**SQL Tenant Project**

**Create Database Tenant**

CREATE DATABASE Tenant;

**Create tables with following specifications**

**2.1) Tenancy Histories**

-------- Create Table Tenancy Histories

CREATE TABLE Tenancy\_histories

(

id int NOT NULL PRIMARY KEY IDENTITY(1,1),

profile\_id int NOT NULL,

house\_id int NOT NULL,

move\_in\_date date NOT NULL,

move\_out\_date date NULL,

rent int NOT NULL,

Bed\_type varchar(255) NULL,

move\_out\_reason varchar(255) NULL

);

**2.2) Profiles**

------- Create Table Profiles

CREATE TABLE Profiles

(

profile\_id int NOT NULL PRIMARY KEY IDENTITY(1,1),

first\_name varchar(255) NULL,

last\_name varchar(255) NULL,

email varchar(255) NOT NULL,

phone varchar(255) NOT NULL,

city\_hometown varchar(255) NULL,

pan\_card varchar(255) NULL,

created\_at date NOT NULL,

gender varchar(255) NOT NULL,

referral\_code varchar(255) NULL,

marital\_status varchar(255) NULL

);

**2.3) Houses**

------- Create Table Houses

CREATE TABLE Houses

(

house\_id int NOT NULL PRIMARY KEY IDENTITY(1,1),

house\_type varchar(255) NULL,

bhk\_details varchar(255) NULL,

bed\_count int NOT NULL,

furnishing\_type varchar(255) NULL,

Beds\_vacant int NOT NULL

);

**2.4) Addresses**

--------- Create Table Addresses

CREATE TABLE Addresses

(

ad\_id int NOT NULL PRIMARY KEY IDENTITY(1,1),

name varchar(255) NULL,

description text NULL,

pincode int NULL,

city varchar(255) NULL,

house\_id int NOT NULL

);

**2.5) Referrals**

--------- Create Table Referrals

CREATE TABLE Referrals

(

ref\_id int NOT NULL PRIMARY KEY IDENTITY(1,1),

referrer\_id int NOT NULL,

referrer\_bonus\_amount float NULL,

referral\_valid tinyint NULL,

vaild\_from date NULL,

valid\_till date NULL

);

**2.6) Employment Details**

---------- Create Table Employment Details

CREATE TABLE Employment\_details

(

id int NOT NULL PRIMARY KEY IDENTITY(1,1),

profile\_id int NOT NULL,

latest\_employer varchar(255) NULL,

official\_mail\_id varchar(255) NULL,

yrs\_experience int NULL,

Occupational\_category varchar(255) NULL

);

**ALTER COLUMNS**

**Add Foreign key in Tenancy\_histories**

Alter Table Tenancy\_histories

Add Constraint fk\_tenancy FOREIGN KEY(profile\_id)

References Profiles (profile\_id);

**Add Foreign key in Tenancy\_histories**

Alter Table Tenancy\_histories

Add Constraint fk\_histories FOREIGN KEY(house\_id)

References Houses (house\_id);

**Add Foreign key in Employment\_details**

Alter Table Employment\_details

Add Constraint fk\_employment FOREIGN KEY(profile\_id)

References Profiles (profile\_id);

**Add Foreign key in Referrals**

Alter Table Referrals

Add Constraint fk\_referral FOREIGN KEY(referrer\_id)

References Profiles (profile\_id);

**Add Foreign key in Addresses**

Alter Table Addresses

Add Constraint

fk\_address FOREIGN KEY(house\_id)

References Houses (house\_id);

**INSERT DATA INTO DIFFERENT TABLES**

**Insert data into Profiles**

Insert into Profiles(first\_name,last\_name,email,phone,city\_hometown,created\_at,gender,referral\_code,marital\_status)

values('anusha','pariti','anusha.pariti@gmail.com',8105987404,'Bangalore','4/16/2015','F','7L5FZW','Y'),

('Ashish','Singh','ashish.singh@gmail.com',9876890463,'Bangalore','5/23/2015','M','KF34MF','Y'),

('Bhaskar','maheshwari','bhaskar.mah@gmail.com',9801834992,'Bangalore','5/1/2015','M','5TYSHGF','N'),

('Garima','yadav','garima0191@gmail.com',81059237004,'Bangalore','10/20/2015','F','5G5FQW','N'),

