ADHOC QUERIES

1. **Retailers from whom highest business is generated per region.**

```
SELECT
    TEMP3.*
FROM
  (
    SELECT
        R1.REGION_ID, R1.REGION_NAME, RT1.RETAILER_ID, RT1.RETAILER_NAME,
SUM(O1.AMOUNT) AS MATCH_SALES
    FROM
        Fall22_S001_3_ORDERS O1, Fall22_S001_3_RETAILERS RT1,
Fall22_S001_3_REGIONS R1
    WHERE
        RT1.RETAILER_ID = O1.RETAILER_ID AND
        RT1.REGION_ID = R1.REGION_ID
    GROUP BY
        R1.REGION_ID, R1.REGION_NAME, RT1.RETAILER_ID, RT1.RETAILER_NAME
  ) TEMP3,
  (
    SELECT
        TEMP.REGION_ID, TEMP.REGION_NAME, MAX(TEMP.SALES) AS
HIGHEST_SALES_PER_REGION
    FROM (
        SELECT
            R.REGION_ID, R.REGION_NAME, SUM(O.AMOUNT) AS SALES
        FROM
            Fall22_S001_3_ORDERS O, Fall22_S001_3_RETAILERS RT,
Fall22_S001_3_REGIONS R
        WHERE
            RT.RETAILER_ID = O.RETAILER_ID AND
            RT.REGION_ID = R.REGION_ID
        GROUP BY
            R.REGION_ID, R.REGION_NAME, RT.RETAILER_ID
      ) TEMP
    GROUP BY
        TEMP.REGION_ID, TEMP.REGION_NAME
  ) TEMP2
WHERE
  TEMP3.REGION_ID = TEMP2.REGION_ID AND
  TEMP3.MATCH_SALES = TEMP2.HIGHEST_SALES_PER_REGION;
```

OUTPUT:

```
REGION_ID REGION_NAME         RETAILER_ID RETAILER_NAME                          BUSINESS_SALES
---------- ------------------- ----------- -------------------------------------- --------------
         1 Dallas North               10 Big Mart Union Fields                           2828.8
         2 Dallas East                19 Mediterranean Store Marshal Fields North        4699.9
         3 Dallas South               22 Walmart FC Road                                 5079.98
         4 Dallas West                39 Nigerian Store St Sebastian Garden              1062.8
```

2. **Retailers from whom highest business is generated per region using OVER clause.**

```
SELECT
  TEMP7.REGION_ID, TEMP7.REGION_NAME, TEMP7.RETAILER_ID,
TEMP7.RETAILER_NAME, TEMP7.SALES
FROM
  (
    SELECT
      TEMP6.REGION_ID, TEMP6.REGION_NAME, TEMP6.RETAILER_ID,
TEMP6.RETAILER_NAME, TEMP6.SALES, MAX(TEMP6.SALES) OVER (PARTITION BY
TEMP6.REGION_ID) AS HIGHEST_SALES_PER_REGION
    FROM (
      SELECT
        R.REGION_ID, R.REGION_NAME, RT.RETAILER_ID, RT.RETAILER_NAME,
SUM(O.AMOUNT) AS SALES
      FROM
        Fall22_S001_3_ORDERS O, Fall22_S001_3_RETAILERS RT,
Fall22_S001_3_REGIONS R
      WHERE
        RT.RETAILER_ID = O.RETAILER_ID AND
        RT.REGION_ID = R.REGION_ID
      GROUP BY
        R.REGION_ID, R.REGION_NAME, RT.RETAILER_ID, RT.RETAILER_NAME
    ) TEMP6
  ) TEMP7
WHERE
  TEMP7.SALES = TEMP7.HIGHEST_SALES_PER_REGION;
```

OUTPUT:

```
REGION_ID REGION_NAME         RETAILER_ID RETAILER_NAME                                   SALES
---------- ------------------- ----------- -------------------------------------- ------------
         1 Dallas North               10 Big Mart Union Fields                          2828.8
         2 Dallas East                19 Mediterranean Store Marshal Fields North       4699.9
         3 Dallas South               22 Walmart FC Road                                5079.98
         4 Dallas West                39 Nigerian Store St Sebastian Garden             1062.8
```

3. Top 10 most sold products throughout.

```
SELECT
    P1.PRODUCT_ID, P1.PRODUCT_NAME, TEMP3.UNITS_SOLD
FROM
    Fall22_S001_3_PRODUCTS P1,
    (
        SELECT
            CO.PRODUCT_ID, SUM(CO.PRODUCT_QUANTITY) AS UNITS_SOLD
        FROM
            Fall22_S001_3_CONTAINS_ORDERS CO
        GROUP BY
            CO.PRODUCT_ID
    ) TEMP3
WHERE
    P1.PRODUCT_ID = TEMP3.PRODUCT_ID
ORDER BY TEMP3.UNITS_SOLD DESC
FETCH FIRST 10 ROWS ONLY;
```

