Anthony Ang

Property Analysis BI Developer - Onboarding Task

1a.

```
/** 1a. Display all property IDs and names for Owner Id: 1426 **/

SELECT t0.Id AS "Property Id",
       t0.Name AS "Property Name"
FROM Keys.dbo.Property t0
     INNER JOIN Keys.dbo.OwnerProperty t1 ON t0.Id = t1.PropertyId
WHERE t1.OwnerId = 1426;
```

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Results | Messages

	Property Id	Property Name
1	5597	BI property 1
2	5637	BI property 2
3	5638	BI property 3

1b. To get current home value, PropertyHomeValue.IsActive = 1.

```
/** 1b. Display the current home value for each property **/

SELECT t0.Id AS "Property Id",
       t0.Name AS "Property Name",
       t2.Value AS "Current Home Value"
FROM Keys.dbo.Property t0
     INNER JOIN Keys.dbo.OwnerProperty t1 ON t0.Id = t1.PropertyId
     INNER JOIN Keys.dbo.PropertyHomeValue t2 ON t0.Id = t2.PropertyId
WHERE t1.OwnerId = 1426
      AND t2.IsActive = 1;
```

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Results | Messages

	Property Id	Property Name	Current Home Value
1	5637	BI property 2	4500000.00
2	5597	BI property 1	45.00
3	5638	BI property 3	3000000.00

1c. The assumption is that the rent is computed correct to the number of days. Hence, DAY is chosen to be the DATEPART used for the DATEDIFF function. If WEEK is used and the end date is 5/1/2019, this will compute the rent based on just 1 year (365 days) when in fact rent should also be collected for the first 5 days of 2019, in addition to the whole of 2018.

If the tenant is still renting, then there will be no end date or end date is NULL. In this case, the end date is taken to be the current date which is GETDATE(). The COASLESCE function is used to take the End Date if there is one. If it is NULL, then it will use the current date as the End Date.

Property.IsOwnerOccupied = 1 for PropertyId = 5638. But this property is also tenanted as shown by the query results below. I am assuming that the owner is staying at this property and renting out rooms or part of the house. Hence, the owner is receiving rent payments even though this property is owner-occupied.

```sql
/** 1c.  For each property in question a), return the following:
i.  Using rental payment amount, rental payment frequency, tenant start date and tenant end date to write a query that returns
    the sum of all payments from start date to end date.
ii.  Display the yield.
 **/

SELECT t0.Id AS "Property Id",
       t0.Name AS "Property Name",
       t2.PaymentAmount AS "Rental Payment Amount",
       t3.Name AS "Rental Payment Frequency",
       FORMAT(t2.StartDate,'dd/MM/yyyy ') AS "Tenant Start Date",
       FORMAT(t2.EndDate,'dd/MM/yyyy ') AS "Tenant End Date",
       CASE t2.PaymentFrequencyId
           WHEN '1'
           THEN CAST(t2.PaymentAmount * DATEDIFF(DAY, t2.StartDate, COALESCE(t2.EndDate, GETDATE())) / 7 AS decimal(18, 2))
           WHEN '2'
           THEN CAST(t2.PaymentAmount * DATEDIFF(DAY, t2.StartDate, COALESCE(t2.EndDate, GETDATE())) / 14 AS decimal(18, 2))
           ELSE CAST(t2.PaymentAmount * DATEDIFF(DAY, t2.StartDate, COALESCE(t2.EndDate, GETDATE()) + 1) * 12 / 365 AS decimal
             (18, 2))
       END AS "Total Payment",
       t4.Yield
FROM Keys.dbo.Property t0
     INNER JOIN Keys.dbo.OwnerProperty t1 ON t0.Id = t1.PropertyId
     INNER JOIN Keys.dbo.TenantProperty t2 ON t0.Id = t2.PropertyId
     INNER JOIN Keys.dbo.TenantPaymentFrequencies t3 ON t2.PaymentFrequencyId = t3.Id
     INNER JOIN Keys.dbo.PropertyFinance t4 ON t0.Id = t4.PropertyId
WHERE t1.OwnerId = 1426;
```

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Results | Messages

	Property Id	Property Name	Rental Payment Amount	Rental Payment Frequency	Tenant Start Date	Tenant End Date	Total Payment	Yield
1	5597	BI property 1	300.00	Weekly	01/01/2018	31/12/2018	15600.00	10000.00
2	5637	BI property 2	400.00	Fortnightly	01/01/2018	31/12/2018	10400.00	8000.00
3	5638	BI property 3	1000.00	Monthly	01/01/2018	31/12/2018	12000.00	12000.00

1d. Justin had added JobStatus table to the database and clarified in the Question Hub and Slack channel that only the Job table is required and this task is asking for active jobs that have no end dates (JobEndDate is NULL).

