Due Date: 6/29/2023
Total Points: 40

Question 1 (30 points)

What to submit:

Submit SQL commands used to answer Part 1, and Part 2. Make sure that your SQL script runs without any errors. Submit screen shots of running commands for Part 2.

Part 1 (10 Points): Creating the database:

Create the following tables. The underlined **bold** column names are the primary keys. Make sure to specify the primary and foreign key constraints in your create table statements.

1. customer: (**<u>cus_code:integer</u>**, cus_lname:varchar(20), cus_fname:varchar(20), cus_initial:char, cus_areacode:integer,cus_phone:integer).

2. invoice: (**<u>inv_number:integer</u>**, cus_code:integer, inv_date:date,
   foreign key cus_code references customer(cus_code))

3. line: (**<u>inv_number:integer</u>**,
   <u>prod_code:integer</u> ,line_units:integer,
   foreign key (inv_number) references
   Invoice(inv_number),

foreign key (prod_code) references Product (prod_code))

4. product:(**prod_code:integer**, prod_desc:varchar(50), prod_price:integer, prod_quant:integer,vend_code:integer, foreign key (vend_code) referenecs Vendor(vend_code))

5. vendor: (**vend_code:integer**,vend_name:varchar(30),vend_contact:varchar(30),vend_areacode:integer,vend_phone:integer)

Part 2 (10 Points): Inserting data:

Insert the following data in the tables using insert into statements:

1. customer:
10010, Ramas, Paul, A, 615, 8442573
10011, Dunne, Leona, K, 713, 8941238
10012, Smith, Kathy, W, 615, 8942285
10013, Olowski, Paul,F, 615, 2221672
10014, Orlando, Myron, NULL, 615, 2971228

2. invoice:
1001, 10011, 2018-01-03
1002, 10014, 2016-08-04
1003, 10012, 2017-03-20
1004, 10014, 2018-01-13

3. line:
1001, 12321, 1
1001, 65781, 3
1003, 83456, 2
1002, 34256, 6
1003, 12321, 5
1002, 12321, 6
1001, 83456, 3

4. product:
12321, hammer, 189 ,20, 232
65781, chain, 12, 45, 235
34256, tape, 35, 60, 235
83456, saw, 165, 15, 236
12333, hanger, 200 ,10, 232

5. vendor:
232, Bryson, Smith, 615, 2233234
235, SuperLoo, Anderson, 615, 2158995
236, Brett, Manko, 612, 3458695

Part 3 (10 Points): SQL Queries

Write SQL statements to answer each of the following questions.

1. List the Product Code, Description, and Quantity for all products, sorted by Description.

2. List the invoice number and invoice date for all invoices of customer Kathy Smith.

3. List the product code and product quantity for products in invoice number 1001, with line_units 3.

4. List all product description and product price supplied by vendor whose vendor contact name is Anderson.

5. Produce a list of product description, vendor name, and vendor phone for all products with quantity greater than 60

Question 2 (10 points)

Consider the employee database below, where the primary keys are underlined. Give an expression in SQL for each of the following queries.

employee (<u>employee_name</u>, street, city)
works (<u>employee_name</u>, company name, salary)
company (<u>company_name</u>, city)
manages (<u>employee_name,</u> manager name)

1. Find the names of all employees who work for First Bank Corporation.
2. Find all employees in the database who live in the same cities as the companies for which they work.
3. Find all employees in the database who live in the same cities and on the same streets as do their managers.