OUTPUT:

```
PRODUCT_ID PRODUCT_NAME                                                UNITS_SOLD
---------- ---------------------------------------------------------- ----------
        22 OREAO CREAM BISCUIT                                               410
         1 ALL OUT ULTRA MOSQUITO REPELLENT                                 400
         4 AIR WICK LAVENDER FRESHNER                                       120
        23 OREAO GOLDEN BISCUIT                                             110
        34 DETTOL LIQUID 250ML                                              110
        19 AMUL BUTTERSCOTCH ICE-CREAM                                      100
         8 MAGGIE NUTRITIOUS OATS MASALA                                     50
        13 MTR INSTANT UTAPAM                                                50
        15 MTR RICE IDLI                                                     40
        29 LATEX DISPOSABLE GLOVES                                           40
```

4. Assuming that all the damages happen when a sales person drives rash, find out the sales person responsible for most of the damages in terms of the total units damaged.

```
SELECT
   SP2.SALES_PERSON_ID, SP2.FIRST_NAME, SP2.LAST_NAME,
TEMP5.SP_DAMAGED_UNITS
FROM
   Fall22_S001_3_SALES_PERSON SP2,
   (
   SELECT
      SP.SALES_PERSON_ID, SUM(TEMP4.RETAILER_DAMAGED_UNITS) AS
SP_DAMAGED_UNITS
   FROM
      Fall22_S001_3_RETAILERS R2, Fall22_S001_3_REGIONS RG,
Fall22_S001_3_ROUTES RO, Fall22_S001_3_SALES_PERSON SP,
      (
         SELECT
            O.RETAILER_ID, SUM(CN.PRODUCT_QUANTITY) AS
RETAILER_DAMAGED_UNITS
         FROM
            Fall22_S001_3_CONTAINS_CN CN, Fall22_S001_3_CREDIT_NOTES C,
Fall22_S001_3_ORDERS O
         WHERE
            CN.CREDIT_NOTE_ID = C.CREDIT_NOTE_ID AND
            C.ORDER_ID = O.ORDER_ID
         GROUP BY
            O.RETAILER_ID
      ) TEMP4
   WHERE
      TEMP4.RETAILER_ID = R2.RETAILER_ID AND
      R2.REGION_ID = RG.REGION_ID AND
      RG.ROUTE_ID = RO.ROUTE_ID AND
      RO.SALES_PERSON_ID = SP.SALES_PERSON_ID
   GROUP BY
      SP.SALES_PERSON_ID
   ) TEMP5
WHERE
   SP2.SALES_PERSON_ID = TEMP5.SALES_PERSON_ID
ORDER BY
   TEMP5.SP_DAMAGED_UNITS DESC
FETCH FIRST 1 ROWS ONLY;
```

OUTPUT:

SALES_PERSON_ID	FIRST_NAME	LAST_NAME	SP_DAMAGED_UNITS
2	LARA	ROSE	258

5. **Give the no of units sold**
   - **Per product then,**
   - **Per product and per region then,**
   - **Per product, per region and per retailer then,**
   - **In total,**

SELECT
  CO.PRODUCT_ID, RG.REGION_ID, O.RETAILER_ID, SUM(CO.PRODUCT_QUANTITY)
AS UNITS_SOLD
FROM
  Fall22_S001_3_CONTAINS_ORDERS CO, Fall22_S001_3_ORDERS O,
Fall22_S001_3_RETAILERS R, Fall22_S001_3_REGIONS RG
WHERE
  CO.ORDER_ID = O.ORDER_ID AND
  O.RETAILER_ID = R.RETAILER_ID AND
  R.REGION_ID = RG.REGION_ID
GROUP BY ROLLUP(CO.PRODUCT_ID, RG.REGION_ID, O.RETAILER_ID);

OUTPUT:

PRODUCT_ID	REGION_ID	RETAILER_ID	UNITS_SOLD
33	1	10	10
33	1		10
33	4	36	5
33	4		5
33			15
34	1	10	10
34	1		10
34	2	16	100
34	2		100
34			110

```
PRODUCT_ID  REGION_ID RETAILER_ID UNITS_SOLD
----------  --------- ----------- ----------
        52          2                      10
        52                                 10
        53          1           7          10
        53          1                      10
        53                                 10
        54          1           7          10
        54          1                      10
        54                                 10
                                         1910
```

6. **Give the no of units damaged**
   ○ **Per product then,**
   ○ **Per product and per region then,**
   ○ **Per product, per region and per retailer then,**
   ○ **In total,**

```
SELECT
   CO.PRODUCT_ID, RG.REGION_ID, P.RETAILER_ID, SUM(CO.PRODUCT_QUANTITY) AS
UNITS_DAMAGED
FROM
   Fall22_S001_3_CONTAINS_CN CO, Fall22_S001_3_CREDIT_NOTES O,
Fall22_S001_3_ORDERS P, Fall22_S001_3_RETAILERS R, Fall22_S001_3_REGIONS RG
WHERE
   CO.CREDIT_NOTE_ID = O.CREDIT_NOTE_ID AND
   O.ORDER_ID = P.ORDER_ID AND
   P.RETAILER_ID = R.RETAILER_ID AND
   R.REGION_ID = RG.REGION_ID
GROUP BY ROLLUP(CO.PRODUCT_ID, RG.REGION_ID, P.RETAILER_ID);
```

OUTPUT:

PRODUCT_ID	REGION_ID	RETAILER_ID	UNITS_DAMAGED
37	3	28	10
37	3		10
37			10
38	2	15	15
38	2		15
38			15
39	3	21	25
39	3		25
39			25
			510