**Advanced Task 3- SSRS Report**

15. Given suburb and city, display median rental value, median yearly income, and value changes of the property within 1 km radius

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-- Author: <Riddhi Ramani>

-- Create date: <Create Date,,>

-- Description: <Description,,>

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ALTER PROCEDURE [dbo].[usp\_CalculateDistanceForRentalMedian]

@SubCity NVARCHAR(100)

AS

BEGIN

-- SET NOCOUNT ON added to prevent extra result sets from

-- interfering with SELECT statements.

SET NOCOUNT ON;

DECLARE @SubGeo GEOGRAPHY, @Lattitude Decimal(18,6), @Longitude Decimal(18,6);

SELECT @Lattitude = [lat],

@Longitude = [lon]

FROM [dbo].[DimSuburb]

WHERE

Concat(Suburb,' - ' ,City) = @SubCity;

SET @SubGeo = geography::Point(@Lattitude,@Longitude,4326);

SELECT Concat(S.Suburb,' - ' ,S.City) as 'Location Of Property',

F.[Rental Type],

F.[Rental Median value],

[Rental Median value] \* 52 As 'Yearly Income',

(@SubGeo .STDistance(geography::Point(ISNULL([lat],0),ISNULL([lon],0),4326))/1000) AS DistanceInKM

From [dbo].[FactRentalMedian] F

Inner Join [dbo].[DimSuburb] S

ON F.[SuburbKey] = S.[SuburbKey]

where (@SubGeo.STDistance(geography::Point(ISNULL([lat], 0),ISNULL([lon], 0),4326))/1000)<=1

AND [lat] IS NOT NULL

AND [lon] IS NOT NULL

END

Graphical user interface, table

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16. Given suburb and city, display local public transport within 1km radius - update data sets

ALTER PROCEDURE [dbo].[usp\_TransportDistance]

@SubCity NVARCHAR(100)

AS

BEGIN

SET NOCOUNT ON;

DECLARE @SubGeo GEOGRAPHY, @Lattitude Decimal(18,6), @Longitude Decimal(18,6);

SELECT @Lattitude = [lat],

@Longitude = [lon]

FROM [dbo].[DimSuburb]

WHERE

Concat(Suburb,' - ' ,City) = @SubCity;

SET @SubGeo = geography ::Point(@Lattitude,@Longitude,4326);

SELECT

F.[Stop\_Name],

F.[Mode],

(@SubGeo .STDistance(geography::Point(ISNULL([Stop\_lat],0),ISNULL([Stop\_lon],0),4326))/1000) AS DistanceInKM

From [dbo].[Dim Station] F

where (@SubGeo.STDistance(geography::Point(ISNULL([Stop\_lat], 0),ISNULL([Stop\_lon], 0),4326))/1000)<=1

AND [Stop\_lat] IS NOT NULL

AND [Stop\_lon] IS NOT NULL

END

Graphical user interface

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17. Given suburb and city, display local schools within 1km radius

ALTER PROCEDURE [dbo].[uspSchoolDistance]

@SubCity NVARCHAR(100)

AS

BEGIN

SET NOCOUNT ON;

DECLARE @SubGeo GEOGRAPHY, @Lattitude Decimal(18,6), @Longitude Decimal(18,6);

SELECT @Lattitude = [lat],

@Longitude = [lon]

FROM [dbo].[DimSuburb]

WHERE

Concat(Suburb,' - ' ,City) = @SubCity;

SET @SubGeo = geography ::Point(@Lattitude,@Longitude,4326);

SELECT [Type],

[School\_Name],

[Address],

[Suburb],

(@SubGeo .STDistance(geography::Point(ISNULL([Lat],0),ISNULL([Lon],0),4326))/1000) AS DistanceInKM

From [dbo].[Dim School]

where (@SubGeo.STDistance(geography::Point(ISNULL([Lat], 0),ISNULL([Lon], 0),4326))/1000)<=1

AND [Lat] IS NOT NULL

AND [Lon] IS NOT NULL

END

Graphical user interface, text, application

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Graphical user interface, text, application

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18. Given suburb and city, display crime rate within 1 km radius

ALTER PROCEDURE [dbo].[usp\_Crime]

@SubCity NVARCHAR(100),

@Year Float

AS

BEGIN

SET NOCOUNT ON;

DECLARE @SubGeo GEOGRAPHY, @Lattitude Decimal(18,6), @Longitude Decimal(18,6);

SELECT @Lattitude = [lat],

@Longitude = [lon]

FROM [dbo].[DimSuburb]

WHERE

Concat(Suburb,' - ' ,City) = @SubCity;

SET @SubGeo = geography ::Point(@Lattitude,@Longitude,4326);

Select

F.[Offences],

F.[Recored Incidents],

F.[Offences Subtype],

F.QTR,

F.Year,

S.[City],

S.[Suburb],

(@SubGeo .STDistance(geography::Point(ISNULL([lat],0),ISNULL([lon],0),4326))/1000) AS DistanceInKM

From [dbo].[FactCrimeRecord] F

Left Join [dbo].[DimSuburb] S

ON F.[SuburbKey] = S.[SuburbKey]

where (@SubGeo.STDistance(geography::Point(ISNULL([lat], 0),ISNULL([lon], 0),4326))/1000)<=1

AND [lat] IS NOT NULL

AND [lon] IS NOT NULL

END

Graphical user interface, application, Excel

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19. Given suburb and city, display property value of the area in Column chart and line chart of 1 year, 5 years and 10 years value

ALTER PROCEDURE [dbo].[usp\_PropertyValue]

@SubCity NVARCHAR(100)

AS

BEGIN

SET NOCOUNT ON;

SELECT S.[City],

S.[Suburb],

[Median Value] as Value,

CAST([Median Value] \* POWER((1.05),1) AS Money) AS [Value 1Y] ,

CAST([Median Value] \* POWER((1.05),5) AS Money ) AS [Value 5Y],

CAST([Median Value] \* POWER((1.05),10) AS Money ) AS [Value 10Y]

FROM [dbo].[FactPropertymedian]

LEFT JOIN [dbo].[DimSuburb] S

ON [dbo].[FactPropertymedian].SuburbKey = S.SuburbKey

WHERE UpdatedYr = 2018

AND CONCAT(Suburb,' - ' ,City) = @SubCity;

END

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ALTER PROCEDURE [dbo].[usp\_UnpivotPropertyMedian]

@SubCity NVARCHAR(100)

AS

BEGIN

SET NOCOUNT ON;

SELECT Concat(Suburb,' - ' ,City) AS Subcity, valueOfPeriod, PropertyMedianAmount

FROM

( SELECT S.[City],

S.[Suburb],

[Median Value] as Value,

CAST([Median Value] \* POWER((1.05),1) AS Money) AS [Value 1Y] ,

CAST([Median Value] \* POWER((1.05),5) AS Money ) AS [Value 5Y],

CAST([Median Value] \* POWER((1.05),10) AS Money ) AS [Value 10Y]

FROM [dbo].[FactPropertymedian]

LEFT JOIN [dbo].[DimSuburb] S

ON [dbo].[FactPropertymedian].SuburbKey = S.SuburbKey

WHERE UpdatedYr = 2018

AND CONCAT(Suburb,' - ' ,City) = @Subcity

) R

UNPIVOT

(

PropertyMedianAmount

For valueOfPeriod IN ([Value], [Value 1Y], [Value 5Y], [Value 10Y])

) As AmountUnpivot

END

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