

```

SQL>
SQL> --Anup Tiwari
SQL> --INSY-3304-001
SQL> --Project 3
SQL>
SQL> --Part I
SQL>
SQL> SET LINESIZE 150
SQL>
SQL> --Formatting column heading (varchar and char columns only)
SQL>
SQL> COLUMN DeptName FORMAT a12
SQL> COLUMN CommClass FORMAT a12
SQL> COLUMN SalesRepFName FORMAT a17
SQL> COLUMN SalesRepLName FORMAT a17
SQL> COLUMN CustID FORMAT a12
SQL> COLUMN "Cust ID" FORMAT a7
SQL> COLUMN CustFName FORMAT a14
SQL> COLUMN CustLName FORMAT a14
SQL> COLUMN ProdName FORMAT a12
SQL> COLUMN OrderDate FORMAT a10
SQL> COLUMN "Order Date" FORMAT a10
SQL> COLUMN "SalesRepFirstName" FORMAT a17
SQL> COLUMN "SalesRepLastName" FORMAT a17
SQL>
SQL>
SQL> -- #4 Add new Customer
SQL> INSERT into CUSTOMER_AT
  2  VALUES ('T104','Wes','Thomas','4695551215',22);

1 row created.

SQL>
SQL> -- #5 Add new Product
SQL> INSERT into PRODUCT_AT
  2  VALUES (246,'Milwaukee Power Drill',2,179);

1 row created.

SQL>
SQL> -- #6 Add new Order
SQL> INSERT INTO ORDER_AT
  2  VALUES ((SELECT MAX (OrderID) + 1) FROM ORDER_AT), '28-JAN-2022', 'T104')
  3
SQL>
SQL>
SQL> INSERT INTO ORDERDETAIL_AT
  2  VALUES ((SELECT MAX (OrderID) FROM ORDER_AT), 618, 1, (SELECT ProdPrice FROM
PRODUCT_AT WHERE ProdID = 618));

```

1 row created.

SQL>

SQL>

SQL>

```
SQL> INSERT INTO ORDERDETAIL_AT
  2 VALUES ((SELECT MAX (OrderID) FROM ORDER_AT), 407, 2, (SELECT ProdPrice FROM
PRODUCT_AT WHERE ProdID = 407));
```

1 row created.

SQL>

SQL>

SQL>

```
SQL> INSERT INTO ORDERDETAIL_AT
  2 VALUES ((SELECT MAX (OrderID) FROM ORDER_AT), 124, 1, (SELECT ProdPrice FROM
PRODUCT_AT WHERE ProdID = 124));
```

1 row created.

SQL>

SQL> -- #7

```
SQL> INSERT INTO ORDER_AT
  2 VALUES ((SELECT MAX (OrderID) + 1) FROM ORDER_AT), '29-JAN-2022', 'S100')
  3
```

SQL>

SQL>

```
SQL> INSERT INTO ORDERDETAIL_AT
  2 VALUES ((SELECT MAX (OrderID) FROM ORDER_AT), 535, 3, (SELECT ProdPrice FROM
PRODUCT_AT WHERE ProdID = 535));
```

1 row created.

SQL>

SQL>

SQL>

```
SQL> INSERT INTO ORDERDETAIL_AT
  2 VALUES ((SELECT MAX (OrderID) FROM ORDER_AT), 246, 1, (SELECT ProdPrice FROM
PRODUCT_AT WHERE ProdID = 246));
```

1 row created.

SQL>

SQL>

SQL>

```
SQL> INSERT INTO ORDERDETAIL_AT
  2 VALUES ((SELECT MAX (OrderID) FROM ORDER_AT), 610, 2, (SELECT ProdPrice FROM
PRODUCT_AT WHERE ProdID = 610));
```

1 row created.

```
SQL>
SQL> -- #8 Change phone number for Customer B200
SQL> UPDATE CUSTOMER_AT
  2 SET CustPhone = '8175558918'
  3 WHERE CustID = 'B200';
```

1 row updated.

```
SQL>
SQL> COMMIT;
```

Commit complete.

```
SQL>
SQL> --Part II
SQL>
SQL> --1.
SQL> SELECT (SalesRepFName || ' ' || SalesRepLName) AS "SalesRep Name", SalesRepID
AS "Sales Rep ID", S.CommClass AS "Commission Class", CommRate AS "Commission Rate"
  2 FROM SALESREP_AT S, COMMISSION_AT C
  3 WHERE S.CommClass = C.CommClass
  4 ORDER BY SalesRepLName;
```

SalesRep Name	Sales Rep ID	C	Commission Rate
Sara Day	14	Z	0
Bob Jackson	20	B	.08
Alice Jones	10	A	.1
Micah Moore	22	Z	0
Kay Price	8	C	.05
Greg Taylor	12	B	.08

6 rows selected.

```
SQL>
SQL> --2.
SQL>
SQL> SELECT OrderID AS "ORDER ID", ProdID AS "Product ID", ProdQty AS "Qty",
TO_CHAR(ProdPrice,$999.99) AS "Price"
  2 FROM ORDERDETAIL_AT
  3 ORDER BY OrderID,ProdID;
```