The following assumptions are made:

- Only “Open” (JobStatusId = 1) jobs are considered as active jobs. “InProgress” jobs are assumed to be awarded and hence, taken off the marketplace. Likewise, jobs marked as Finished, Cancelled and Deleted are assumed to be no longer active and should not be on the marketplace.
- Some jobs have a JobStartDate. Since a job already has started, it should no longer be offered in the marketplace. Hence, the query should also look for JobStartDate is NULL in addition to JobEndDate is NULL.
- I only display selected columns, rather than all columns, from the Job table. If additional columns are deemed to be required for this task, please let me know so that I can modify the query.

```
/** 1d. Display active (Open) job advertised in the marketplace with no
  job start and end dates **/

SELECT t0.Id AS "JobId",
       t1.Status,
       t0.JobDescription,
       t0.PropertyId, t0.OwnerId, t0.ProviderId,
       t0.PaymentAmount,
       t0.JobStartDate,
       t0.JobEndDate
FROM Keys.dbo.Job t0
     INNER JOIN Keys.dbo.JobStatus t1 ON JobStatusId = t1.Id
WHERE t1.Id = 1 AND t0.JobEndDate is NULL AND t0.JobStartDate is NULL
ORDER BY t1.Status DESC;
```

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Results | Messages

	JobId	Status	JobDescription	PropertyId	OwnerId	ProviderId	PaymentAmount	JobStartDate	JobEndDate
1	93	Open	Kitchen Sink	19	NULL	NULL	0.00	NULL	NULL
2	149	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
3	151	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
4	153	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
5	155	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
6	156	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
7	158	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
8	159	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
9	173	Open	SDsd	19	NULL	NULL	0.00	NULL	NULL
10	178	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
11	179	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
12	181	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
13	183	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
14	185	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL
15	186	Open	Test - Tap not working	19	NULL	NULL	0.00	NULL	NULL

Query executed successfully. | mvpstudio.cdvkl5vm8weq.ap-s... | KeysOnboardUser (108) | Keys | 00:00:00 | 259 rows

1e. To get current tenants, use WHERE Tenant.IsActive = 1

```
/** 1e. Display all property names, current tenants first and last names and rental payments per week/
    fortnight/month for the properties in question 1a. **/

SELECT t0.Id AS "Property Id",
       t0.Name AS "Property Name",
       t4.FirstName AS "Tenant First Name",
       t4.LastName AS "Tenant Last Name",
       '$' + CAST(t2.PaymentAmount AS varchar) +
       CASE t2.PaymentFrequencyId
          WHEN '1'THEN ' per week'
          WHEN '2' THEN ' per fortnight'
          ELSE ' per month'
       END AS "Rental Payment"
FROM Keys.dbo.Property t0
     INNER JOIN Keys.dbo.OwnerProperty t1 ON t0.Id = t1.PropertyId
     INNER JOIN Keys.dbo.TenantProperty t2 ON t0.Id = t2.PropertyId
     INNER JOIN Keys.dbo.Tenant t3 ON t2.TenantId = t3.id
     INNER JOIN Keys.dbo.Person t4 ON t3.Id = t4.Id
WHERE t1.OwnerId = 1426
      AND t3.IsActive = 1;
```

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Results | Messages

	Property Id	Property Name	Tenant First Name	Tenant Last Name	Rental Payment
1	5597	BI property 1	Nick	Johnson	$300.00 per week
2	5637	BI property 2	BI	Tenant	$400.00 per fortnight
3	5638	BI property 3	BI	Tenant	$1000.00 per month

Expense Report of Property A

Current Owner: ABDC

Property address: 231 Great South Road, Drury, Auckland 2113, New Zealand

Property details: 2 Bedrooms, 2 Bathrooms

Rental payment: $300 per week

Expense	Amount	Date
Rate assessment	300.00	20 Aug 2016
Rate assessment	300.00	20 Aug 2016
Rate assessment	300.00	20 Aug 2016
Rate assessment	300.00	20 Aug 2016