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    ■ Person.BusinessEntityContact

 a) Создайте таблицу Person.CountryRegionHst, которая будет хранить

    ⊞ ■ Person.CountryRegion

                                                      информацию об изменениях в таблице Person.CountryRegion
 ☐CREATE TABLE Person.CountryRegionHst(
ID INT IDENTITY(1, 1) PRIMARY KEY,
   □ Columns
       P ID (PK, int, not null)
       Action (nvarchar(6), not null)
                                                       Action NVARCHAR(6) NOT NULL,
      ModifiedDate (datetime, not null)
                                                      ModifiedDate DATETIME NOT NULL CONSTRAINT Default_ModifiedDate DEFAULT GETDATE(),
      SourceID (nyarchar(3), not null)
                                                       SourceID NVARCHAR(3) NOT NULL,
       UserName (nvarchar(100), not null)
                                                      UserName NVARCHAR(100) NOT NULL CONSTRAINT Default_UserName DEFAULT USER_NAME(),
   CONSTRAINT OnlyActions CHECK(Action IN ('INSERT', 'UPDATE', 'DELETE'))
      OnlyActions
      ■ Default_ModifiedDate
      Default_UserName
                                               100 % -
   Messages

    □ Indeves

                                                 Command(s) completed successfully.
   # Person Confact Lype
                                                         b) Создайте три AFTER триггера для трех операций INSERT, UPDATE, DELETE
для таблицы Person.CountryRegion. Каждый триггер должен заполнять таблицу

☐ Person.CountryRegion

    Columns
                                                           Person.CountryRegionHst с указанием типа операции в поле Action.
   USE AdventureWorks2012 --почему если это не сделать бьёт ошибку
GO --'CREATE TRIGGER' must be the first statement in a query batch
   Triggers
                                                     CREATE TRIGGER Person.CountryRegionAfterInsert ON Person.CountryRegion

☑ CountryRegionAfterDelete

                                                     AFTER INSERT

☑ CountryRegionAfterInsert

       CountryRegionAfterUpdate
                                                     INSERT INTO Person.CountryRegionHst (Action, SourceID)
   inserted.CountryRegionCode
                                                             inserted

    ⊞ ■ Person.CountryRegionHst

                                                             --а без этого GO почему-то ругается на следующую строку

■ Person FmailAddress

    ⊞    ■ Person.Password

                                                      USE AdventureWorks2012

    ⊞ ■ Person.Person

    ⊞ ■ Person.PersonPhone

                                                     {\tt CREATE\ TRIGGER\ Person.CountryRegionAfterUpdate\ ON\ Person.CountryRegion}
 AFTER UPDATE

    ■ Person.StateProvince

 INSERT INTO Person.CountryRegionHst (Action, SourceID)
 SELECT
                                                             'UPDATE'
                                                             inserted.CountryRegionCode

    Production.Document

                                                     FROM
                                                             inserted

    ⊞ ■ Production.Illustration

    ⊞ ■ Production.Location

 USE AdventureWorks2012
 □CREATE TRIGGER Person.CountryRegionAfterDelete ON Person.CountryRegion

■ Production.ProductCostHistory

 INSERT INTO Person.CountryRegionHst (Action, SourceID)
 SELECT
                                                             'DELETE
 deleted.CountryRegionCode
 FROM
                                                             deleted

    ■ Production.ProductModelIllustration

                                                      G0

    □ □ Production ProductModelProductDescriptionCulture
    □ Databases

  c) Создайте представление VIEW, отображающее все поля таблицы Person.CountryRegion.
  Сделайте невозможным просмотр исходного кода представления.
   □CREATE VIEW Person.EncryptedView
    🛚 🗀 Tables
                                                        WITH ENCRYPTION
   ■ Wiews
      SELECT *
      Person.CountryRegion
                                                       FROM

