Find all the non-local orders by looking at the salesmen that generated orders for their customers but are located elsewhere unlike their customers, and fetch the details like order_no, name of the customer, customer_id, salesman_id.

```
-- Joins concept is reuired to solve this problem

                  /* query to fetch the required result*/


SELECT
      o.order_no, c.name, o.customer_id, s.id   -- required fields from tables
FROM
      salesman s                    -- Inner Join & alliasing
      INNER JOIN customer c
      ON c.salesman_id = s.id
      INNER JOIN orders o
      ON o.customer_id = c.id             -- Appropriate relations on common fields
WHERE
      s.city != c.city              -- for non local orders
ORDER BY
      order_no                      -- sorting the orders


      ------------------------------------------------------
```

Find amount of incentive made by each employee

```
                        /* query for employee incentive made */


SELECT
      e.employee_id,
CASE
      WHEN ((ROUND(e.emp_sale/i.sales_milestone))*i.incentive) < i.cap
      THEN ((ROUND(e.emp_sale/i.sales_milestone))*i.incentive)
      WHEN ((ROUND(e.emp_sale/i.sales_milestone))*i.incentive) > i.cap
      THEN i.cap
END incentive_made      -- use of CASE clause to categorise the incentive made

FROM
      employee e INNER JOIN incentive_details i
      ON e.pos_id = i.p_id
ORDER BY
      e.employee_id

      ------------------------------------------------------
```

Write an SQL Query to find subjects that contain the alphabet "b" and have papers written under the guidance of more female mentors than male mentors.

```
/* Query to fetch results for assigned task */
```

```
SELECT
      p_subject
FROM
      (SELECT
            m_gender, p_subject, COUNT(*)
      FROM
            mentors me INNER JOIN research_mentor rm  -- Inner join of tables
            ON me.m_id = rm.m_id
            INNER JOIN researchers r
            ON r.r_id = rm.r_id
            INNER JOIN research_paper rp
            ON rp.r_id = r.r_id
            INNER JOIN papers p
            ON p.p_id = rp.p_id
       WHERE
            m_gender = 'F'          -- filter to get female mentors
       AND
            p_subject LIKE '%b%'    -- subject with b letter
      GROUP BY m_gender, p_subject) a

/* research paper task by another query */
-- fetching the result by using windows function in the query

SELECT
      p_subject
FROM
    (SELECT *, MAX(ct) OVER (PARTITION BY m_gender,P_subject) mc
    FROM
        (SELECT
            m_gender, p_subject, COUNT(*) AS ct
        FROM
            mentors me INNER JOIN research_mentor rm  -- Inner join of tables
            ON me.m_id = rm.m_id
            INNER JOIN researchers r
            ON r.r_id = rm.r_id
            INNER JOIN research_paper rp
            ON rp.r_id = r.r_id
            INNER JOIN papers p
            ON p.p_id = rp.p_id
        WHERE
            p_subject LIKE '%b%'    -- subject with b letter
        GROUP BY m_gender, p_subject) a
        ) b
    WHERE
        m_gender = 'F'        -- filtering gender
    AND
        ct = mc         -- filtering the paper
```

VARMA PRASAD S