

2.2. Star schema implementation - Level 0

The following is the SQL script for implementing the star schema of version 2 (Level 0).

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-- ===== SharedIM =====
-- DIM: CarbodyDIM
DROP TABLE CarBodyTypeDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE CarBodyTypeDIM AS
(SELECT DISTINCT(CARBODYTYPE), numseats FROM moncity.car);

-- ===== BookingFact =====
-- DIM: PassengerDIM
DROP TABLE PassengerDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE PassengerDIM
  AS (SELECT PASSENGERID, PASSENGERAGE
FROM Clean_passenger
);

-- DIM: DatedIM
DROP TABLE DateDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE DateDIM
AS (SELECT BOOKINGDATE
FROM Clean_Booking
);

-- DIM: FacultyDIM
DROP TABLE FacultyDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE FacultyDIM AS
(SELECT FACULTYID, FACULTYNAME
FROM moncity.faculty);

-- ===== MaintenanceFact =====
-- DIM: MaintenanceTypeDIM
DROP TABLE MaintenanceTypeDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE MaintenanceTypeDIM AS
(SELECT maintenancetype
FROM moncity.maintenancetype);

-- DIM: (B) MaintenanceTeamDIM_V2
DROP TABLE MaintenanceTeamDIM_V2 CASCADE CONSTRAINTS PURGE;
CREATE TABLE MaintenanceTeamDIM_V2 AS
(SELECT TEAMID
FROM moncity.maintenanceTeam
);

-- DIM: (B) BridgeTable
DROP TABLE BridgeTable CASCADE CONSTRAINTS PURGE;
CREATE TABLE BridgeTable
AS (SELECT * FROM moncity.belongto);
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-- DIM: (B) ResearchCenterDIM
DROP TABLE ResearchCenterDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE ResearchCenterDIM
AS(
SELECT CENTERID, CENTERNAME
FROM moncity.researchcenter
);

-- DIM: MaintenanceDIM
DROP TABLE MaintenanceDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE MaintenanceDIM
AS(
SELECT maintenanceid
FROM Clean_maintenance
);

-- ===== AccidentFact =====

-- DIM: AccidentZoneDIM
DROP TABLE AccidentZoneDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE AccidentZoneDIM AS
(SELECT DISTINCT accidentzone
FROM clean_accidentinfo);

-- DIM: AccidentInfoDIM_V2
DROP TABLE AccidentInfoDIM_V2 CASCADE CONSTRAINTS PURGE;
CREATE TABLE AccidentInfoDIM_V2 AS
(
SELECT clean_accidentinfo.accidentid
FROM clean_accidentinfo
);

-- DIM: CarAccidentDIM
DROP TABLE CarAccidentDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE CarAccidentDIM AS
(SELECT REGISTRATIONNO, accidentid FROM moncity.caraccident);

-- DIM: ErrorDIM
DROP TABLE ErrorDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE ErrorDIM AS
(SELECT errorcode FROM moncity.error);

-- DIM: CarDamageSeverityDIM
DROP TABLE CarDamageSeverityDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE CarDamageSeverityDIM AS
(SELECT DISTINCT (CAR_DAMAGE_SEVERITY)
FROM clean_accidentinfo);

-- DIM: CarDIM
DROP TABLE CarDIM CASCADE CONSTRAINTS PURGE;
CREATE TABLE CarDIM AS
(SELECT DISTINCT registrationno, CARBODYTYPE
FROM moncity.car);

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-- Creating facts:
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-- ===== FACT: AccidentFACT =====
-- ==== new AccidentFACT
DROP TABLE AccidentFACT_V2 CASCADE CONSTRAINTS PURGE;
CREATE TABLE AccidentFACT_V2
AS (
SELECT accidentzone, errorcode, car_damage_severity, accidentid,
count(accidentid) as num_of_accident
FROM clean_accidentinfo
GROUP BY
accidentzone,
car_damage_severity,
errorcode,
accidentid
);

-- ===== FACT: BookingFact =====
-- Create BookingFact
DROP TABLE BookingFACT_V2 CASCADE CONSTRAINTS PURGE;
CREATE TABLE BookingFACT_V2
AS (
SELECT b.bookingdate, f.facultyid, c.carbodytype, p.passengerage, b.bookingid, count(b
ookingid) as num_of_booking_record
FROM Clean_Booking b, Clean_passenger p, moncity.faculty f, moncity.car c
WHERE b.passengerid = p.passengerid AND f.facultyid = p.facultyid AND b.REGISTRATIONN
O = c.REGISTRATIONNO
GROUP BY b.bookingdate, f.facultyid, c.carbodytype, p.passengerage, b.bookingid
);

-- ===== FACT: MaintenanceFact =====
DROP TABLE MaintenanceFact_V2 CASCADE CONSTRAINTS PURGE;
CREATE TABLE MaintenanceFact_V2
AS (
SELECT m.maintenanceid,
m.maintenancetype,
c.carbodytype,
m.teamid,
count(DISTINCT m.maintenanceid) as num_of_main_record,
sum(m.maintenancecost) as main_cost

FROM Clean_maintenance m,

(SELECT DISTINCT b.teamid FROM
moncity.maintenanceteam mte, moncity.belongto b, moncity.researchcenter r ) mTeam,

moncity.maintenancetype mty,
moncity.car c

WHERE m.teamid = mTeam.teamid AND
mty.maintenancetype = m.maintenancetype and
c.registrationno = m.registrationno

GROUP BY m.maintenanceid, m.maintenancetype, c.carbodytype, m.teamid
);

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