    ⊞    ☐ HumanResources.vEmployeeDepartment

      ■ HumanResources.vob Candidate Employment
```

AvAddigonalContactInfo

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⊡/*
           d) Вставьте новую строку в Person.CountryRegion через представление.
           Обновите вставленную строку. Удалите вставленную строку. Убедитесь,
           что все три операции отображены в Person.CountryRegionHst.
     □INSERT INTO Person.EncryptedView (
           CountryRegionCode,
           Name,
           ModifiedDate)
       VALUES (
           'ABC',
           'Komar',
           GETDATE()
      SELECT * FROM Person.CountryRegion
  91 %
  Results
                                              ModifiedDate
        CountryRegionCo.
                          Name
                                              2020-10-31 01:37:41.107
        ABC
                          Komar
  1
        ۸D
                                              2002-06-01 00:00:00.000
  3
        ΑE
                          United Arab Emirates
                                              2002-06-01 00:00:00.000
        AF
                          Afghanistan
                                              2002-06-01 00:00:00.000
       UPDATE Person.EncryptedView
                Name = 'DMITRY',
        SET
                 ModifiedDate = GETDATE()
                CountryRegionCode = 'ABC'
        WHERE
        SELECT * FROM Person.CountryRegion
   91 %
          ιιτς 🛅 Messages
         CountryRegionCo...
                                               ModifiedDate
                           Name
                                               2020-10-31 01:40:30.890
         ABC
                           DMITRY
                                               2002-06-01 00:00:00:00
                                               2002-06-01 00:00:00.000
    3
         ΑE
                           United Arab Emirates
                                               2002-06-01 00:00:00.000
          AF
                            Afghanistan
   Query executed successfully.
                                                                 DESKI
   DELETE FROM Person.EncryptedView
    WHERE CountryRegionCode = 'ABC'
    SELECT * FROM Person.CountryRegion
91 %
III Results 🔓 Messages
      CountryRegionCo...
                                            ModifiedDate
                        Name
                        Andorra
                                            2002-06-01 00:00:00.000
1
                                            2002-06-01 00:00:00.000
2
      ΑE
                        United Arab Emirates
3
      AF
                        Afghanistan
                                            2002-06-01 00:00:00.000
      AG
                        Antigua and Barbuda
                                            2002-06-01 00:00:00.000
4
Query executed successfully.
                                                              DESK1
```

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    ⊞    ■ System Databases

                                                        a) Создайте представление VIEW, отображающее данные из таблиц
                                                        Person.CountryRegion и Sales.SalesTerritory. Создайте уникальный
кластерный индекс в представлении по полю TerritoryID.

    □ Tables

                                                    CREATE VIEW CR ST View
  🗏 🗀 Views
                                                    WITH SCHEMABINDING
   AS SELECT
                                                              PCR.CountryRegionCode,
   ■ 🖾 dbo.CR_ST_View
                                                              PCR.ModifiedDate AS CRModifiedDate,
     □ Columns
                                                              PCR.Name AS CRName,
         CountryRegionCode (nvarchar(3), not null)
                                                              SST.CostLastYear,
                                                              SST.CostYTD,
         CRModifiedDate (datetime, not null)
                                                              SST.[Group],
         CRName (Name(nvarchar(50)), not null)
                                                              SST.ModifiedDate AS STModifiedDate,
         CostLastYear (money, not null)
                                                              SST.Name AS STName,
         CostYTD (money, not null)
                                                              SST.rowguid,
         Group (nvarchar(50), not null)
                                                              SST.SalesLastYear,
         STModifiedDate (datetime, not null)
                                                              SST.SalesYTD,
         STName (Name(nvarchar(50)), not null)
                                                              SST.TerritoryID
                                                    FROM Person.CountryRegion AS PCR
         rowguid (uniqueidentifier, not null)
                                                    JOIN Sales.SalesTerritory AS SST
ON PCR.CountryRegionCode;
         SalesLastYear (money, not null)
         SalesYTD (money, not null)
         TerritoryID (int, not null)
                                                   □CREATE UNIQUE CLUSTERED INDEX CR_ST_Index
     ON dbo.CR_ST_View (TerritoryID);
     A CR ST Index (Clustered)
                                                91 %
     Messages
   Command(s) completed successfully.
   b) Создайте один INSTEAD OF триггер для представления на три
 🖽 🗀 Database Diagrams
                                                   операции INSERT, UPDATE, DELETE. Триггер должен выполнять
                                                  соответствующие операции в таблицах Person.CountryRegion и Sales.SalesTerritory.
 ■ Wiews
                                               CREATE TRIGGER IO_TRIGGER
   ON dbo.CR_ST_View

