```sql
-- Use the correct database
USE rfm_sales;

-- View sample records
SELECT * FROM sales_sample_data LIMIT 20;

-- Date range (Business start and end)
SELECT MIN(STR_TO_DATE(ORDERDATE, '%d/%m/%y')) FROM sales_sample_data; --
FIRST BUSINESS DAY: 2003-01-06
SELECT MAX(STR_TO_DATE(ORDERDATE, '%d/%m/%y')) FROM sales_sample_data; --
LAST BUSINESS DAY: 2005-05-31

-- Today's date
SELECT CURDATE();

-- Customer-level RFM metrics
SELECT
        CUSTOMERNAME,
    MAX(STR_TO_DATE(ORDERDATE, '%d/%m/%y')),
    COUNT(DISTINCT ORDERNUMBER) AS F_VALUE,
    ROUND(SUM(SALES),0) AS M_Value
FROM sales_sample_data
GROUP BY CUSTOMERNAME;

-- Subquery for RFM values within a recency range
SELECT * FROM
(SELECT
        CUSTOMERNAME,
    DATEDIFF((SELECT MAX(STR_TO_DATE(ORDERDATE, '%d/%m/%y')) FROM
sales_sample_data), MAX(STR_TO_DATE(ORDERDATE, '%d/%m/%y'))) AS R_VALUE,
    COUNT(DISTINCT ORDERNUMBER) AS F_VALUE,
    ROUND(SUM(SALES),0) AS M_Value
FROM sales_sample_data
GROUP BY CUSTOMERNAME) AS SUMMARY_TABLE
WHERE R_VALUE BETWEEN 50 AND 100;

-- Final RFM analysis view
CREATE OR REPLACE VIEW RFM AS
WITH CUSTOMER_SUMMARY_TABLE AS (
  SELECT
    CUSTOMERNAME,
    DATEDIFF((SELECT MAX(STR_TO_DATE(ORDERDATE, '%d/%m/%y')) FROM
sales_sample_data), MAX(STR_TO_DATE(ORDERDATE, '%d/%m/%y'))) AS
RECENCY_VALUE,
    COUNT(DISTINCT ORDERNUMBER) AS FREQUENCY_VALUE,
    ROUND(SUM(SALES),0) AS MONETARY_VALUE
  FROM sales_sample_data
  GROUP BY CUSTOMERNAME
```

```sql
),
RFM_SCORE AS (
  SELECT
    S.*,
    NTILE(5) OVER(ORDER BY RECENCY_VALUE DESC) AS R_SCORE,
    NTILE(5) OVER(ORDER BY FREQUENCY_VALUE ASC) AS F_SCORE,
    NTILE(5) OVER(ORDER BY MONETARY_VALUE ASC) AS M_SCORE
  FROM CUSTOMER_SUMMETARY_TABLE AS S
),
RFM_COMBINATION_SCORE AS (
  SELECT
    R.*,
    (R_SCORE+F_SCORE+M_SCORE) AS TOTAL_RFM_SCORE,
    CONCAT_WS('', R_SCORE, F_SCORE, M_SCORE) AS RFM_SCORE_COMBINATION
  FROM RFM_SCORE AS R
)
SELECT
  RC.*,
  CASE
    WHEN RFM_SCORE_COMBINATION IN (455, 542, 544, 552, 553, 452, 545, 554, 555)
THEN 'Champions'
    WHEN RFM_SCORE_COMBINATION IN (344, 345, 353, 354, 355, 443, 451, 342, 351,
352, 441, 442, 444, 445, 453, 454, 541, 543, 515, 551) THEN 'Loyal Customers'
    WHEN RFM_SCORE_COMBINATION IN (513, 413, 511, 411, 512, 341, 412, 343, 514)
THEN 'Potential Loyalists'
    WHEN RFM_SCORE_COMBINATION IN (414, 415, 214, 211, 212, 213, 241, 251, 312,
314, 311, 313, 315, 243, 245, 252, 253, 255, 242, 244, 254) THEN 'Promising Customers'
    WHEN RFM_SCORE_COMBINATION IN (141,
142,143,144,151,152,155,145,153,154,215) THEN 'Needs Attention'
    WHEN RFM_SCORE_COMBINATION IN (113, 111, 112, 114, 115) THEN 'About to Sleep'
    ELSE 'OTHER'
  END AS CUSTOMER_SEGMENT
FROM RFM_COMBINATION_SCORE AS RC;

-- View RFM table
SELECT * FROM RFM;

-- Segment summary: monetary value
SELECT
  CUSTOMER_SEGMENT,
  ROUND(SUM(MONETARY_VALUE), 0) AS TOTAL_MONETARY_VALUE,
  ROUND(AVG(MONETARY_VALUE), 0) AS AVERAGE_MONETARY_VALUE
FROM RFM
GROUP BY 1
ORDER BY 2 DESC;

-- Segment summary: quantity and sales
SELECT
```

```
    CUSTOMER_SEGMENT,
    SUM(QUANTITYORDERED) AS TOTAL_QUANTITY_ORDERED,
    ROUND(SUM(SALES),0) AS TOTAL_SALES_AMOUNT
FROM sales_sample_data AS S
LEFT JOIN RFM AS R ON S.CUSTOMERNAME = R.CUSTOMERNAME
GROUP BY 1
ORDER BY 2 DESC;
```