('Tanvi','mann','tanvi.mann1907@gmail.com',9178352769,'Bangalore','2/16/2015','F','JSH48B','N'),

('Harish','sahai','harish294all@gmail.com',9876548763,'Bangalore','11/11/2015','M','MKGI2W','Y'),

('Kamal','gera','kamal0094@gmail.com',8105987404,'Bangalore','10/31/2015','M','MK34ER','N'),

('Tushar','kapoor','tushar.kapoor21@gmail.com',8926537154,'Pune','12/12/2015','M','KLF12E','N'),

('Shivshankar','das','sankar.shiva730@gmail.com',9801834992,'Pune','10/6/2015','M','3RE5TY','Y'),

('Aditi','jain','aditi.jain@sproxil.com',9873123456,'Pune','6/11/2015','F','5TPL4E','N'),

('Deepa','sudhakar','sudhakar.deepa@gmail.com',7896785432,'Pune','9/15/2015','F','4RTYUIO','Y'),

('Umang','parejiya','uparejiya@gmail.com',7896543674,'Pune','7/18/2015','M','6TY4WE','N'),

('Mitali','gupta','mitali.gupta80@gmail.com',8796751238,'Pune','3/24/2015','F','5RTYU3','Y'),

('Manisha','Yadav','maniyadav88@gmail.com',9867845182,'Delhi','1/27/2015','F','LKGHY6','N'),

('Shivani','godha','shivani\_go@nid.edu',9878673428,'Delhi','2/19/2015','F','8NM4R','Y'),

('Rajan','pandey','raajanpandey@gmail.com',8987647811,'Delhi','9/4/2015','M','5TYUIO','N'),

('Roosena','manuel','roseenasimimanuel@gmail.com',9875623345,'Delhi','4/13/2015','F','6TYHU','Y'),

('Prabhjot','gill','prabhjotgill09@gmail.com',9800786688,'Delhi','12/30/2015','M','GHJK34','N'),

('Ankita','sharma','ankita.anku96@gmail.com',9988789656,'Delhi','8/17/2015','F','TH67TY','Y'),

('Karan','Singh','karan.singh@gmail.com',8976665768,'Delhi','9/15/2015','M','LRF34F','N');

select \* from Profiles;

**Insert data into Houses**

Insert into Houses(house\_type,bhk\_details,bed\_count,furnishing\_type,Beds\_vacant)

values('Apartment','3 BHK',5,'unfurnished',2),

('Apartment','3 BHK',3,'unfurnished',1),

('Apartment','3 BHK',6,'fully-furnished',4),

('Apartment','2 BHK',2,'fully-furnished',0),

('Independent','4 BHK',4,'fully-furnished',2),

('Apartment','3 BHK',3,'semifurnished',1),

('Apartment','3 BHK',3,'semifurnished',0),

('Apartment','2 BHK',4,'fully-furnished',1),

('Independent','1 BHK',2,'unfurnished',0),

('Independent','3 BHK',3,'fully-furnished',1),

('Apartment','1 BHK',1,'unfurnished',0),

('Independent','1 BHK',2,'unfurnished',1),

('Independent','2 BHK',4,'unfurnished',2),

('Apartment','3 BHK',3,'fully-furnished',0),

('Independent','1 BHK',2,'unfurnished',1),

('Apartment','3 BHK',3,'fully-furnished',0),

('Independent','3 BHK',3,'fully-furnished',1),

('Independent','2 BHK',2,'fully-furnished',1),

('Independent','3 BHK',3,'fully-furnished',1),

('Independent','1 BHK',2,'unfurnished',2);

select \* from Houses;

**Insert data into Addresses**

Insert into Addresses(name,description,pincode,city,house\_id)

values('Zaanz appartment','Sterling BrookSide, Opp. Kundalahalli Colony, ITPL Main Rd',560037,'bangalore',1),

('stag saptgiri','No.44,Ground floor,20th cross,Sector 2 HSR Layout,Bangalore',560102,'bangalore',2),

('sri sai enclave','No.44,First floor,20th cross,Sector 2 HSR Layout',560102,'bangalore',3),

('orchids building','D-208, Balaji Pristine Whitefield Main Road',560066,'bangalore',4),

('Fella homes','#11,Annaiya Reddy Rd, Narayana Reddy Layout,Phase 2, Electronic City',560100,'bangalore',5),

