1. Identify all partial dependencies.

CUSTOMER: cus_lname, cus_areacode, cus_initial, cus_balance, cus_phone, cus_fname

INVOICE: inv_date

LINE: line_units, line_price

PRODUCT: p_qoh, p_discount, p_price, p_min, p_description, p_indate

VENDOR: v_name, v_contact, v_phone, v_order, v_state, v_areacode

2. Identify all transitive dependencies.

INVOICE: cus_code

LINE: p_code

PRODUCT: v_code

3. Create relations in 3NF that represent the given Crow's Foot ERD.

CUSTOMER:

(Cus_code, cus_lname, cus_areacode, cus_initial, cus_balance, cus_phone, cus_fname)

3NF: CUSTOMER_CONTACT: (Cus_code, cus_lname, cus_areacode, cus_initial, cus_phone, cus_fname)

CUSTOMER: (Cus_code, cus_balance)

INVOICE:

(Inv_number, inv_date, cus_code)

3NF: (Inv_number, inv_date, cus_code, p_code)

LINE:

(inv_number, p_code), (line_number, line_units, line_price)

3NF: (line_number, line_units, line_price)

PRODUCT:

(p_code, p_qoh, p_discount, v_code, p_price, p_min, p_description, p_indate)

3NF: PRODUCT_PRICE: (p_description, p_price, p_discount, p_min)

PRODUCT: (p_code, p_qoh, v_code, p_indate)

VENDOR:

(v_code, v_name, v_contact, v_phone, v_order, v_state, v_areacode)

3NF: VENDOR_Contact: (v_contact, v_phone, v_name, v_state, v_areacode)

VENDOR: (v_code, v_order)

4. List the primary keys and the foreign keys associated with the different relations.

CUSTOMER: PK = cus_code

INVOICE: PK = inv_number; FK = cus_code

LINE: PK = inv_number, line_number; FK = p_code

PRODUCT: PK = p_code; FK = v_code

VENDOR: PK = v_code