***Questions containing SQL Use Cases for Hands on***

1. Below is the sample data to be inserted in **Location** table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Locationcode** | **LocationName** | **LocationFullName** | **SiteID** | **StateSiteID** | **RowInsertDate** | **RowUpdateDate** |
| 22338815 | Star-River Commercial Street | xinghewanfendian | 1400495 | 1400495 | 7/27/2020 | 3/11/2023 |
| 22338822 | 南与野店 | 683700南与野店 | 0 | 910575 | 7/27/2020 | 3/9/2023 |
| 22338839 | Wusi Rd.hengli City | Fuzhou Zhonglv Cheng（Hengli cheng） | 1410282 | 1410282 | 7/28/2020 | 4/11/2023 |
| 22338846 | minjiang north CBD rongqiao ce | Fuzhou Jiangbin West Avenue Restaurant(Rongqiao Center) | 1410283 | 1410283 | 7/28/2020 | 4/11/2023 |
| 22338853 | MURS ERIGN | MURS ERIGNE | 1054 | 761054 | 12/20/2013 | 7/8/2023 |
| 22338860 | EQUEURDREU | EQUEURDREVILLE | 1098 | 761098 | 12/20/2013 | 7/8/2023 |
| 22338877 | VILLENEUVE | VILLENEUVE SAINT GEORGES | 1101 | 761101 | 12/20/2013 | 7/8/2023 |
| 22338884 | GUILERS | GUILERS | 1102 | 761102 | 12/20/2013 | 7/8/2023 |
| 22338891 | LAMORLAYE | LAMORLAYE | 1103 | 761103 | 12/20/2013 | 7/8/2023 |
| 223388107 | SIX FOURS | SIX FOURS LES PLAGES | 1096 | 761096 | 12/20/2013 | 7/8/2023 |

Below is the sample data to be inserted into **LocationAttributes** table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LocationCode | buildingtype | RestaurantClass | StoreOpenEffectiveDate | RowInsertDate | RowUpdateDate |
| 22338815 | NULL | FREESTAND | 00:00.0 | 1/28/2021 | 4/7/2022 |
| 22338839 | NULL | FREESTAND | 00:00.0 | 7/29/2020 | 4/18/2023 |
| 22338846 | NULL | FREESTAND | 00:00.0 | 7/29/2020 | 6/16/2022 |
| 22338853 | 1500 PLUS TIU | Freestanding Traditional | 00:00.0 | 12/20/2013 | 7/26/2023 |
| 223388114 | NULL | In-Store | 00:00.0 | 12/20/2013 | 7/26/2023 |
| 223388183 | NULL | Mall | 00:00.0 | 12/20/2013 | 7/26/2023 |
| 223388220 | NULL | In-Store | 00:00.0 | 12/20/2013 | 7/26/2023 |
| 223388282 | NULL | Freestanding Traditional | 00:00.0 | 12/20/2013 | 7/26/2023 |
| 223388405 | NULL | SPECIAL | NULL | 5/4/2022 | 5/5/2022 |
| 223388558 | NULL | Mall | 00:00.0 | 12/20/2013 | 7/26/2023 |

**Business Requirement:** We need to display the LocationName and StateSiteID for those records which are not there in LocationAttributes table.

**Objective:** Do notuse ***Not in*** as it is not advised due to performance issue.

1. **Business Requirement:** For the above tables in question 1, display the LocationName, RestaurantClass, SiteID, StoreOpenEffectiveDate and LocationFullName for the locations which are present in both tables.
2. Below given is a table containing **person** data.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **code** | **name** | **LastName** | **FirstName** | **MiddleInitial** |
| 2 | Test\_demo1, soumava-rest1 | Test\_demo1 | soumavarest1 | NULL |
| 5 | Soumava\_test, Shruti\_test1 | Soumava\_test | Shruti\_test1 | NULL |
| 7 | HIJAZIN, NASHAT J | Hijazin | Nashat | J |
| 9 | BAUMER, AVELINA R | BAUME,R | AVELINA | R |
| 16 | COOK, ROBIN L | C\*OOK | R#OBIN | L |
| 20 | WOLD, KIM K | WOLD | ?KIM | K |
| 24 | CLAWSON, WALTER | CLAWSON | WA=LTER | NULL |
| 27 | LOGAN, ANNA | LOGA&N | AN#NA | NULL |
| 28 | Garcia, Karen | G#arcia | Ka%ren |  |
| 29 | CYPHERS, SCOTTY R | CY#PHERS | SCOT&TY | R |
| 30 | MOORES, DENISE M | M%OORES | D&ENISE | M |
| 127. | WILLIAMS, THERESA G | WILLIAMS | THERE#SA | G |

**Business Requirement:** FirstName and LastName should not contain special characters.

**Objective:** Correct the faulty data by replacing special characters in the first name and last name with *nothing* in its place and display the records after that.

