```sql
-- Dillon Wallace
-- A10 P2
-- Due: 04/12/17
-- Purpose: Create facts/Dimension tables in A102 Scheme along with Constraints

use CIS31036;

--Create TimeDim table
Create table A102.TimeDim(
    TimeKey int not null Identity,
    char_date date,
    year int,
    month int,
    quarter int,
    week int,
    dow varchar(10)
);

-- Alter and add PK and Other contraints
Alter table A102.TimeDim
    Add Constraint PK_TimeKey Primary Key(Timekey); -- PK

-- Create pilot dim table
Create Table A102.PilotDim(
    PilotKey int not null Identity,
    Emp_Num int,
    Emp_First_Name varchar(255),
    Emp_Last_Name varchar(255),
    Emp_Hire_Date date
);
Alter table A102.PilotDim
    Add Constraint PK_PilotDim Primary Key(PilotKey); -- PK;


--Create Plane Tables
Create Table A102.PlaneDim(
    PlaneKey int not null Identity,
    AC_Num varchar(5),
    Mod_Code int,
    Mod_Name varchar(255),
    Mod_Chg_Mile float(8),
    Mod_Seats float(8),
    MOD_MANUFACTURER varchar(15)
);
Alter Table A102.PlaneDim
    Add Constraint PK_PlaneDim Primary Key (PlaneKey);

Create Table A102.Fact(
    TimeKey int not null ,
    PilotKey int not null,
    PlaneKey int not null,
    char_distance float(8) not null,
```

```sql
    char_hour_flight float(8) not null,
    char_fuel_gallons float(8) not null
);
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;

Create Table A102.Staging (
    char_date date,
    emp_num int,
    AC_Num varchar(5),
    char_distance float(8) not null,
    char_hour_flight float(8) not null,
--  char_fuel_gallons float(8) not null,
    Revenue decimal(10,2),
    TimeKey int not null ,
    PilotKey int not null,
    PlaneKey int not null
);
```