The queries written for questions:

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.

SELECT Profiles.profile\_id AS ProfileID, Profiles.first\_name + ' ' + Profiles.last\_name AS FullName, phone AS ContactNo,

DATEDIFF(DAY,move\_in\_date,move\_out\_date) AS No\_ofDaysStayed

FROM Profiles

INNER JOIN Tenancy\_histories ON Tenancy\_histories.profile\_id = Profiles.profile\_id

WHERE Profiles.profile\_id = (

SELECT TOP 1 profile\_id

FROM Tenancy\_histories

ORDER BY DATEDIFF(DAY,move\_in\_date,move\_out\_date)DESC);

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

SELECT Profiles.profile\_id AS ProfileID, Profiles.first\_name + ' ' + Profiles.last\_name AS FullName, email AS EmailID, phone,

Tenancy\_histories.rent, Profiles.marital\_status AS MaritalStatus

FROM Profiles

INNER JOIN Tenancy\_histories ON Profiles.profile\_id = Tenancy\_histories.profile\_id

WHERE Profiles.marital\_status = 'Y'

AND Profiles.profile\_id IN (

SELECT profile\_id

FROM Tenancy\_histories

WHERE rent > 9000);

1. 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.

SELECT DISTINCT Profiles.profile\_id AS ProfileID, Profiles.first\_name + ' ' + Profiles.last\_name AS FullName, Profiles.phone, Profiles.email AS emailID,

Profiles.city, Tenancy\_histories.house\_id AS HouseID, Tenancy\_histories.move\_in\_date, Tenancy\_histories.move\_out\_date, Tenancy\_histories.rent,

COUNT(Referrals.ref\_id) Over (PARTITION BY Referrals.referrer\_id) AS TotalReferrals, Employment\_details.latest\_employer AS LastEmployer,Employment\_details.Occupational\_category

FROM Tenancy\_histories

INNER JOIN Profiles ON Tenancy\_histories.profile\_id = Profiles.profile\_id

INNER JOIN Employment\_details ON Profiles.profile\_id = Employment\_details.profile\_id

LEFT JOIN Referrals ON Profiles.profile\_id = Referrals.referrer\_id

WHERE Profiles.city IN ('Bangalore', 'Pune') AND

(Tenancy\_histories.move\_in\_date between '2015-01-01' and '2016-01-31') or

(Tenancy\_histories.move\_out\_date between '2015-01-01' and '2016-01-31') or

(Tenancy\_histories.move\_in\_date <= '2015-01-01' and Tenancy\_histories.move\_out\_date>= '2016-01-31')

ORDER BY rent DESC;

1. 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.

SELECT Profiles.profile\_id, Profiles.first\_name+' '+Profiles.last\_name AS FullName, Profiles.email AS EmailID, Profiles.phone AS PhoneNo, Profiles.referral\_code

, Referrals.TotalReferrals, Referrals.TotalBonusAmount , Referrals.TotalValidBonusAmount

FROM Profiles

JOIN (SELECT Referrals.referrer\_id, SUM(Referrals.referrer\_bonus\_amount) AS TotalBonusAmount

, (SELECT SUM(Referrals.referrer\_bonus\_amount)

FROM Referrals

WHERE Referrals.referrer\_id = Referrals.referrer\_id

AND referral\_valid = 1) AS TotalValidBonusAmount

, COUNT(referrer\_id) AS TotalReferrals

FROM Referrals

GROUP BY referrer\_id) Referrals

ON Profiles.profile\_id = Referrals.referrer\_id

WHERE Referrals.TotalReferrals > 1;

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

SELECT DISTINCT Addresses.city,

SUM(Tenancy\_histories.rent) OVER(PARTITION BY Addresses.city) AS 'RentGenerated',

SUM(Tenancy\_histories.rent) OVER() AS 'TotalRent'

FROM Tenancy\_histories

INNER JOIN Addresses On Tenancy\_histories.house\_id = Addresses.house\_id;

1. 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.

CREATE VIEW vw\_tenant AS

SELECT profile\_id, rent, move\_in\_date, Houses.house\_type, Houses.beds\_vacant, Addresses.description, Addresses.city

FROM Tenancy\_histories

INNER JOIN Houses ON Tenancy\_histories.house\_id = Houses.house\_id

INNER JOIN Addresses ON Addresses.house\_id=Houses.house\_id

WHERE move\_in\_date >= '2015-04-30'

AND move\_out\_date is null

AND Houses.beds\_vacant>0;

SELECT \* FROM vw\_tenant;

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

SELECT DISTINCT Referrals.ref\_id ,Referrals.referrer\_id,COUNT(Referrals.referrer\_id) OVER(PARTITION BY referrer\_id) AS TotalRef,

DATEADD(MM, 1, valid\_till) AS ExtendedValid\_tillDate

FROM Referrals

WHERE referrer\_id IN

(SELECT referrer\_id

FROM referrals

GROUP BY referrer\_id

HAVING COUNT(Referrals.referrer\_id) > 2 );

1. 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.

SELECT Profiles.profile\_id AS ProfileID, Profiles.first\_name + ' ' + Profiles.last\_name AS FullName,

Profiles.phone AS ContactNo, IIF(Tenancy\_histories.rent>10000,'Grade A',IIF(Tenancy\_histories.rent < 7500,'Grade C', 'Grade B')) AS 'Customer Segment'

FROM Profiles

INNER JOIN Tenancy\_histories

ON Tenancy\_histories.profile\_id = Profiles.profile\_id;

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

SELECT Profiles.first\_name + ' ' + Profiles.last\_name AS FullName, Profiles.phone AS Contact,

Profiles.city AS City, Houses.bhk\_details

FROM Profiles

INNER JOIN Tenancy\_histories ON Profiles.profile\_id = Tenancy\_histories.profile\_id

INNER JOIN Houses ON Tenancy\_histories.house\_id = Houses.house\_id

LEFT JOIN Referrals ON Profiles.profile\_id = Referrals.referrer\_id

WHERE Referrals.referrer\_id IS NULL;

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

SELECT TOP 1 WITH TIES Houses.house\_id, Houses.house\_type, Houses.bhk\_details,

Addresses.name,Addresses.description,Addresses.pincode, Addresses.city,

Houses.furnishing\_type,Houses.bed\_count, Houses.Beds\_vacant,(bed\_count - Beds\_vacant) AS TotalOccupancy

FROM Houses

INNER JOIN Addresses On Addresses.house\_id = Houses.house\_id

ORDER BY (bed\_count - Beds\_vacant) DESC;