

PERSON (personID, f-name, l-name, Dob, gender, street, city, state, zip)

PERSON_CONTACT (personID, phone, email)

EMPLOYEE (emp-personID, emp-ID, position, salary, hire-date, sales-target, supervisor-emp-personID)

SUPPLIER (supplierID, name, email, phone)

CUSTOMER (cust-personID, custID)

OPTOMETRIST (optl-emp-personID, opt-emp-ID, opt-ID, licence-no)

PRODUCT (productID, model, brand, size, price, category, color, material, lens-type, product-supplierID)

PRESCRIPTION (optl-emp-personID, cust-personID, prescription-ID, opt-emp-id, opt-id-issue-date, lens-type, left, right)

WARRANTY (cust-personID, productID, warr-no, period, status, coverage-details, refund-amt)

SELLS (emp-personID, ProductID)

SELLS-details (emp-personID, productID, date-sold, quantity)

BUYS (cust-personID, productID)

BUYS-details (cust-personID, productID, date, payment-method, total-sale-value, quantity)

SUPPLIES (supplierID, productID)

SUPPLIES-details (supplierID, productID, quantity, unit-cost, supply-date)

FUNCTIONAL DEPENDENCIES

PERSON

personID → f-name, L-name, DOB, gender, street, city, state, zip

PERSON_CONTACT

personID, phone, email → personID

EMPLOYEE

emp-personID → empID, position, salary, hire-date, sales-Target,
Supervisor-emp-personID

emp-ID → emp-personID, position, salary, hire-date, sales-Target,
Supervisor-emp-personID

SUPPLIER

supplier → name, email, phone

SUPPLIES

SupplierID, productID → supplierID

SupplierID, productID → productID

SUPPLIES-DETAILS

supplierID, productID, quantity, unit-cost, supply-date → supplier-ID

CUSTOMER

cust-personID → cust-ID

cust-ID → cust-personID

OPTOMETRIST

opt-emp-personID → opt-empID, opt-ID, license-no

opt-ID → opt-emp-personID, opt-empID, license-no

opt-emp-ID → opt-emp-personID, opt-empID, license-no

PRODUCT

product ID → model, brand, size, price, category, color, material,
lens-type, product-supplierID

PRESCRIPTION

prescriptionID → opt-emp-personID, opt-emp-id, opt-id, cust-personID,
issue-date, lens-type, left, right

WARRANTY

warr-no → productID, period, status, coverage-details,
refund-amt

SELLS

emp-personID, productID → emp-personID

emp-personID, productID → productID

SELLS DETAILS

emp-personID, productID, date-sold, quantity → emp-personID

emp-personID, productID, date-sold, quantity → productID

BUYS

cust-personID, productID → cust-personID

cust-personID, productID → productID

BUYS-DETAILS

cust-personID, productID, date, payment-method, total-sale-value,
quantity → cust-personID

cust-personID, productID, date, payment-method, total-sale-value,
quantity → cust-personID.

CANDIDATE KEYS

PERSON - personID

PERSON-CONTACT - {personID, phone, email}

EMPLOYEE - emp-personID, empID

SUPPLIER - supplierID

CUSTOMER - cust-personID, custID

OPTOMETRIST - opt-emp-personID, opt-emp-ID, opt-ID

PRODUCT - productID

PRESCRIPTION - {opt-emp-personID, opt-emp-ID, opt-ID, cust-person-ID, prescriptionID} and prescriptionID

WARRANTY - {product-ID, warr-no} and warr-no

SELLS - {emp-person-ID, productID}

SELLS-DETAILS - {emp-personID, productID, date-sold, quantity}

BUYS - {cust-person-ID, productID}

BUYS-DETAILS - {cust-person-ID, product ID, date, payment-method, total-sale-value, quantity}

SUPPLIES - {supplierID, ProductID}

SUPPLIES-DETAILS - {supplier-ID, productID, quantity, unit-cost, supply-date}

BCNF Normalization:

Team 8

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