1. **Business Requirement:** We have a table ‘Person’ (refer table in question 3). Add a column ‘InactiveDate’ having datatype ‘Datetime’. This column denotes the person is no longer active in the organization since that date. Add dates in ‘InactiveDate’ for the records mentioned in question 3. Now, delete all the records from Person table where the InactiveDate is more than 6 years.
2. We have a table: **FieldOpsPosition** which stores the operational hierarchy data for different persons (OC- Operations Consultant, OM- Operations Manager). OM is the parent of OC.

ParentPosition column references the Primary key in the same table: FieldOpsPositionCode.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **FieldOpsPositionCode** | **ParentPosition** | **EmployeeID** | **PersonCode** | **PositionTitle** | **LocalLanguagePositionTitle** | **Country** | **SourceIndicator** |
| 114204 | NULL | NULL | 14914848 | OM | NULL | NZ | NIM |
| 114208 | 114204 | 14914848 | 14915116 | OC | NULL | NZ | NIM |

**Business requirement**: When an OM is deleted, the FieldOpsPosition for the OM is deleted but the OC is still referencing it in the ParentPosition. This causes ‘Merge Statement conflicted with Foreign key’ Error when we try to merge data into the table from source.

**Objective**: Write an SQL statement to rectify the issue and prevent the error.

1. Below is the sample data from **Location** table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Locationcode** | **LocationName** | **LocationFullName** | **SiteID** | **StateSiteID** |
| 22338815 | Star-River Commercial Street | xinghewanfendian | 1400495 | 1400495 |
| 22338853 | MURS ERIGN | MURS ERIGNE | 1054 | 761054 |
| 22338860 | EQUEURDREU | EQUEURDREVILLE | 1098 | 761098 |
| 22338877 | VILLENEUVE | VILLENEUVE SAINT GEORGES | 1101 | 761101 |
| 22338884 | GUILERS | GUILERS | 1102 | 761102 |
| 22338891 | LAMORLAYE | LAMORLAYE | 1103 | 761103 |
| 223388107 | SIX FOURS | SIX FOURS LES PLAGES | 1096 | 761096 |
| 22338853 | MURS ERIGN1 | MURS ERIGNE | 1054 | 761054 |
| 22338853 | MURS ERIGN2 | MURS ERIGNE | 1054 | 761054 |
| 22338860 | EQUEURDREU | EQUEURDREVILLE1 | 1098 | 761098 |

**Business Requirement:** This data will be used as source to merge into a target table based on LocationCode. However, the merge fails as merge statement is trying to update/delete the same row of target table more than once.

**Objective:** Find out the reason and write an SQL query to find the data and its count, which is failing the merge.

1. **Reference:** Refer to the table in Question 6

**Business Requirement:** We want to merge data into the target table without failure.

**Objective:** We will filter out the erroneous records from source so that they do not take part in the merge. This process is called *Bypassing Erroneous Records.* Write an SQL query to bypass erroneous records from the source and display the new source data.

1. **Reference:**

BEGIN TRY

……

END TRY

BEGIN CATCH

SELECT

ERROR\_NUMBER() AS 'ERROR\_NUMBER',

ERROR\_SEVERITY() AS 'ERROR\_SEVERITY',

ERROR\_STATE() AS 'ERROR\_STATE',

LEFT(ERROR\_PROCEDURE(),350) AS 'ERROR\_PROCEDURE',

ERROR\_LINE() AS 'ERROR\_LINE',

LEFT(ERROR\_MESSAGE(),240) AS 'ERROR\_MESSAGE'

END CATCH

**Business Requirement:** We have a block of code in a Try Block and in the Catch block, we have statements to display the Error. However, the Error does not fail the procedure or job.

