

Use the SaleCo ERD listed below and the provided SQL scripts to construct its relational database and answer the following queries.

Note: Purchases = LINE_PRICE * LINE_UNITS

Note: Inventory value = P_QOH * P_PRICE

1. (2 pts) How many invoices are there?

SELECT COUNT(*) FROM INVOICE; Answer: 8

```
sqlite> SELECT COUNT(*) FROM INVOICE;
COUNT(*)
-----
8
```

- (3 pts) List the invoice numbers and the invoice dates.

SELECT INV_NUMBER, INV_DATE FROM INVOICE;

```
sqlite> SELECT INV_NUMBER, INV_DATE FROM INVOICE;
INV_NUMBER  INV_DATE
-----
1001        16-JAN-2016
1002        16-JAN-2016
1003        16-JAN-2016
1004        17-JAN-2016
1005        17-JAN-2016
1006        17-JAN-2016
1007        17-JAN-2016
1008        17-JAN-2016
```

2. (2 pts) How many customers are there?

SELECT COUNT(*) FROM CUSTOMER; Answer: 10

```
sqlite> SELECT COUNT(*) FROM CUSTOMER;
COUNT(*)
-----
10
```

- (3 pts) List the customer codes and customer names.

SELECT CUS_CODE, CUS_FNAME, CUS_LNAME FROM CUSTOMER;

```
sqlite> SELECT CUS_CODE, CUS_FNAME, CUS_LNAME FROM CUSTOMER;
CUS_CODE  CUS_FNAME  CUS_LNAME
-----
10016     James      Brown
10011     Leona      Dunne
10018     Anne       Farriss
10015     Amy        O'Brian
10013     Paul       Olowski
10014     Myron      Orlando
10010     Alfred     Ramas
10012     Kathy      Smith
10019     Olette     Smith
10017     George     Williams
```

3. (2 pts) List vendor numbers and vendor names.

```
SELECT V_CODE, V_NAME FROM VENDOR;
```

```
sqlite> SELECT V_CODE, V_NAME FROM VENDOR;
V_CODE  V_NAME
-----  -
21225   Bryson, Inc.
21226   SuperLoo, Inc.
21231   D&E Supply
21344   Gomez Bros.
22567   Dome Supply
23119   Randsets Ltd.
24004   Brackman Bros.
24288   ORDVA, Inc.
25443   B&K, Inc.
25501   Damal Supplies
25595   Rubicon Systems
```

- (3 pts) Show the vendor count per state.

```
SELECT V_STATE, COUNT(*) FROM VENDOR GROUP BY V_STATE;
```

```
sqlite> SELECT V_STATE, COUNT(*) FROM VENDOR GROUP BY V_STATE;
V_STATE  COUNT(*)
-----  -
FL        3
GA        2
KY        1
TN        5
```

4. (2 pts) Based on price, what is the most expensive product?

```
SELECT P_CODE, P_DESCRIPT, P_PRICE FROM PRODUCT ORDER BY
P_PRICE DESC; Answer: 89-WRE-Q, Hicut chain saw, 16 in.
256.99
```

```
sqlite> SELECT P_CODE, P_DESCRIPT, P_PRICE FROM PRODUCT ORDER BY P_PRICE DESC;
P_CODE    P_DESCRIPT                                P_PRICE
-----    -
89-WRE-Q   Hicut chain saw, 16 in.                   256.99
WR3/TT3    Steel matting, 4'x8'x1/6", .5" mesh       119.95
11QER/31   Power painter, 15 psi., 3-nozzle          109.99
2232/QTY   B&D jigsaw, 12-in. blade                  109.92
2232/QWE   B&D jigsaw, 8-in. blade                   99.87
1558-QW1   Hrd. cloth, 1/2-in., 3x50                 43.99
1546-QQ2   Hrd. cloth, 1/4-in., 2x50                 39.95
2238/QPD   B&D cordless drill, 1/2-in.               38.95
14-Q1/L3   9.00-in. pwr. saw blade                   17.49
13-Q2/P2   7.25-in. pwr. saw blade                   14.99
23114-AA   Sledge hammer, 12 lb.                     14.4
23109-HB   Claw hammer                               9.95
SW-23116   2.5-in. wd. screw, 50                     8.45
SM-18277   1.25-in. metal screw, 25                  6.99
PVC23DRT   PVC pipe, 3.5-in., 8-ft                   5.87
54778-2T   Rat-tail file, 1/8-in. fine               4.99
```