| CUSTOMER_SEGMENT	TOTAL_QUANTITY_ORDERED	TOTAL_SALES_AMOUNT
Champions	35575.00	3617917
OTHER	32570.00	3264966
Loyal Customers	15185.00	1573983
About to Sleep	10937.00	1098537
Promising Customers	4800.00	477226

CUSTOMER_SEGMENT

OTHER	About to Sleep	Champions	Loyal Customers	Promisi...
37	17	17	16	5

CUSTOMERNAME	R_SCORE	F_SCORE	M_SCORE	CUSTOMER_SEGMENT
Alpha Cognac	4	4	2	Loyal Customers
Amica Models & Co.	1	1	3	About to Sleep
Anna's Decorations, Ltd	4	5	5	Champions
Atelier graphique	3	3	1	OTHER
Australian Collectables, Ltd	5	2	1	OTHER
Australian Collectors, Co.	3	5	5	Loyal Customers
Australian Gift Network, Co	4	4	1	Loyal Customers
Auto Assoc. & Cie.	2	2	2	OTHER
Auto Canal Petit	4	4	3	Loyal Customers
Auto-Moto Classics Inc.	3	3	1	OTHER
AV Stores, Co.	3	3	5	OTHER
Baane Mini Imports	2	4	4	Promising Customers
Bavarian Collectables Imports, Co.	1	1	1	About to Sleep
Blauer See Auto, Co.	2	4	3	Promising Customers
Boards & Toys Co.	4	2	1	OTHER
CAF Imports	1	1	1	About to Sleep
Cambridge Collectables Co.	1	1	1	About to Sleep
Canadian Gift Exchange Network	2	2	2	OTHER
Classic Gift Ideas, Inc	2	2	2	OTHER
Classic Legends Inc.	3	3	2	OTHER
Clover Collections, Co.	2	2	1	OTHER
Collectable Mini Designs Co.	1	1	3	About to Sleep
Collectables For Less Inc.	4	3	3	OTHER
Corporate Gift Ideas Co.	4	5	5	Champions
Corrida Auto Replicas, Ltd	2	2	4	OTHER
Cruz & Sons Co.	2	3	3	OTHER
Daedalus Designs Imports	1	1	2	About to Sleep
Danish Wholesale Imports	5	5	5	Champions

Customer segment by RFM Value

● About to Sleep ● Champions ● Loyal Customers ● OTHER ● Promising Customers
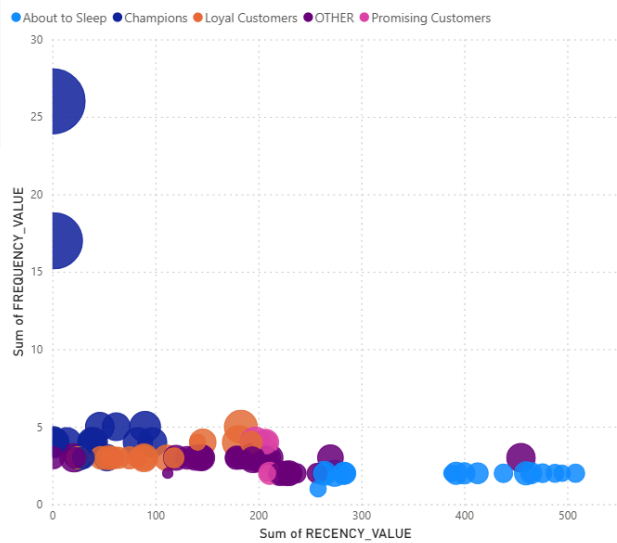
RFM Score	Customer Segment	Sort
113	About to Sleep	6
141	Needs Attention	5
142	Needs Attention	5
143	Needs Attention	5
144	Needs Attention	5
151	Needs Attention	5
152	Needs Attention	5
155	Needs Attention	5
111	About to Sleep	6
112	About to Sleep	6
114	About to Sleep	6
115	About to Sleep	6
145	Needs Attention	5
153	Needs Attention	5