Assignment 1   Jamia Russell

1. How many invoices are there? List the invoice numbers and the invoice dates.

   SQL Code:

```
SELECT COUNT (*) FROM invoice;

SELECT inv_number,
       inv_date,
COUNT(*) AS invoice_count
FROM invoice
GROUP BY inv_number, inv_date;
```

   .

   SQL Code Output:

	count bigint 🔒
1	8

	inv_number [PK] integer ✎	inv_date date ✎	invoice_count bigint 🔒
1	1003	2016-01-16	1
2	1004	2016-01-17	1
3	1006	2016-01-17	1
4	1001	2016-01-16	1
5	1005	2016-01-17	1
6	1007	2016-01-17	1
7	1008	2016-01-17	1
8	1002	2016-01-16	1

2. How many customers are there? List the customer codes and customer names.

   SQL Code:

```
SELECT COUNT (*) FROM customer;

-OR-

SELECT COUNT (*),
 cus_code, cus_fname,cus_lname
 FROM customer
GROUP BY customer.cus_code;
```

SQL Code Output:

	count bigint 🔒
1	10

	count bigint 🔒	cus_code [PK] integer ✏️	cus_fname character varying (15) ✏️	cus_lname character varying (15) ✏️
1	1	10013	Paul	Olowski
2	1	10015	Amy	O'Brian
3	1	10012	Kathy	Smith
4	1	10010	Alfred	Ramas
5	1	10019	Olette	Smith
6	1	10014	Myron	Orlando
7	1	10018	Anne	Farriss
8	1	10016	James	Brown
9	1	10011	Leona	Dunne
10	1	10017	George	Williams

3. List vendor numbers and vendor names for those located in the state of Tennessee.

SQL Code:

```
SELECT v_code,v_name,v_state FROM vendor WHERE v_state = 'TN'
```

SQL Code Output:

	v_code [PK] integer	v_name character varying (35)	v_state character
1	21225	Bryson, Inc.	TN
2	21231	D&E Supply	TN
3	24004	Brackman Bros.	TN
4	24288	ORDVA, Inc.	TN
5	25501	Damal Supplies	TN

4. Find the most expensive product based on price and determine the quantity on hand for that product.

SQL Code:

```
SELECT p_price,p_descript,p_qoh FROM product ORDER BY p_price DESC;
```

SQL Code Output:

	p_price numeric (8,2)	p_descript character varying (35)	p_qoh smallint
1	256.99	Hicut chain saw, 16 in.	11

5. Display the product description, quantity on hand, and price for all products that have a discount greater than 5%.

SQL Code:

```
SELECT p_descript,p_qoh,p_price FROM product WHERE p_discount<=
.05
```

SQL Code Output:

	p_descript *see next page varying (35)	p_qoh smallint	p_price numeric (8,2)	p_discount numeric (4,2)
1	Power painter, 15 psi., 3-nozzle	8	109.99	0.00
2	7.25-in. pwr. saw blade	32	14.99	0.05
3	9.00-in. pwr. saw blade	18	17.49	0.00
4	Hrd. cloth, 1/4-in., 2x50	15	39.95	0.00
5	Hrd. cloth, 1/2-in., 3x50	23	43.99	0.00
6	B&D jigsaw, 12-in. blade	8	109.92	0.05
7	B&D jigsaw, 8-in. blade	6	99.87	0.05
8	B&D cordless drill, 1/2-in.	12	38.95	0.05
9	Sledge hammer, 12 lb.	8	14.40	0.05
10	Rat-tail file, 1/8-in. fine	43	4.99	0.00
11	Hicut chain saw, 16 in.	11	256.99	0.05
12	PVC pipe, 3.5-in., 8-ft	188	5.87	0.00
13	1.25-in. metal screw, 25	172	6.99	0.00
14	2.5-in. wd. screw, 50	237	8.45	0.00

6. Generate a listing of products offered by each vendor. List vendor name, product code and product description. Sort by vendor name and product code.

SQL Code:

```
SELECT p_descript,p_code,v_name FROM product INNER JOIN vendor ON
product.v_code=vendor.v_code ORDER BY v_name,p_code DESC;
```

SQL Code Output:

	p_descript character varying (35)	p_code character varying (10)	v_name character varying (35)
1	1.25-in. metal screw, 25	SM-18277	Bryson, Inc.
2	Claw hammer	23109-HB	Bryson, Inc.
3	7.25-in. pwr. saw blade	13-Q2/P2	Bryson, Inc.
4	Power painter, 15 psi., 3-nozzle	11QER/31	Bryson, Inc.
5	2.5-in. wd. screw, 50	SW-23116	D&E Supply
6	Rat-tail file, 1/8-in. fine	54778-2T	Gomez Bros.
7	9.00-in. pwr. saw blade	14-Q1/L3	Gomez Bros.
8	Hicut chain saw, 16 in.	89-WRE-Q	ORDVA, Inc.
9	B&D jigsaw, 8-in. blade	2232/QWE	ORDVA, Inc.
10	B&D jigsaw, 12-in. blade	2232/QTY	ORDVA, Inc.
11	Hrd. cloth, 1/2-in., 3x50	1558-QW1	Randsets Ltd.
12	Hrd. cloth, 1/4-in., 2x50	1546-QQ2	Randsets Ltd.
13	Steel matting, 4'x8'x1/6", .5" mesh	WR3/TT3	Rubicon Systems
14	B&D cordless drill, 1/2-in.	2238/QPD	Rubicon Systems

7. List the discounted price (rounded to the nearest cent) for each vendor in the state of Georgia. Show the vendor code, product code, product description and discounted price.