(3 pts) How much quantity on hand is available for the most expensive product?

```
SELECT P_CODE, P_DESCRIPT, P_QOH FROM PRODUCT WHERE  
P_CODE='89-WRE-Q'; Answer: 11
```

```
sqlite> SELECT P_CODE, P_DESCRIPT, P_QOH FROM PRODUCT WHERE P_CODE='89-WRE-Q';  
P_CODE      P_DESCRIPT      P_QOH  
-----  
89-WRE-Q    Hicut chain saw, 16 in.  11
```

5. **(2 pts)** Write a query to count the number of customers with a customer balance over \$500.

```
SELECT COUNT(*) FROM CUSTOMER WHERE CUS_BALANCE>500;
```

Answer: 2

```
sqlite> SELECT COUNT(*) FROM CUSTOMER WHERE CUS_BALANCE>500;  
COUNT(*)  
-----  
2
```

(3 pts) List the customer code, customer name and balance amount of these customers.

```
SELECT CUS_CODE, CUS_FNAME, CUS_LNAME, CUS_BALANCE FROM  
CUSTOMER WHERE CUS_BALANCE>500;
```

```
sqlite> SELECT CUS_CODE, CUS_FNAME, CUS_LNAME, CUS_BALANCE FROM CUSTOMER WHERE CUS_BALANCE>500;  
CUS_CODE  CUS_FNAME  CUS_LNAME  CUS_BALANCE  
-----  
10013     Paul       Olowski    536.75  
10017     George     Williams   768.93
```

6. **(7 pts)** Generate a listing of products offered by each Vendor. List vendor name, product code and product name. Sort by vendor name and product code.

```
SELECT V.V_NAME, P.P_CODE, P.P_DESCRIPT  
FROM PRODUCT AS P  
INNER JOIN VENDOR AS V  
ON V.V_CODE =P.V_CODE  
ORDER BY V.V_NAME, P.P_CODE;
```

```
sqlite> SELECT V.V_NAME, P.P_CODE, P.P_DESCRIPT  
FROM PRODUCT AS P  
INNER JOIN VENDOR AS V  
ON V.V_CODE =P.V_CODE  
ORDER BY V.V_NAME, P.P_CODE;  
V_NAME      P_CODE      P_DESCRIPT  
-----  
Bryson, Inc. 23109-HB    Claw hammer  
Bryson, Inc. SM-18277    1.25-in. metal screw, 25  
D&E Supply  SW-23116    2.5-in. wd. screw, 50  
Gomez Bros. 13-Q2/P2    7.25-in. pwr. saw blade  
Gomez Bros. 14-Q1/L3    9.00-in. pwr. saw blade  
Gomez Bros. 54778-2T    Rat-tail file, 1/8-in. fine  
ORDVA, Inc. 2232/QTY    B&D jigsaw, 12-in. blade  
ORDVA, Inc. 2232/QWE    B&D jigsaw, 8-in. blade  
ORDVA, Inc. 89-WRE-Q    Hicut chain saw, 16 in.  
Randsets Ltd. 1546-QQ2    Hrd. cloth, 1/4-in., 2x50  
Randsets Ltd. 1558-QW1    Hrd. cloth, 1/2-in., 3x50  
Rubicon Systems 11QER/31    Power painter, 15 psi., 3-nozzle  
Rubicon Systems 2238/QPD    B&D cordless drill, 1/2-in.  
Rubicon Systems WR3/TT3    Steel matting, 4'x8'x1/6", .5" mesh
```

