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/*1*/
CREATE VIEW View_EVDetailedRegistrations AS
SELECT
    v.Year AS Model_Year,
    mo.Make,
    mo.Model,
    COUNT(v.DOL_Vehicle_Id) AS RegistrationCount
FROM vehicle v
JOIN model mo ON v.Model_Id = mo.Model_Id
JOIN vehicle_location vl ON v.DOL_Vehicle_Id = vl.DOL_Vehicle_Id
JOIN location l ON vl.Location_Id = l.Location_Id
WHERE l.State = 'WA' AND v.Year >= (YEAR(CURDATE()) - 5)
GROUP BY v.Year, mo.Make, mo.Model;
/*2*/
CREATE VIEW View_EVMarketAnalysis AS
SELECT
    l.State,
    m.Make,
    COUNT(v.DOL_Vehicle_Id) AS TotalVehicles,
    AVG(v.Range) AS AverageRange
FROM vehicle v
JOIN model m ON v.Model_Id = m.Model_Id
JOIN vehicle_location vl ON v.DOL_Vehicle_Id = vl.DOL_Vehicle_Id
JOIN location l ON vl.Location_Id = l.Location_Id
WHERE m.Make = 'TESLA'
GROUP BY l.State, m.Make;
/*3*/
CREATE VIEW View_RegionalEVAAdoption AS
SELECT
    l.City,
    COUNT(DISTINCT v.DOL_Vehicle_Id) AS TotalEVs,
    SUM(CASE WHEN ce.CAFV_Eligibility = 'Clean Alternative Fuel Vehicle Eligible'
THEN 1 ELSE 0 END) AS EligibleEVs,
    (SELECT COUNT(DISTINCT ve.DOL_Vehicle_Id)
    FROM vehicle ve
    JOIN model mo ON ve.Model_Id = mo.Model_Id
    JOIN vehicle_location vle ON ve.DOL_Vehicle_Id = vle.DOL_Vehicle_Id
    JOIN location lo ON vle.Location_Id = lo.Location_Id
    WHERE mo.Make = 'TESLA' AND lo.City = l.City) AS TeslaCount
FROM vehicle v
JOIN `caf_v eligibility` ce ON v.CAFV_Id = ce.CAFV_Id
JOIN vehicle_location vl ON v.DOL_Vehicle_Id = vl.DOL_Vehicle_Id
JOIN location l ON vl.Location_Id = l.Location_Id
WHERE l.State = 'WA'
GROUP BY l.City;
/*4*/
CREATE VIEW View_TeslaModelAnalysis AS
SELECT
    mo.Model,
    COUNT(v.DOL_Vehicle_Id) AS ModelCount,
    AVG(v.Range) AS AvgRange
FROM vehicle v
JOIN model mo ON v.Model_Id = mo.Model_Id
WHERE mo.Make = 'TESLA'
GROUP BY mo.Model;
/*5*/
CREATE VIEW View_VehicleTypeComparison AS
SELECT
    vt.Vehicle_Type,

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    COUNT(v.DOL_Vehicle_Id) AS VehicleCount,  
    SUM(CASE WHEN ce.CAFV_Id= 1 THEN 1 ELSE 0 END) AS EligibleCount  
FROM vehicle v  
JOIN vehicle_type vt ON v.Vehicle_Type_Id = vt.Vehicle_Type_Id  
JOIN `caf_v_eligibility` ce ON v.CAFV_Id = ce.CAFV_Id  
GROUP BY vt.Vehicle_Type;
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