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-- =====
-- Template generated from Template Explorer using:
-- Create Procedure (New Menu).SQL
--
-- Use the Specify Values for Template Parameters
-- command (Ctrl-Shift-M) to fill in the parameter
-- values below.
--
-- This block of comments will not be included in
-- the definition of the procedure.
-- =====
Use CIS31036;
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
-- =====
-- Author:      Wallace, Dillon
-- Create date: 04/06/17
-- Description: Populate Dimensions
-- =====
CREATE PROCEDURE A102.Fill_Star_Schema
AS
BEGIN

    -- Count records, to determine if needs to be truncated
    Declare @TimeDim int;
    Declare @PilotDim int;
    Declare @PlaneDim int;
    Declare @Fact int;

    Set @TimeDim = (Select Count(*) from A102.TimeDim);
    Set @PilotDim = (Select Count(*) from A102.PilotDim);
    Set @PlaneDim = (Select Count(*) from A102.PlaneDim);
    Select @Fact = (Select Count(*) from A102.Fact);

    If ((@TimeDim + @PilotDim + @PlaneDim + @Fact) > 0)
        Begin
            -- Since SP is not suppose to run truncate per lecture, warn user only
            -- SELECT 'Please run truncate tables' as "Error";
            Alter table a102.fact
                DROP
                    Constraint PK_Fact,
                    Constraint FK_Fact_TimeDim,
                    Constraint FK_Fact_PilotDim,
                    Constraint FK_Fact_PlaneDim;
            Alter table a102.TimeDim
                DROP constraint PK_TimeKey;
            Alter table a102.PilotDim
                DROP constraint PK_PilotDim;
            Alter table a102.PlaneDim
                DROP constraint PK_PlaneDim;
```

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truncate table a102.fact;
truncate table a102.TimeDim;
truncate table a102.PlaneDim;
truncate table a102.pilotdim;
-- Alter and add PK and Other constraints
Alter table A102.TimeDim
  Add Constraint PK_TimeKey Primary Key(TimeKey); -- PK
Alter table A102.PilotDim
  Add Constraint PK_PilotDim Primary Key(PilotKey); -- PK;
Alter Table A102.PlaneDim
  Add Constraint PK_PlaneDim Primary Key (PlaneKey);
-- Add Fact
Alter table A102.Fact
  Add
    Constraint PK_Fact Primary Key(TimeKey, PilotKey, PlaneKey),
    Constraint FK_Fact_TimeDim Foreign Key (TimeKey) references A102.TimeDim,
    Constraint FK_Fact_PilotDim Foreign Key (PilotKey) references A102.PilotDim,
    Constraint FK_Fact_PlaneDim foreign Key (PlaneKey) references A102.PlaneDim;

END

--Tables have been cleared if anything in it, constraints have been added back, now re/
init populate
  /** POPULATE Dimension Tables */
  --Populate Time
    INSERT INTO A102.TimeDim (char_date, year, month, quarter, week, dow)
    SELECT CHAR_DATE, Year(char_date), month(char_date), datepart(quarter,
      char_date), DATEPART(week, char_date),DATEPART(weekday, char_date)
    FROM A10.CHARTER
    GROUP BY char_date; --Unique Dates, so all dates fill
  --Populate Pilots
    INSERT INTO A102.PilotDim (Emp_Num, Emp_First_Name, Emp_Last_Name,
      Emp_Hire_Date)
    SELECT Emp_Num, Emp_FNAME,Emp_LNAME,Emp_Hire_Date
    FROM A10.Employee
  --Populate Plane
    Insert INTO A102.PlaneDim (AC_NUM, MOD_CODE, MOD_NAME, MOD_CHG_MILE,
      MOD_SEATS, MOD_Manufacturer)
    SELECT p.ac_number, m.MOD_CODE, m.MOD_name, m.MOD_CHG_MILE,
      m.MOD_SEATS, m.MOD_Manufacturer
    FROM A10.aircraft p inner join A10.model m ON (p.MOD_CODE =
      m.MOD_CODE)

  /** DIMENSIONS HAVE BEEN POPULATED. FILL Staging table, then insert into fact
  table */
  -- Per formula on A10 Formula for Revenue:
  -- "Revenue is defined as char_fuel_gallons * mod_chg_mile."
  INSERT INTO a102.Staging (char_date, emp_num, AC_Num, char_distance,
    char_hour_flight, char_gallons_used, Revenue, PilotKey, PlaneKey, TimeKey)
    SELECT c.char_date, e.emp_num, c.AC_Number, c.char_distance,
      c.char_hours_flown,c.CHAR_FUEL_GALLONS,

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...niversity of Louisville\Spring 2017\CIS 310\A10\A10P3.sql 3
(m.MOD_CHG_MILE*c.char_fuel_gallons) as "Revenue", dimPI.PilotKey,
dimPL.PlaneKey, dimT.TimeKey
FROM A10.charter c inner join A10.crew ON (c.char_trip =
A10.crew.char_trip)
INNER JOIN a10.employee e ON (A10.crew.emp_num = e.emp_num)
INNER JOIN a10.AIRCRAFT a on (a.AC_NUMBER = c.AC_NUMBER)
INNER JOIN a10.MODEL m on (a.MOD_CODE = m.MOD_CODE)
-- Join on Dimension tables to pull dimesion ID's
Inner Join a102.PilotDim dimPI on (dimPI.Emp_Num = e.EMP_NUM)
INNER JOIN A102.PlaneDim dimPL on (dimPL.AC_Num = c.AC_NUMBER)
INNER JOIN A102.TimeDim dimT on (dimT.char_date = c.CHAR_DATE)
--INSERT STAGING INTO FACTS WITH PARAMS WE NEED
INSERT INTO a102.Fact(PilotKey, PlaneKey, TimeKey, char_distance,
char_fuel_gallons, revenue, char_hour_flight)
SELECT PilotKey, PlaneKey, timeKey, char_distance, char_gallons_used, Revenue,
char_hour_flight
FROM a102.Staging

truncate table a102.staging; -- truncate temp staging table.

END

GO
-- Test
EXECUTE A102.Fill_Star_Schema;

```