ORDER ID	Product ID	Qty	Price
100	121	2	\$8.00
100	228	1	\$65.00
100	407	1	\$4.25
100	480	2	\$3.00
101	610	200	\$1.75
101	618	100	\$1.25
102	121	1	\$7.00
102	380	2	\$1.25
102	535	4	\$7.50
103	121	50	\$7.00
103	123	20	\$6.25

ORDER ID	Product ID	Qty	Price
104	229	1	\$50.00
104	380	2	\$1.25
104	535	4	\$7.50
104	610	200	\$1.75
105	123	40	\$5.00
105	610	200	\$1.75
106	124	1	\$6.50
107	229	1	\$59.00
108	235	1	\$62.00

108	407	1	\$5.25
108	618	2	\$2.15

ORDER ID	Product ID	Qty	Price
109	121	1	\$8.25
109	124	1	\$6.50
109	246	1	\$179.00
109	407	2	\$4.25
109	480	1	\$3.75
109	535	3	\$7.50
109	610	2	\$1.75
109	618	1	\$1.25

30 rows selected.

SQL>

SQL> --3.

```
SQL> SELECT CustID, CustFName AS "CustFirstName", CustLName AS "CustLastName", ('('
|| SUBSTR(CustPhone,1,3) || ')') || SUBSTR(CustPhone,4,3) || '-' ||
SUBSTR(CustPhone,7,4)), S.SalesRepID, SalesRepFName AS "SalesRepFirstName",
SalesRepLName AS "SalesRepLastName"
  2 FROM CUSTOMER_AT CU , SALESREP_AT S
  3 WHERE CU.SalesRepID = S.SalesRepID
  4 ORDER BY CustID ASC;
```

CUSTID	CustFirstName	CustLastName	('(' SUBSTR(CUSTPHONE,1,3) ') ' SUBSTR(CU SALESREPID SalesRepFirstName SalesRepLastName
--------	---------------	--------------	---

A120	Jane	Adams	(817)555-3434
	12 Greg	Taylor	
B200	Ann	Brown	(817)555-8918
	8 Kay	Price	
G070	Kate	Green	(817)555-1034
	20 Bob	Jackson	

G119	Amanda	Green	(NUL)L -
	14 Sara	Day	
J090	Tim	Jones	(NUL)L -
	14 Sara	Day	
S100	John	Smith	(214)555-1212
	10 Alice	Jones	
S120	Nicole	Sims	(NUL)L -
	22 Micah	Moore	
T104	Wes	Thomas	(469)555-1215
	22 Micah	Moore	

8 rows selected.

SQL>

SQL>

SQL> --4.

SQL>

```
SQL> SELECT DE.DeptID AS "Dept_ID", DE.DeptName AS "Dept_Name", SR.SalesRepID AS
"Sales_Rep_ID",
  2  SR.SalesRepFName AS "First_Name", SR.SalesRepLName AS "Last_Name",
  3  SR.CommClass AS "Commission_Class", C.CommRate AS "Commission_Rate"
  4  FROM DEPARTMENT_snb DE, SALESREP_snb SR, COMMISSION_snb C
  5  WHERE C.CommClass = SR.CommClass AND
  6  DE.DeptID = SR.DeptID AND
  7  (DE.DeptID, CommRate) IN
  8  (SELECT DeptID, MAX(CommRate)
  9   FROM SALESREP_snb
 10  GROUP BY DeptID);
FROM DEPARTMENT_snb DE, SALESREP_snb SR, COMMISSION_snb C
*
```

ERROR at line 4:

ORA-00942: table or view does not exist

SQL>

SQL> --5.

SQL>

```
SQL> SELECT OD.ProdID AS "Product_ID", PR.ProdName AS "Product_Name", PR.ProdCatID
AS "Category",
  2  TO_CHAR(PR.ProdPrice, '$999.99' ) AS "Price"
  3  FROM PRODUCT_AT PR, ORDER_AT O, ORDERDETAIL_AT OD
  4  WHERE PR.ProdID = OD.ProdID AND
  5         O.OrderID = OD.OrderID AND
  6         O.OrderID = 100 AND
  7         PR.ProdPrice = (SELECT MAX(ProdPrice)
  8         FROM ORDERDETAIL_AT OD
  9         WHERE OrderID = 100);
```

Product_ID Product_Name

Category Price

```
-----
```

228 Makita Power Drill	2	\$65.00
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```
SQL>
SQL>
SQL> --6.
SQL>
SQL> SELECT DeptName AS "Dept_Name", COUNT(SalesRepID) AS "Sales_Rep_Count"
  2 FROM DEPARTMENT_AT, SALESREP_AT
  3      GROUP BY DeptName
  4      ORDER BY "Sales_Rep_Count" ASC;
```

Dept_Name	Sales_Rep_Count
-----------	-----------------