☐ 図 dbo.CR_ST_Vie

                                               INSTEAD OF INSERT, UPDATE, DELETE

    □ Triggers

        IO TRIGGER
                                                   IF NOT EXISTS (SELECT * FROM INSERTED)
                                                  BEGIN

    □ Indexes

                                                      DECLARE @crr NVARCHAR(3);
    SELECT @crr = DELETED.CountryRegionCode FROM DELETED;
   DELETE FROM Sales.SalesTerritory
   WHERE CountryRegionCode = @crr;
   DELETE FROM Person.CountryRegion
WHERE CountryRegionCode = @crr;
   END ELSE IF NOT EXISTS (SELECT * FROM DELETED)
    BEGIN
         IF NOT EXISTS
                            (SELECT *
                            FROM
                                      Person.CountryRegion AS PCR
                            JOTN
                            ON
                                      INSERTED.CountryRegionCode = PCR.CountryRegionCode)
              INSERT INTO Person.CountryRegion(
                   CountryRegionCode,
                  Name,
                   ModifiedDate
              ) SELECT
                            INSERTED.CountryRegionCode,
                            INSERTED.CRName,
                            INSERTED.CRModifiedDate
                            FROM INSERTED;
         ELSE
              UPDATE Person.CountryRegion
              SET Name = INSERTED.CRName,
                   ModifiedDate = INSERTED.CRModifiedDate
              FROM INSERTED
              WHERE Person.CountryRegion.CountryRegionCode = INSERTED.CountryRegionCode;
```

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         INSERT INTO Sales.SalesTerritory (
             Name,
             CountryRegionCode,
             [Group],
             SalesYTD,
             SalesLastYear,
             CostYTD,
             CostLastYear,
             ModifiedDate
         )SELECT INSERTED.STName,
                  INSERTED.CountryRegionCode,
                  INSERTED. [Group],
                  INSERTED.SalesYTD.
                  INSERTED.SalesLastYear,
                 INSERTED.CostYTD,
                 INSERTED.CostLastYear,
                 INSERTED.STModifiedDate
         FROM INSERTED;
     END
     ELSE
     BEGIN
         UPDATE Person.CountryRegion
         SET Name = INSERTED.CRName,
             ModifiedDate = INSERTED.CRModifiedDate
         FROM Person.CountryRegion AS PCR
         JOIN INSERTED
         ON PCR.CountryRegionCode = INSERTED.CountryRegionCode;
         UPDATE Sales.SalesTerritory
         SET Name = INSERTED.STName,
             [Group] = INSERTED.[Group],
             SalesYTD= INSERTED.SalesYTD,
             SalesLastYear = INSERTED.SalesLastYear,
             CostYTD= INSERTED.CostYTD,
             CostLastYear= INSERTED.CostLastYear,
             ModifiedDate = INSERTED.STModifiedDate
         FROM Sales.SalesTerritory AS ST
         JOIN INSERTED
         ON ST.TerritoryID = INSERTED.TerritoryID;
     END
 END
```

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- /∗
     с) Вставьте новую строку в представление, указав новые данные для
     CountryRegion и SalesTerritory. Триггер должен добавить новые строки
     в таблицы Person.CountryRegion и Sales.SalesTerritory.
     Обновите вставленные строки через представление. Удалите строки.
 */
∃INSERT INTO dbo.CR_ST_View
     CRModifiedDate,
     STName,
     CountryRegionCode,
     CRName,
     [Group],
     SalesYTD,
     SalesLastYear,
     CostYTD,
     CostLastYear,
     rowguid,
     STModifiedDate
 ) VALUES (
     GETDATE(),
     'MINSK',
     'BEL',
     'MINSK',
     'RU',
     123.4,
     56.7,
     58.0,
     12.0,
     NEWID(),
     GETDATE()
 );
JUPDATE dbo.CR_ST_View
SET CRName = 'HELLO',
    [Group] = 'RU',
    SalesLastYear = 123.0
WHERE CountryRegionCode = 'BEL';
DELETE FROM dbo.CR_ST_View
WHERE CountryRegionCode = 'BEL';
```