**Objective:** Identify the reason for this problem and write the SQL query to solve this.

1. **Business requirement:** Given below is a View Definition containing hardcoded values for Store Attributes of different markets. We need to make an enhancement. Create a table containing all records in the view definition (commented & uncommented). Add an isActive flag in the table: Flag will be set to 1 for uncommented records and 0 for commented records. Then rewrite the view in such a way that it pulls the active records from the table.

**Objective:** My current view and changed view should give the same output.

**VIEW Definition:**

CREATE VIEW [OPER].[vw\_DepSourceSync]

AS

/\*\*\*\*\*\*\*\*\*\*\*\*\* AU LookUp Values \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

SELECT 'AU' AS MarketCode, 'ALLAttributes' AS AttributeValue, 'Attribute' AS AttributeName

UNION ALL

SELECT 'AU' AS MarketCode, 'LatLog' AS AttributeValue, 'Column' AS AttributeName

UNION ALL

/\*\*\*\*\*\*\*\*\*\*\*\*\* DK LookUp Values \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

--SELECT 'DK' AS MarketCode, 'ALLAttributes' AS AttributeValue, 'Attribute' AS AttributeName

SELECT  CountryCode AS MarketCode,

AttributeName AS AttributeValue,

'Attribute' AS AttributeName

From ODS.Attribute AS A

cross Join (select 'DK' AS [CountryCode]) as b

Where AttributeName  IN ('PublicAccessible','NumberofParkingStalls','ParkingLotPresence','HandicapAccessible',

 'SecondFloorSize','GroundFloorSize','BasementSize','TotalBuildingSize','BuildingSeries','BuildingType','McCafeBrandExtension','ResponsibleForParkingLot','ElectricVehicle','BusTruckParking', --Building

'DRIVE THRU PRES','LaneConfiguration','OrderPointConfiguration','BoothConfiguration','Windows','CarService','DriveThruTypeDescription', --drive thru

 'IndoorSeatingCount','IndoorSeatingPresence','OutdoorDiningPresence','OutdoorSeatingCount','PartyRoomPresence','PartyRoomSeatingCount','FamilyHandicapAccessible', 'RestaurantNotice' ,'Male/FemaleHandicapAccessible','BabyChangingRoom',  --diningArea

'PlayPlacePresence','PlayPlaceType','PlayPlaceSize','PlaySeatingCount','PlayPlaceRestroomFlag' --Play place

 ,'McCafeBrandExtension','BreakFastServed','NightMenuServed','CreateYourTaste','SuperSaver' --MenuRealetd

 ,'Lobby','TWENTYFOURHOURS','DriveThru','RestaurantHours'  --RestaurantHours

,'McDelivery','WebOrdering','WebOffers','MobileOrdering','MobileOffers'  --digitaldelivery

 ,'ALL\_DAY\_BREAKFAST','SignatureCollection','BreastFeeding','WALKUP WINDOW','Contactless','FREEPHONECHARGING','WiFi','CashLess'

,'JUNIORCLUB','Bakery','DESSERTSKIOSKS','BIRTHDAYPARTIES','GiftCards','INTERACTIVETABLETS','TableService','CHILDRENSPARTY'  --amenity

 ,'Timezone','Latitude','Longitude'      )

UNION ALL

SELECT 'DK' AS MarketCode, 'LatLog' AS AttributeValue, 'Column' AS AttributeName

UNION ALL

/\*\*\*\*\*\*\*\*\*\*\*\*\* NO  LookUp Values \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

--SELECT 'NO' AS MarketCode, 'ALLAttributes' AS AttributeValue, 'Attribute' AS AttributeName

SELECT  CountryCode AS MarketCode,

AttributeName AS AttributeValue,

'Attribute' AS AttributeName

From ODS.Attribute AS A

cross Join (select 'NO' AS [CountryCode]) as b

Where AttributeName  IN ('PublicAccessible','NumberofParkingStalls','ParkingLotPresence','HandicapAccessible',

   'SecondFloorSize','GroundFloorSize','BasementSize','TotalBuildingSize','BuildingSeries','BuildingType','McCafeBrandExtension', 'ResponsibleForParkingLot','ElectricVehicle','BusTruckParking', --Building