('Juniper appartments','# 595/1, 1st Floor,1st A main, Domlur Layout',560038,'bangalore',6),

('UDB Building','Flat No: T1 Deccan Field Appartment Kunadanhalli main road',560037,'bangalore',7),

('Apoorva society','Flat No-202, Apoorva Apartment No-296 Vyalikaval House Building Cooperative Society Ltd Nagavara',561202,'Delhi',8),

('Stag saptgiri','Flat No-202, stag saptgiri No-26 phase2 Cooperative Society',560045,'Delhi',9),

('VaK Residency','302,#473 VAK Residency, B-Block, AECS Layout Kundalahalli',456738,'Delhi',10),

('Sunshine hills','Flat no 3, water ville apartment R.galli',100234,'Delhi',11),

('Sri Sai appartment','2nd House, No-80/289, Sri Hari Darshan Nilaya, Ground Floor, Bellandur',560107,'Delhi',12),

('Barvika Residency','B105, 1st floor, B block, Barvika Residency',5610023,'Delhi',13),

('Nestaway building','#157, 4th Cross, 1st Main Road, Lower Palace Orchard',546783,'Delhi',14),

('Windsor Plaza','#301, Windsor Plaza,ITPL',560025,'Pune',15),

('Indira society','No. 502, Indira Meadows, Arunodaya Colony',302017,'Pune',16),

('Sri Krishna Society','Flat No-211 Sri Krishna sai enclave, Hoodi village, beside Vivekananda Ashram, Mahadevapura post',560048,'Pune',17),

('uniworld','D1-1201, Uniworld Garden 2',543678,'Pune',18),

('Vinayaka residency','49, House 1 lathangi 2nd main vinayaka housing layout, RMV 2nd stage bhoopasandra',560094,'Pune',19),

('Sun city appartments','Majeera Diamond Towers,malad-west',5600263,'Pune',20);

select \* from Addresses;

**Insert data into Referrals**

Insert into Referrals(referrer\_id,referrer\_bonus\_amount,referral\_valid,vaild\_from,valid\_till)

values(2,2500,1,'7/5/2015','9/5/2015'),

(3,2500,1,'7/5/2015','9/5/2015'),

(5,1000,0,'12/13/2015','2/13/2016'),

(6,2500,0,'4/25/2016','6/24/2016'),

(10,1000,1,'7/1/2015','9/1/2015'),

(12,2500,1,'5/12/2015','7/12/2015'),

(13,2500,0,'8/5/2015','10/5/2015'),

(20,1000,1,'2/5/2016','4/5/2016'),

(2,2500,0,'8/12/2015','9/12/2015'),

(5,1000,1,'2/18/2016','4/18/2016'),

(20,1500,1,'6/19/2016','8/19/2016'),

(9,2500,0,'11/15/2015','1/15/2016'),

(13,1000,1,'2/1/2016','4/1/2016'),

(5,1000,1,'4/25/2016','6/24/2016');

select \* from Referrals;

**Insert data into Employement\_details**

Insert into Employment\_details(profile\_id,latest\_employer,official\_mail\_id,yrs\_experience,Occupational\_category)

values(1,'Sabre','mehdi.hasan@sabre.com',1,'Working'),

(2,'hindustan unilever','rags.ramgas@gmail.com',2,'Working'),

(3,'Technicolor','jigna.thacker@technicolor.com',1,'Working'),

(4,'','',NULL,'Student'),

(5,'GE Healthcare','ruchita.save@ge.com',3,'Working'),

(6,'Aditya birla','shubhi.bajpai@adityabirla.com',3,'Working'),

(7,'','',NULL,'Student'),

(8,'','',NULL,'Student'),

(9,'','',NULL,'Student'),

(10,'huawei Technologies','gunjan19wadhwa@gmail.com',4,'Working'),

(11,'','',NULL,'Student'),

(12,'Centurylink India','PreetInder.Sodhi@centurylink.com',2,'Working'),

(13,'SAP Labs India','udit.singh@sap.com',2,'Working'),

(14,'NestAway','deepak@nestaway.com',1,'Working'),

(15,'','',NULL,'Student'),

(16,'','',NULL,'Student'),

(17,'Microsoft','t-akmeh@microsoft.com',2,'Working'),

(18,'Cognizant','bhavranjan.pandey@cognizant.com',2,'Working'),

(19,'','',NULL,'Student'),

(20,'Tiny Mogul Games','sanchit@hike.in',3,'Working');

select \* from Employment\_details;

