name Do

      Vet ID 45

      Name Graham Sharp

Account for services provided on 19/08/2023 at 9:30 AM

Service Code	Service Description	Line Cost
EXM11	Examination: Detailed Assessment	$85.00
LAB12	Laboratory: Urinalysis Dipstick, Specific Gravity	$45.90
INJ01	Injection: Clinic administered injection	$10.00

Drug ID	Drug Name	Qty Supplied	Line Cost
567	Convenia Injection	1	$25.00
253	Bactrim Tablets	10	$40.00

Total Amount Due	$205.90

Payment for services provided is required immediately after service completed

Paid By: CASH ☐

EFT ☑

UNF

VISIT (animal_id, animal_name, owner_id, owner_givenname, owner_familyname, vet_id, vet_givenname, vet_familyname, visit_date_time (service_code, service_desc, visit_service_linecost), (drug_id, drug_name, visit_drug_qtysupplied, visit_drug_linecost), visit_total_cost, visit_paid_by)

1NF

VISIT (<u>animal_id,</u> <u>visit_date_time</u>, animal_name, owner_id, owner_givenname, owner_familyname, vet_id, vet_givenname, vet_familyname, visit_total_cost, visit_paid_by)

CK VISIT
- animal_id, visit_date_time
- vet_id, visit_date_time

VISIT_SERVICE (<u>animal_id,</u> <u>visit_date_time</u>, <u>service_code</u>, service_desc, visit_service_linecost)

CK VISIT_SERVICE
- animal_id, visit_date_time, service_code

VISIT_DRUG (<u>animal_id,</u> <u>visit_date_time</u>, <u>drug_id</u>, drug_name, visit_drug_qtysupplied, visit_drug_linecost)

CK VISIT_DRUG
- animal_id, visit_date_time, drug_id

Partial dependencies
animal_id -> animal_name, owner_id, owner_givenname, owner_familyname
vet_id -> vet_givenname, vet_familyname
service_code -> service_desc
drug_id -> drug_name

2NF

VISIT (<u>animal_id,</u> <u>visit_date_time</u>, vet_id, visit_total_cost, visit_paid_by)

VISIT_SERVICE (<u>animal_id,</u> <u>visit_date_time</u>, <u>service_code</u>, visit_service_linecost)

VISIT_DRUG (<u>animal_id,</u> <u>visit_date_time</u>, <u>drug_id</u>, visit_drug_qtysupplied, visit_drug_linecost)

ANIMAL (<u>animal_id</u>, animal_name, owner_id, owner_givenname, owner_familyname)

VET (<u>vet_id</u>, vet_givenname, vet_familyname)

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

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

Transitive Dependencies

owner_id -> owner_givenname, owner_familyname

3NF

VISIT (<u>animal_id,</u> <u>visit_date_time</u>, vet_id, visit_total_cost, visit_paid_by)

VISIT_SERVICE (<u>animal_id,</u> <u>visit_date_time</u>, <u>service_code</u>, visit_service_linecost)

VISIT_DRUG (<u>animal_id,</u> <u>visit_date_time</u>, <u>drug_id</u>, visit_drug_qtysupplied, visit_drug_linecost)

ANIMAL (<u>animal_id</u>, animal_name, owner_id)

VET (<u>vet_id</u>, vet_givenname, vet_familyname)

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

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

OWNER (<u>owner_id</u>, owner_givenname, owner_familyname)

Full Dependencies

animal_id, visit_date_time -> vet_id, visit_total_cost, visit_paid_by
animal_id, visit_date_time, service_code -> visit_service_linecost
animal_id, visit_date_time, drug_id -> visit_drug_qtysupplied, visit_drug_linecost
animal_id -> animal_name, owner_id
vet_id -> vet_givenname, vet_familyname
service_code -> service_desc
drug_id -> drug_name
owner_id ->owner_givenname, owner_familyname

CONSOLIDATION:

1.   TRAINING (<u>train_id</u>, vet_id, train_title, train_duration, train_date_time, clinic_id)

2.   TRAIN_ATTEND (<u>train_id</u>, <u>vet_id</u>, train_attend_cmpltd, train_attend_expiry)

3.   VET (<u>vet_id,</u> clinic_id, vet_givenname, vet_familyname)

4.   CLINIC (<u>clinic_id,</u> clinic_name)

5.   VISIT (<u>animal_id,</u> <u>visit_date_time</u>, vet_id, visit_total_cost, visit_paid_by)

6.   VISIT_SERVICE (<u>animal_id,</u> <u>visit_date_time</u>, <u>service_code</u>, visit_service_linecost)

7.   VISIT_DRUG (<u>animal_id,</u> <u>visit_date_time</u>, <u>drug_id</u>, visit_drug_qtysupplied, visit_drug_linecost)

8.   ANIMAL (<u>animal_id</u>, animal_name, owner_id)

9.   VET (<u>vet_id</u>, vet_givenname, vet_familyname)

10.   SERVICE (<u>service_code</u>, service_desc)

11.   DRUG (<u>drug_id</u>, drug_name)

12.   OWNER (<u>owner_id</u>, owner_givenname, owner_familyname)

1
TRAINING (train_id, vet_id, train_title, train_duration, train_date_time, clinic_id)

2
TRAIN_ATTEND (train_id, vet_id, train_attend_cmpltd, train_attend_expiry)

3 & 9
VET (vet_id, clinic_id, vet_givenname, vet_familyname)

4
CLINIC (clinic_id, clinic_name)

5
VISIT (animal_id, visit_date_time, vet_id, visit_total_cost, visit_paid_by)

6
VISIT_SERVICE (animal_id, visit_date_time, service_code, visit_service_linecost)

7
VISIT_DRUG (animal_id, visit_date_time, drug_id, visit_drug_qtysupplied, visit_drug_linecost)

8
ANIMAL (animal_id, animal_name, owner_id)

10
SERVICE (service_code, service_desc)

11
DRUG (drug_id, drug_name)

12
OWNER (owner_id, owner_givenname, owner_familyname)

FINAL 3NF

TRAINING (train_id, vet_id, train_title, train_duration, train_date_time, clinic_id)

TRAIN_ATTEND (train_id, vet_id, train_attend_cmpltd, train_attend_expiry)

VET (vet_id, vet_givenname, vet_familyname, clinic_id)

CLINIC (clinic_id, clinic_name)

VISIT (animal_id, visit_date_time, vet_id, visit_total_cost, visit_paid_by)

VISIT_SERVICE (animal_id, visit_date_time, service_code, visit_service_linecost)

VISIT_DRUG (animal_id, visit_date_time, drug_id, visit_drug_qtysupplied, visit_drug_linecost)

ANIMAL (animal_id, animal_name, owner_id)

SERVICE (service_code, service_desc)

DRUG (drug_id, drug_name)

OWNER (owner_id, owner_givenname, owner_familyname)