'DRIVE THRU PRES','LaneConfiguration','OrderPointConfiguration','BoothConfiguration','Windows','CarService','DriveThruTypeDescription', --drive thru

'IndoorSeatingCount','IndoorSeatingPresence','OutdoorDiningPresence','OutdoorSeatingCount','PartyRoomPresence','PartyRoomSeatingCount','FamilyHandicapAccessible',

'Male/FemaleHandicapAccessible','BabyChangingRoom',  --diningArea

'PlayPlacePresence','PlayPlaceType','PlayPlaceSize','PlaySeatingCount','PlayPlaceRestroomFlag' --Play place

   ,'McCafeBrandExtension','BreakFastServed','NightMenuServed','CreateYourTaste','SuperSaver' --MenuRealetd

,'Lobby','TWENTYFOURHOURS','DriveThru','RestaurantHours'  --RestaurantHours

,'McDelivery','WebOrdering','WebOffers','MobileOrdering','MobileOffers'  --digitaldelivery

 ,'ALL\_DAY\_BREAKFAST','SignatureCollection','BreastFeeding','WALKUP WINDOW','Contactless','FREEPHONECHARGING','WiFi','CashLess'

  ,'JUNIORCLUB','Bakery','DESSERTSKIOSKS','BIRTHDAYPARTIES','GiftCards','INTERACTIVETABLETS','TableService','CHILDRENSPARTY'--amenity

,'Timezone','Latitude','Longitude')

UNION ALL

SELECT 'NO' AS MarketCode, 'LatLog' AS AttributeValue, 'Column' AS AttributeName

UNION ALL

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* IE Market \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

SELECT 'IE' AS MarketCode, 'ALLAttributes' AS AttributeValue, 'Attribute' AS AttributeName

UNION ALL

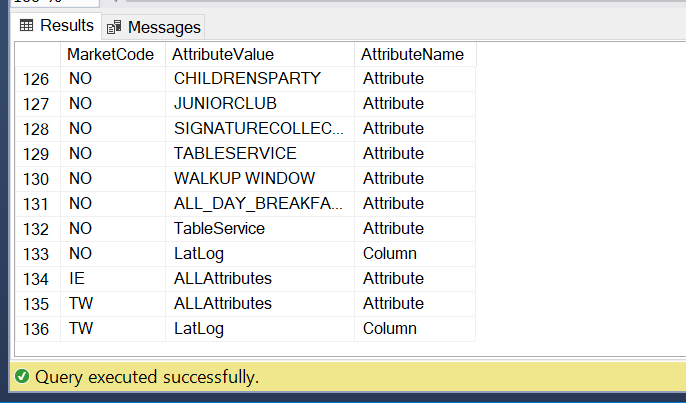
/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* TW Market \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

SELECT 'TW' AS MarketCode, 'ALLAttributes' AS AttributeValue, 'Attribute' AS AttributeName

UNION ALL

SELECT 'TW' AS MarketCode, 'LatLog' AS AttributeValue, 'Column' AS AttributeName

**Output Sample of Current View:**



1. **Create a view to retrieve data from tables using below Business Logic:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name to be kept in View** | **Table Name** | **Attribute Name in Table** | **Comments** |
| Record\_Type |  |  | Always A1 |
| Datetimestamp |  |  | Today's date in format '0hhmmssMMddyyyy' |
| GLIN | mdm.Location | Code |  |
| Project Type | [mdm].[Project] | Project\_Type |  |
| Location Status | [mdm].[Location] (L) /[mdm].[LifeCycleEvent] (LCE) | LifeCycleEvent/Name | CASE [L].[LifeCycleEvent] WHEN 'OP' THEN 'OPENED RESTAURANT' WHEN 'CL' THEN 'CLOSED RESTAURANT' ELSE [LCE].[Name] |
| MCD\_PA\_GRNDBRK\_SCHED | [mdm].[ProjectTask] | [ScheduleDate] | WHEN [ProjectType] = 'NEW' OR 'REBUILD' |
| MCD\_PA\_GRNDBRK\_ACT | [mdm].[ProjectTask] | [ActualDate] | WHEN [ProjectType] = 'NEW' OR 'REBUILD' |
| MCD\_PA\_TMP\_REST\_CLS\_ACT | [mdm].[ProjectTask] | ActualDate | WHEN [ProjectType]='REBUILD' |