```sql
--A10 SQL --EDGAR JOSEPH DEGUZMAN FILE



--PART 2
CREATE TABLE AIRCRAFTDIM (
MODEL_KEY INT IDENTITY NOT NULL,
MOD_CODE varchar(10),
MOD_MANUFACTURER varchar(5),
MOD_NAME varchar,
MOD_SEATS float(8),
MOD_CHG_MILE float(8),
);

CREATE TABLE FACT  (
TIME_KEY INT NOT NULL IDENTITY,
PILOT_KEY int NOT NULL,
MODEL_KEY int NOT NULL,
CHAR_DISTANCE float(8),
CHAR_FUEL_GALLONS float(8),
MOD_CHG_MILE float(8),
);

CREATE TABLE TIMEDIM (
TIME_KEY int NOT NULL IDENTITY,
CHAR_DATE datetime,
CHAR_YEAR datetime,
CHAR_MONTH datetime,
);

CREATE TABLE PILOTDIM (
PILOT_KEY int NOT NULL IDENTITY,
EMP_NUM INT,
EMP_LNAME VARCHAR(15),
EMP_FNAME VARCHAR(15),
PIL_LICENSE varchar(25),
PIL_RATINGS varchar(25),
PIL_MED_TYPE varchar(1),
PIL_MED_DATE datetime,
PIL_PT135_DATE datetime,
);

ALTER TABLE AIRCRAFTDIM
ADD CONSTRAINT PK_AIRCRAFTDIM PRIMARY KEY (AIRCRAFT_KEY),
     CONSTRAINT FK_AIRCRAFTDIM_MODEL FOREIGN KEY (MOD_CODE) REFERENCES
MODEL

ALTER TABLE FACT
ADD CONSTRAINT PK_FACT PRIMARY KEY (TIME_KEY, PILOT_KEY, MODEL_KEY),
     CONSTRAINT FK_FACT_TIME FOREIGN KEY (TIME_KEY) REFERENCES
TIMEDIM,
```

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        CONSTRAINT FK_FACT_PILOTDIM FOREIGN KEY (PILOT_KEY) REFERENCES
PILOTDIM,
        CONSTRAINT FK_FACT_MODELDIM FOREIGN KEY (MODEL_KEY) REFERENCES
MODELDIM

ALTER TABLE TIMEDIM
ADD CONSTRAINT PK_TIMEDIM PRIMARY KEY (TIME_KEY)

ALTER TABLE PILOTDIM
ADD CONSTRAINT PK_PILOTDIM PRIMARY KEY (PILOT_KEY),
        CONSTRIANT FK_PILOTDEIM_EMPLOYEE FOREIGN KEY (EMP_NUM) REFERENCES
EMPLOYEE

--PART 3
CREATE PROCEDURE STAR PROCEDURE
AS
BEGIN

ALTER TABLE FACT
DROP CONSTRAINT  FK_FACT_TIME,
        CONSTRAINT FK_FACT_PILOTDIM,
        CONSTRAINT FK_FACT_MODELDIM

ALTER TABLE MODELDIM
DROP CONSTRAINT PK_MODELDIM,
            CONSTRAINT FK_MODELDIM_MODEL

ALTER TABLE PILOTDIM
DROP CONSTRAINT PK_PILOTDIM,
        CONSTRAINT FK_PILOTDIM_EMPLOYEE

ALTER TABLE TIMEDIM
DROP CONSTRAINT PK_TIMEDIM

TRUNCATE TABLE MODELDIM
TRUNCATE TABLE TIMEDIM
TRUNCATE TABLE PILOTDIM
TRUNCATE TABLE FACT

ALTER TABLE MODELDIM
ADD CONSTRAINT PK_MODELDIM PRIMARY KEY (MODEL_KEY),
        CONSTRAINT FK_MODELDIM_MODEL FOREIGN KEY (MOD_CODE) REFERENCES
MODEL