**Insert data into Tenancy\_histories**

Insert into Tenancy\_histories(profile\_id,house\_id,move\_in\_date,move\_out\_date,rent,Bed\_type,move\_out\_reason)

values(1,5,'2/12/2015','4/30/2016',7500,'bed','MOVE\_OUT'),

(2,2,'6/5/2015',NULL,11000,'room',''),

(3,4,'10/28/2015','11/28/2016',12000,'room','RENT\_CHANGE'),

(4,1,'4/26/2015',NULL,8000,'bed',''),

(5,3,'5/15/2015','12/27/2015',9000,'bed','MOVE\_OUT'),

(6,8,'12/25/2015',NULL,10200,'room',''),

(7,6,'11/20/2015',NULL,6500,'bed',''),

(8,7,'11/10/2015','12/31/2016',7200,'bed','MOVE\_OUT'),

(9,9,'10/15/2015',NULL,7500,'bed',''),

(10,10,'6/20/2015',NULL,7500,'bed',''),

(11,19,'8/29/2015','6/14/2016',8000,'bed','INTERNAL\_TRANSFER'),

(12,15,'2/24/2015',NULL,11000,'room',''),

(13,12,'2/25/2015',NULL,12000,'room',''),

(14,18,'1/7/2016','12/30/2016',13500,'room','MOVE\_OUT'),

(15,13,'4/7/2015',NULL,6500,'bed',''),

(16,17,'4/23/2015',NULL,6500,'bed',''),

(17,14,'2/10/2015',NULL,10500,'room',''),

(18,16,'10/16/2015','9/4/2016',8000,'bed','MOVE\_OUT'),

(19,20,'9/26/2015',NULL,7500,'bed',''),

(20,11,'9/30/2015',NULL,9500,'bed','');

select \* from Tenancy\_histories;

**Question 1**

Write a query to get Profile ID, Full Name and Contact Number of the tenant who has stayed with us for the longest time period in the past.

**Answer**

select \* from Profiles;

select \* from Tenancy\_histories;

Select P.profile\_id, CONCAT(first\_name,' ',last\_name) as Full\_Name, phone from Profiles P

Full join

Tenancy\_histories T

on P.profile\_id = T.profile\_id

where P.profile\_id =

(SELECT TOP 1 profile\_id from Tenancy\_histories)

order by DATEDIFF(month, move\_in\_date, move\_out\_date);

**Question 2**

Write a query to get the Full name, email id, phone of tenants who are married and paying rent > 9000 using subqueries.

**Answer**

select CONCAT(first\_name,' ',last\_name) as Full\_Name, email, phone from Profiles

where (Profiles.profile\_id

IN(select profile\_id from Tenancy\_histories where (Tenancy\_histories.rent > 9000)))

and Profiles.marital\_status = 'Y';

**Question 3**

Write a query to display profile id, full name, phone, email id, city, house id, move\_in\_date, move\_out date, rent, total number of referrals made, latest employer and the occupational category of all the tenants living in Bangalore or Pune in the time period of jan 2015 to jan 2016 sorted by their rent in descending order.

**Answer**

select \* from Profiles;

select \* from Tenancy\_histories;

select \* from Referrals;

select \* from Employment\_details;

select \* from Addresses;

select DISTINCT P.profile\_id, CONCAT(first\_name,' ',last\_name) as Full\_Name, phone, email, city,

A.house\_id, move\_in\_date, move\_out\_date, rent, COUNT(referrer\_id) as Referrals\_Made,

latest\_employer, Occupational\_category

from Profiles P

Full Join

Tenancy\_histories T

On P.profile\_id = T.profile\_id

Full join

Referrals R

On P.profile\_id = R.referrer\_id

Full Join

Employment\_details E

On P.profile\_id = E.profile\_id

Full Join

Addresses A

On T.house\_id = A.house\_id

where city

IN ( select city from Addresses where city = 'bangalore' or city ='Pune' and move\_in\_date > '12-31-2014')

group by P.profile\_id, T.move\_in\_date, T.move\_out\_date, first\_name, last\_name, phone, email, city, A.house\_id,

move\_in\_date, move\_out\_date, rent, latest\_employer, Occupational\_category

Order by rent DESC;

**Question 4**

Write a sql snippet to find the full\_name, email\_id, phone number and referral code of all the tenants who have referred more than once.

