SQL Syntax – tidy

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-- Create Customer table
CREATE TABLE Customer (
    cust_id INTEGER PRIMARY KEY,
    birth_year INTEGER,
    cust_age INTEGER,
    education VARCHAR(10),
    marital_status VARCHAR(10),
    income NUMERIC,
    nr_children INTEGER,
    nr_teenagers INTEGER,
    registration_date DATE,
    purchase_recency INTEGER,
    alcohol_spend NUMERIC,
    vegetables_spend NUMERIC,
    meat_spend NUMERIC,
    fish_spend NUMERIC,
    chocolate_spend NUMERIC,
    commodities_spend NUMERIC,
    nr_discount_deals INTEGER,
    nr_website_buy INTEGER,
    nr_instore_buy INTEGER,
    monthly_website_visits INTEGER,
    campaign_response NUMERIC,
    cust_complaint NUMERIC,
    country_key VARCHAR(3),
    country VARCHAR(20),
    lead_conversion INTEGER
);

-- Create ADs table
CREATE TABLE Advertisement (
    cust_id INTEGER PRIMARY KEY,
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    bulkmail_ad NUMERIC,
    twitter_ad NUMERIC,
    instagram_ad NUMERIC,
    facebook_ad NUMERIC,
    brochure_ad NUMERIC
);

-- Joining the Tables
SELECT *
FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id;

-- Most effective Advertisement channel per Country
SELECT
    c.country,
    SUM(a.bulkmail_ad) AS bulkmail_total,
    SUM(a.twitter_ad) AS twitter_total,
    SUM(a.instagram_ad) AS instagram_total,
    SUM(a.facebook_ad) AS facebook_total,
    SUM(a.brochure_ad) AS brochure_total,
    SUM(c.lead_conversion) AS total_lead_conversions
FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id
GROUP BY c.country
ORDER BY total_lead_conversions DESC;

-- Most effective Advertisement channel based on Marital Status
SELECT
    c.marital_status,
    SUM(a.bulkmail_ad) AS bulkmail_total,
    SUM(a.twitter_ad) AS twitter_total,
    SUM(a.instagram_ad) AS instagram_total,
    SUM(a.facebook_ad) AS facebook_total,
    SUM(a.brochure_ad) AS brochure_total,
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    SUM(c.lead_conversion) AS total_lead_conversions
FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id
GROUP BY c.marital_status
ORDER BY total_lead_conversions DESC;

-- Total spend per Country
SELECT
    c.country,
    SUM(c.alcohol_spend + c.chocolate_spend + c.fish_spend + c.meat_spend +
c.vegetables_spend) AS total_spend
FROM customer c
GROUP BY c.country
ORDER BY total_spend DESC;

-- Total spend per Product per Country
SELECT
    c.country,
    SUM(c.alcohol_spend) AS total_alcohol_spend,
    SUM(c.chocolate_spend) AS total_chocolate_spend,
    SUM(c.commodities_spend) AS total_commodities_spend,
    SUM(c.fish_spend) AS total_fish_spend,
    SUM(c.meat_spend) AS total_meat_spend,
    SUM(c.vegetables_spend) AS total_vegetables_spend
FROM customer c
GROUP BY c.country
ORDER BY total_alcohol_spend DESC;

-- Total spend per Product by Marital Status
SELECT
    c.marital_status,
    SUM(c.alcohol_spend) AS total_alcohol_spend,
    SUM(c.chocolate_spend) AS total_chocolate_spend,
    SUM(c.commodities_spend) AS total_commodities_spend,
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    SUM(c.fish_spend) AS total_fish_spend,
    SUM(c.meat_spend) AS total_meat_spend,
    SUM(c.vegetables_spend) AS total_vegetables_spend
FROM customer c
GROUP BY c.marital_status
ORDER BY total_alcohol_spend DESC;

-- Total spend per Product by Children and Teens
SELECT
    c.nr_children,
    c.nr_teenagers,
    SUM(c.alcohol_spend) AS total_alcohol_spend,
    SUM(c.chocolate_spend) AS total_chocolate_spend,
    SUM(c.commodities_spend) AS total_commodities_spend,
    SUM(c.fish_spend) AS total_fish_spend,
    SUM(c.meat_spend) AS total_meat_spend,
    SUM(c.vegetables_spend) AS total_vegetables_spend
FROM customer c
GROUP BY c.nr_children, c.nr_teenagers
ORDER BY total_alcohol_spend DESC;

-- Most effective advertisement channels per country
SELECT c.country,
       'Bulkmail' AS advertising_channel,
       SUM(a.bulkmail_ad) AS total_ad_engagement,
       SUM(c.lead_conversion) AS total_lead_conversions
FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id
GROUP BY c.country
UNION
SELECT c.country,
       'Twitter' AS advertising_channel,
       SUM(a.twitter_ad) AS total_ad_engagement,
       SUM(c.lead_conversion) AS total_lead_conversions
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FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id
GROUP BY c.country
UNION
SELECT c.country,
    'Instagram' AS advertising_channel,
    SUM(a.instagram_ad) AS total_ad_engagement,
    SUM(c.lead_conversion) AS total_lead_conversions
FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id
GROUP BY c.country
UNION
SELECT c.country,
    'Facebook' AS advertising_channel,
    SUM(a.facebook_ad) AS total_ad_engagement,
    SUM(c.lead_conversion) AS total_lead_conversions
FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id
GROUP BY c.country
UNION
SELECT c.country,
    'Brochure' AS advertising_channel,
    SUM(a.brochure_ad) AS total_ad_engagement,
    SUM(c.lead_conversion) AS total_lead_conversions
FROM customer c
INNER JOIN advertisement a ON c.cust_id = a.cust_id
GROUP BY c.country
ORDER BY country, total_ad_engagement DESC, advertising_channel,
total_lead_conversions DESC;

-- Amount spent per Product, per Country - by Advertisement channel
SELECT country, products, Bulkmail, Twitter, Instagram, Facebook, Brochure
FROM (
   SELECT a.country, 'alcohol' AS products,
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        SUM(a.bulkmail_ad) AS Bulkmail,
        SUM(a.twitter_ad) AS Twitter,
        SUM(a.instagram_ad) AS Instagram,
        SUM(a.facebook_ad) AS Facebook,
        SUM(a.brochure_ad) AS Brochure
    FROM public.advertisement a
    INNER JOIN products p ON a.cust_id = p.cust_id
    WHERE p.alcohol_spend > 0
    GROUP BY a.country, p.alcohol_spend
    UNION
    SELECT a.country, 'chocolate' AS products,
        SUM(a.bulkmail_ad) AS Bulkmail,
        SUM(a.twitter_ad) AS Twitter,
        SUM(a.instagram_ad) AS Instagram,
        SUM(a.facebook_ad) AS Facebook,
        SUM(a.brochure_ad) AS Brochure
    FROM public.advertisement a
    INNER JOIN products p ON a.cust_id = p.cust_id
    WHERE p.chocolate_spend > 0
    GROUP BY a.country, p.chocolate_spend
    -- Add other product-specific subqueries in the same format
) AS subquery
ORDER BY country, products;
```