

Assignment 01

Q1

Branch:

Assumptions

→ Each person's tell No & email will be different. (Not using same common tell No or email)

Staff:

→ Passwords, can be same

Property For Rent:

→ Postcode of a city doesn't change therefore 2 branches located in the same city in the same street will have same postcode.

Client: tell No, email

Private Owner: tell No, email, ~~password~~

→

Viewing:

Assumptions

→ Address is defined as street, city, postcode therefore it can be same

Registration:

Q2 Done After Q4

Q2 BranchNo, StaffNo, PropertyNo, OwnerNo, ClientNo, tellNo, email

→ duplication

Q3 a) key constraint (SAQ), Domain constraint (sex, 1) (wrong datatype)

b) Entity constraint (PK can't be NULL)

c) No violations

d) Referential Integrity (owner No 10933 referenced in PropertyForRent) ^{table}

e) Referential Integrity (ClientNo ^{FK} in Client, ClientNo ^{FK} in Registration)

f) Referential Integrity (Viewing), PropertyNo is FK in Viewing table

* g) Entity Integrity No violations

Q4 Create Table staff (

staffNo Varchar(8) Not NULL,

fName Varchar(15) Not NULL,

lName Varchar(15) Not NULL,

position Varchar(15) Not NULL,

sex char(1) Not NULL

DOB Date Not NULL check (DOB > '01-01-1900

AND DOB < '01-01-2021') (extract(year from DOB) -

extract(year from sysdate)) < 60) ~~AND~~ *

Salary Decimal(7,2) Not NULL check (salary between 9000 AND 30000),

branchNo Varchar(6) Default 'B0001',

Constraint PK_staffNo Primary key (staffNo),

Constraint FK_branchNo Foreign key (branchNo) Reference

Branch(branchNo) ON DELETE SET DEFAULT ON UPDATE CASCADE);

Create Table property For Rent (

propertyNo Varchar(6) Not NULL,

Street Varchar(30) Not NULL,

city Varchar(15) Not NULL,

postcode Varchar(15) Not NULL,

type Varchar(10) Default 'House',

rooms Int(2) Not NULL check (rooms >= 1)

rent Decimal(4,2) Not NULL,

ownerNo Varchar(5) Not NULL,

staffNo Varchar(5),

branchNo Varchar(6) Not NULL,

Constraint Pk_Viewing Primary key (ClientNo, branchNo),
Constraint Fk_ClientNo Foreign key (ClientNo) References
registration (ClientNo) ON DELETE CASCADE ON UPDATE
CASCADE, constraint Fk_PropertyNo Foreign key (propertyNo)
References propertyForRent (ClientNo) ON DELETE CASCADE
ON UPDATE CASCADE);

Q2 ~~branchNo (staffNo)~~ references Branch.

Branch (No FK)

Staff: BranchNo (PK of Branch Table)

Property for Rent: Owner No, staff No, branchNo (PK of
branch, staff, PrivateOwner) respectively

Client: No FK

Viewing: PropertyNo (PK in Property For Rent), ClientNo
(PK in Client).

Private Owner: No FK

Registration: ClientNo (PK in Client), BranchNo (PK in
Branch), staffNo (PK in staff).

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a) Select P.PropertyNo
From PropertyForRent P, staff S
Where P.BranchNo = S.BranchNo AND S.sex = 'F'

b) Select P.*
From PrivateOwner P, PropertyForRent R
Where P.ownerNo = R.ownerNo AND R.type = 'House'

c) Select ~~S.Staff~~ S.Salary * 1.15
From Staff S, Branch B
Where S.BranchNo = B.BranchNo AND ~~B.Branch~~
B.City = 'London'

d) Select PR.*
From PropertyForRent PR, ~~Registration R~~ Viewing V
Where PR.propertyNo = V.propertyNo AND V.viewDate Like
'% MAY % 13'

e) select S.*
From staff S
Where S.fName Like 'D%' OR S.lName like 'W%'