ALTER TABLE FACT
ADD CONSTRAINT PK_FACT PRIMARY KEY (TIME_KEY, PILOT_KEY, MODEL_KEY),
        CONSTRAINT FK_FACT_TIME FOREIGN KEY (TIME_KEY) REFERENCES
TIMEDIM,
        CONSTRAINT FK_FACT_PILOTDIM FOREIGN KEY (PILOT_KEY) REFERENCES
PILOTDIM,
        CONSTRAINT FK_FACT_MODELDIM FOREIGN KEY (MODEL_KEY) REFERENCES
MODELDIM
```

```sql
ALTER TABLE TIMEDIM
ADD CONSTRAINT PK_TIMEDIM PRIMARY KEY (TIME_KEY)

ALTER TABLE PILOTDIM
ADD CONSTRAINT PK_PILOTDIM PRIMARY KEY (PILOT_KEY),
      CONSTRIANT FK_PILOTDEIM_EMPLOYEE FOREIGN KEY (EMP_NUM) REFERENCES
EMPLOYEE

END
GO


INSERT INTO MODELDIM
SELECT *
FROM AIRCRAFT

INSERT INTO PILOTDIM
SELECT *
FROM PILOT

INSERT INTO TIMEDIM
SELECT *
FROM CHARTER


CREATE TABLE STAGING  (
TIME_KEY INT NOT NULL,
PILOT_KEY INT NOT NULL,
AIRCRAFT_KEY INT NOT NULL,
CHAR_DATE DATETIME NOT NULL,
CHAR_DISTANCE FLOAT,
CHAR_FUEL_GALLONS FLOAT,
MOD_CHG_MILE FLOAT
);

INSERT INTO STAGING
SELECT *
FROM MODEL M INNER JOIN AIRCRAFT AC ON M.MOD_CODE = AC.MOD_CODE
      INNER JOIN CHARTER CH ON AC.AC_NUMBER = CH.AC_NUMBER
      INNER JOIN CREW C ON CH.CHAR_TRIP = C.CHAR_TRIP
      INNER JOIN PILOT P ON C.EMP_NUM = P.EMP_NUM

UPDATE STAGING
SET TIME_KEY = T.TIME_KEY
FROM STAGING S INNER JOIN TIMEDIM T ON S.TIME_KEY = T.TIME_KEY
UPDATE STAGING SET PILOT_KEY = P.PILOT_KEY
FROM STAGING S INNER JOIN PILOTDIM P ON S.PILOT_KEY = P.PILOT_KEY
UPDATE STAGING SET AIRCRAFT_KEY = AC.AIRCRAFT_KEY
FROM STAGING S INNER JOIN MODELDIM M ON S.AIRCRAFT_KEY = M.MODEL_KEY

INSERT INTO FACT
```

```
SELECT *
FROM STAGING

TRUNCATE TABLE STAGING

--PART 4
--1
SELECT E.EMP_LNAME, SUM(CH.CHAR_DISTANCE) AS TOTAL_MILES
FROM PILOT P INNER JOIN EMPLOYEE E ON P.EMP_NUM = E.EMP_NUM
                INNER JOIN CREW C ON E.EMP_NUM = C.EMP_NUM
                INNER JOIN CHARTER CH ON C.CHAR_TRIP = C.CHAR_TRIP
GROUP BY E.EMP_LNAME
ORDER BY SUM (CH.CHAR_DISTANCE) DESC

--2
SELECT M.MOD_NAME, MONTH(CH.CHAR_DATE) AS MONTH, (CH.CHAR_FUEL_GALLONS
* M.MOD_CHG_MILE) AS REVENUE
FROM CHARTER CH INNER JOIN AIRCRAFT AC ON CH.AC_NUMBER = AC.AC_NUMBER
      INNER JOIN MODEL M ON AC.MOD_CODE = M.MOD_CODE
GROUP BY M.MOD_NAME
ORDER BY (CH.CHAR_FUEL_GALLONS * M.MOD_CHG_MILE) ASC
```