Also find the total bonus amount they should receive given that the bonus gets calculated only for valid referrals.

**Answer**

select \* from Profiles;

select \* from Referrals;

select DISTINCT CONCAT(first\_name,' ',last\_name) as Full\_Name, email, phone, referral\_code,

SUM(referrer\_bonus\_amount) as Total\_bonus

from Profiles P

inner join

Referrals R

On P.profile\_id = R.referrer\_id

where exists

(select COUNT(referrer\_id) as Count\_of\_ID

from Referrals

where referral\_valid = 1

having COUNT(referrer\_id) > 1)

Group by referral\_valid, referrer\_id, first\_name, last\_name, email, phone, referral\_code;

**Question 5**

Write a query to find the rent generated from each city and also the total of all cities.

**Answer**

select \* from Tenancy\_histories;

select \* from Addresses;

select A.city, SUM(rent) as Total\_City\_Rent

from Tenancy\_histories T

Right join

Addresses A

On T.house\_id = A.house\_id

Group by city

UNION

Select 'Total' as City, SUM(rent) from Tenancy\_histories;

**Question 6**

Create a view 'vw\_tenant' find profile\_id, rent, move\_in\_date, house\_type, beds\_vacant, description and city of tenants who shifted on/after 30th april 2015 and are living in houses having vacant beds and its address.

**Answer**

select \* from Tenancy\_histories;

select \* from Houses;

create view vw\_tenant AS

Select profile\_id, rent, move\_in\_date, house\_type, beds\_vacant, description, city

From Tenancy\_histories T

INNER JOIN

Houses H

ON T.house\_id = H.house\_id

INNER JOIN

Addresses a

ON H.house\_id = A.house\_id

where Beds\_vacant != 0

and move\_in\_date >= '04-30-2015';

select \* from vw\_tenant;

**Question 7**

Write a code to extend the valid\_till date for a month of tenants who have referred more than two times.

**Answer**

select \* from Referrals;

Select referrer\_id, DATEADD(MM, 1, valid\_till) as Extended\_Date

from referrals

where referrer\_id IN

(select referrer\_id from referrals

group by referrer\_id

having COUNT(referrer\_id) > 2);

**Question 8**

Write a query to get Profile ID, Full Name, Contact Number of the tenants along with a new column 'Customer Segment' wherein if the tenant pays rent greater than 10000, tenant falls in Grade A segment, if rent is between 7500 to 10000, tenant falls in Grade B else in Grade C

**Answer**

select \* from Profiles;

select \* from Tenancy\_histories;

Select DISTINCT CONCAT(first\_name,' ',last\_name) as Full\_Name, email, phone,

IIF(rent > 10000,'Grade A',

IIF(rent >= 7500 and rent <= 10000, 'Grade B','Grade C')) as Customer\_Segment

From Profiles P

inner join

Tenancy\_histories T

On P.profile\_id = T.profile\_id

group by rent, first\_name, last\_name, email, phone;

**Question 9**

Write a query to get Fullname, Contact, City and House Details of the tenants who have not referred even once

**Answer**

select \* from Profiles;

select \* from Tenancy\_histories;

select \* from Referrals;

select \* from Houses;

Select DISTINCT CONCAT(first\_name,' ',last\_name) as Full\_Name, email, phone,

city\_hometown, R.referrer\_id, H.house\_type,

H.bhk\_details, H.furnishing\_type

from Profiles P

full join

Tenancy\_histories T

On P.profile\_id = T.profile\_id

full join

Referrals R

On P.profile\_id = R.referrer\_id

full join

Houses H

On T.house\_id = H.house\_id

where P.profile\_id not in (select referrer\_id from Referrals)

group by r.referrer\_id, first\_name, last\_name, email, phone, city\_hometown, house\_type, bhk\_details, furnishing\_type;

**Question 10**

Write a query to get the house details of the house having highest occupancy.

**Answer**

select \* from Addresses;

select \* from Houses;

select TOP 1 with ties A.house\_id, A.name, H.house\_type, H.bhk\_details, H.furnishing\_type,

(H.bed\_count - H.Beds\_vacant) AS Total\_Occupancy

from Addresses A

INNER JOIN Houses H

ON A.house\_id = H.house\_id

order by Total\_Occupancy Desc;