7. (7 pts) Generate a listing of customer purchases, including the subtotals for each of the invoice line numbers; sort output by customer code, invoice number and the line_number.

```
SELECT SUM(LINE_PRICE * LINE_UNITS), I.CUS_CODE,  
I.INV_NUMBER, L.LINE_NUMBER  
FROM LINE AS L  
LEFT JOIN INVOICE AS I  
ON I.INV_NUMBER =L.INV_NUMBER  
GROUP BY I.INV_NUMBER, L.LINE_NUMBER  
ORDER BY I.CUS_CODE, I.INV_NUMBER, L.LINE_NUMBER;
```

```
sqlite> SELECT SUM(LINE_PRICE * LINE_UNITS), I.CUS_CODE, I.INV_NUMBER, L.LINE_NUMBER  
FROM LINE AS L  
LEFT JOIN INVOICE AS I  
ON I.INV_NUMBER =L.INV_NUMBER  
GROUP BY I.INV_NUMBER, L.LINE_NUMBER  
ORDER BY I.CUS_CODE, I.INV_NUMBER, L.LINE_NUMBER;  
SUM(LINE_PRICE * LINE_UNITS)  CUS_CODE  INV_NUMBER  LINE_NUMBER  
-----  
9.98                          10011    1002        1  
14.97                         10011    1004        1  
19.9                          10011    1004        2  
29.35                         10011    1008        1  
359.85                        10011    1008        2  
9.95                          10011    1008        3  
38.95                         10012    1003        1  
39.95                         10012    1003        2  
74.95                         10012    1003        3  
14.99                         10014    1001        1  
9.95                          10014    1001        2  
20.97                         10014    1006        1  
109.92                        10014    1006        2  
9.95                          10014    1006        3  
256.99                        10014    1006        4  
29.98                         10015    1007        1  
4.99                         10015    1007        2  
70.44                        10018    1005        1
```

8. (7 pts) List the balance characteristics of the customers who have made purchases during the current invoice cycle—that is, for the customers who appear in the INVOICE table; sort by customer code.

```
SELECT CUS_CODE, CUS_BALANCE
FROM CUSTOMER
WHERE CUS_CODE IN (SELECT CUS_CODE FROM INVOICE)
ORDER BY CUS_CODE;
```

```
sqlite> SELECT CUS_CODE, CUS_BALANCE
FROM CUSTOMER
WHERE CUS_CODE IN (SELECT CUS_CODE FROM INVOICE)
ORDER BY CUS_CODE;
CUS_CODE  CUS_BALANCE
-----
10011      0
10012    345.86
10014      0
10015      0
10018    216.55
```

9. (7 pts) Find a listing of customers who did not make purchases during the invoicing period; sort by customer code.

```
SELECT CUS_CODE
FROM CUSTOMER
WHERE CUS_CODE NOT IN (SELECT CUS_CODE FROM INVOICE)
ORDER BY CUS_CODE;
```

```
sqlite> SELECT CUS_CODE
FROM CUSTOMER
WHERE CUS_CODE NOT IN (SELECT CUS_CODE FROM INVOICE)
ORDER BY CUS_CODE;
CUS_CODE
-----
10010
10013
10016
10017
10019
```

10. (7 pts) Create a query to produce a summary of the value of products currently in inventory.

```
SELECT P_CODE, P_DESCRIPT, P_QOH, P_PRICE, P_QOH * P_PRICE
AS VALUE
FROM PRODUCT
ORDER BY P_CODE;
```

```
sqlite> SELECT P_CODE, P_DESCRIPT, P_QOH, P_PRICE, P_QOH * P_PRICE AS VALUE
FROM PRODUCT
ORDER BY P_CODE;
```

P_CODE	P_DESCRIPT	P_QOH	P_PRICE	VALUE
11QER/31	Power painter, 15 psi., 3-nozzle	8	109.99	879.92
13-Q2/P2	7.25-in. pwr. saw blade	32	14.99	479.68
14-Q1/L3	9.00-in. pwr. saw blade	18	17.49	314.82
1546-QQ2	Hrd. cloth, 1/4-in., 2x50	15	39.95	599.25
1558-QW1	Hrd. cloth, 1/2-in., 3x50	23	43.99	1011.77
2232/QTY	B&D jigsaw, 12-in. blade	8	109.92	879.36
2232/QWE	B&D jigsaw, 8-in. blade	6	99.87	599.22
2238/QPD	B&D cordless drill, 1/2-in.	12	38.95	467.4
23109-HB	Claw hammer	23	9.95	228.85
23114-AA	Sledge hammer, 12 lb.	8	14.4	115.2
54778-2T	Rat-tail file, 1/8-in. fine	43	4.99	214.57
89-WRE-Q	Hicut chain saw, 16 in.	11	256.99	2826.89
PVC23DRT	PVC pipe, 3.5-in., 8-ft	188	5.87	1103.56
SM-18277	1.25-in. metal screw, 25	172	6.99	1202.28
SW-23116	2.5-in. wd. screw, 50	237	8.45	2002.65
WR3/TT3	Steel matting, 4'x8'x1/6", .5" mesh	18	119.95	2159.1