SQL Code:

```
SELECT
VENDOR.V_CODE,
```

```
  PRODUCT.P_CODE,
 PRODUCT.P_DESCRIPT,
 ROUND((PRODUCT.P_PRICE-(PRODUCT.P_PRICE * PRODUCT.P_DISCOUNT)),2)
AS DISCOUNTED_PRICE
 FROM
      PRODUCT
  LEFT JOIN
      VENDOR ON PRODUCT.V_CODE = VENDOR.V_CODE
  WHERE
      V_STATE = 'GA';
```

SQL Code Output:

	v_code integer	p_code character varying (10)	p_descript character varying (35)	discounted_price numeric
1	23119	1546-QQ2	Hrd. cloth, 1/4-in., 2x50	39.95
2	23119	1558-QW1	Hrd. cloth, 1/2-in., 3x50	43.99

8. List all vendor names along with their "products on hand" for each product.

SQL Code:

```
SELECT p_descript,p_qoh,v_name FROM product INNER JOIN vendor ON
product.v_code=vendor.v_code
```

-OR-

```
SELECT p_descript,p_qoh,v_name FROM vendor INNER JOIN product ON
product.v_code = vendor.v_code
```

SQL Code Output:
see next page

	p_descript character varying (35)	p_qoh smallint	v_name character varying (35)
1	Power painter, 15 psi., 3-nozzle	8	Bryson, Inc.
2	7.25-in. pwr. saw blade	32	Bryson, Inc.
3	9.00-in. pwr. saw blade	18	Gomez Bros.
4	Hrd. cloth, 1/4-in., 2x50	15	Randsets Ltd.
5	Hrd. cloth, 1/2-in., 3x50	23	Randsets Ltd.
6	B&D jigsaw, 12-in. blade	8	ORDVA, Inc.
7	B&D jigsaw, 8-in. blade	6	ORDVA, Inc.
8	B&D cordless drill, 1/2-in.	12	Rubicon Systems
9	Claw hammer	23	Bryson, Inc.
10	Rat-tail file, 1/8-in. fine	43	Gomez Bros.
11	Hicut chain saw, 16 in.	11	ORDVA, Inc.
12	1.25-in. metal screw, 25	172	Bryson, Inc.
13	2.5-in. wd. screw, 50	237	D&E Supply
14	Steel matting, 4'x8'x1/6", .5" mesh	18	Rubicon Systems

9. Generate a list of customer purchases, including the total price for each invoice line item; sort the output by customer code, invoice number, and line number. List the total amount spent by each customer who made purchases during the current invoice cycle—that is, for the customers who appear in the INVOICE table; sort by customer code.

SQL Code:

```
SELECT
INVOICE.CUS_CODE, INVOICE.INV_NUMBER, INVOICE.INV_DATE,
PRODUCT.P_DESCRIPT, LINE.LINE_UNITS AS "TOTAL", LINE.LINE_PRICE AS
"PRICE"

FROM INVOICE

JOIN CUSTOMER ON
INVOICE.CUS_CODE=CUSTOMER.CUS_CODE

JOIN LINE ON
INVOICE.INV_NUMBER=LINE.INV_NUMBER

JOIN PRODUCT ON
LINE.P_CODE=PRODUCT.P_CODE
```

```
ORDER BY CUS_CODE, INV_NUMBER, P_DESCRIPT
```

SQL Code Output:

	cus_code integer	inv_number integer	inv_date date	p_descript character varying (35)	"total" numeric (9,2)	"price" numeric (9,2)
1	10011	1002	2016-01-16	Rat-tail file, 1/8-in. fine	2.00	4.99
2	10011	1004	2016-01-17	Claw hammer	2.00	9.95
3	10011	1004	2016-01-17	Rat-tail file, 1/8-in. fine	3.00	4.99
4	10011	1008	2016-01-17	Claw hammer	1.00	9.95
5	10011	1008	2016-01-17	PVC pipe, 3.5-in., 8-ft	5.00	5.87
6	10011	1008	2016-01-17	Steel matting, 4'x8'x1/6", .5" mesh	3.00	119.95
7	10012	1003	2016-01-16	7.25-in. pwr. saw blade	5.00	14.99
8	10012	1003	2016-01-16	B&D cordless drill, 1/2-in.	1.00	38.95
9	10012	1003	2016-01-16	Hrd. cloth, 1/4-in., 2x50	1.00	39.95
10	10014	1001	2016-01-16	7.25-in. pwr. saw blade	1.00	14.99
11	10014	1001	2016-01-16	Claw hammer	1.00	9.95
12	10014	1006	2016-01-17	1.25-in. metal screw, 25	3.00	6.99
13	10014	1006	2016-01-17	B&D jigsaw, 12-in. blade	1.00	109.92
14	10014	1006	2016-01-17	Claw hammer	1.00	9.95
15	10014	1006	2016-01-17	Hicut chain saw, 16 in.	1.00	256.99
16	10015	1007	2016-01-17	7.25-in. pwr. saw blade	2.00	14.99
17	10015	1007	2016-01-17	Rat-tail file, 1/8-in. fine	1.00	4.99
18	10018	1005	2016-01-17	PVC pipe, 3.5-in., 8-ft	12.00	5.87

10. Find a listing of customers who did not make purchases during the invoicing period; sort by customer code.

SQL Code:

```
SELECT customer.cus_code, customer.cus_balance
  FROM customer
  WHERE NOT EXISTS (SELECT * FROM invoice WHERE
      invoice.cus_code=customer.cus_code)
```

SQL Code Output:

	cus_code [PK] integer	cus_balance numeric (9,2)
1	10010	0.00
2	10013	536.75
3	10016	221.19
4	10017	768.93
5	10019	0.00