```
-----
```

Corp Sales	6
Web Sales	6
Store Sales	6

```
SQL>
SQL> --7.
SQL>
SQL> SELECT SalesRepID AS "Sales_Rep_ID", SalesRepFName AS "First_Name",
SalesRepLName AS "Last_Name", (CommRate*100) || '%' AS "Commission_Rate"
  2 FROM SALESREP_AT S, COMMISSION_AT C
  3 WHERE S.CommClass = C.CommClass AND
  4 (SalesRepID) IN
  5 (SELECT SalesRepID FROM SALESREP_AT S, COMMISSION_AT C WHERE S.CommClass =
C.CommClass AND CommRate <= .05 AND CommRate <> 0 GROUP BY SalesRepID)
  6 ORDER BY CommRate DESC;
```

Sales_Rep_ID	First_Name	Last_Name	Commission_Rate
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```
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-----
```

8 Kay	Price	5%
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```
SQL>
SQL>
SQL> --8.
SQL> SELECT O.OrderID, TO_CHAR(O.OrderDate, 'mm/dd/yy') AS "OrderDate", C.CustFName,
C.CustLName, S.SalesRepID, S.SalesRepFName, S.SalesRepLName
```

```

2 FROM ORDER_AT O, CUSTOMER_AT C, SALESREP_AT S
3 WHERE O.CustID = C.CustID AND
4 C.SalesRepID = S.SalesRepID
5 ORDER BY OrderID;

```

ORDERID	OrderDate	CUSTFNAME	CUSTLNAME	SALESREPID	SALESREPFNAME	
100	01/24/22	John	Smith	10	Alice	
Jones						
101	01/25/22	Jane	Adams	12	Greg	
Taylor						
102	01/25/22	Tim	Jones	14	Sara	Day
103	01/26/22	Ann	Brown	8	Kay	
Price						
104	01/26/22	John	Smith	10	Alice	
Jones						
105	01/26/22	Ann	Brown	8	Kay	
Price						
106	01/27/22	Kate	Green	20	Bob	
Jackson						
107	01/27/22	Tim	Jones	14	Sara	Day
108	01/28/22	Nicole	Sims	22	Micah	
Moore						
109	01/28/22	Amanda	Green	14	Sara	Day

10 rows selected.

```

SQL>
SQL> --9.
SQL>
SQL> SELECT O.OrderID, P.ProdID, P.ProdName, P.ProdCatID AS "CatID",
2 O.ProdPrice AS "Price", O.ProdQty AS "Qty", (O.ProdPrice*O.ProdQty) AS
"ExtPrice"
3 FROM ORDERDETAIL_AT O, PRODUCT_AT P
4 WHERE O.ProdID = P.ProdID AND
5 OrderID = 104
6 ORDER BY "ExtPrice";

```

ORDERID	PRODID	PRODNAME	CatID	Price	Qty	ExtPrice
104	380	Acme Yard St	3	1.25	2	2.5

ick

104	535 Schlage Door	5	7.5	4	30
	Knob				

104	229 BD Power Dri	2	50	1	50
	11				

104	610 3M Duct Tape	6	1.75	200	350
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SQL>

SQL> --10.

SQL>

```
SQL> SELECT D.DeptID AS "DeptID", DeptName AS "DeptName", COUNT(SalesRepID) AS
"SalesRepCount", (AVG(CommRate)*100) || '%' AS "AvgCommRate"
  2 FROM DEPARTMENT_AT D, COMMISSION_AT C, SALESREP_AT S
  3 WHERE D.DeptID = S.DeptID AND
  4 C.CommClass = S.CommClass
  5 GROUP BY D.DeptID, DeptName
  6 ORDER BY "AvgCommRate" ASC;
```

DeptID	DeptName	SalesRepCount	AvgCommRate
--------	----------	---------------	-------------

16	Web Sales	1	0%
10	Store Sales	3	6%
14	Corp Sales	2	6.5%

SQL>

SQL> --11.

```
SQL> SELECT SalesRepID, SalesRepFName, SalesRepLName, DeptName, C.CommClass, CommRate
  2 FROM SALESREP_AT S, COMMISSION_AT C, DEPARTMENT_AT
  3 WHERE C.CommClass = S.CommClass
  4 AND CommRate > 0
  5 ORDER BY S.SalesRepID;
```

SALESREPID	SALESREPFNAME	SALESREPLNAME	DEPTNAME	COMMCLASS	COMMRATE
------------	---------------	---------------	----------	-----------	----------

8 Kay	Price	Corp Sales	C		.05
8 Kay	Price	Store Sales	C		.05
8 Kay	Price	Web Sales	C		.05
10 Alice	Jones	Web Sales	A		.1
10 Alice	Jones	Store Sales	A		.1
10 Alice	Jones	Corp Sales	A		.1
12 Greg	Taylor	Corp Sales	B		.08
12 Greg	Taylor	Store Sales	B		.08
12 Greg	Taylor	Web Sales	B		.08
20 Bob	Jackson	Store Sales	B		.08
20 Bob	Jackson	Corp Sales	B		.08

SALESREPID	SALESREPFNAME	SALESREPLNAME	DEPTNAME	COMMCLASS	COMMRATE

20 Bob	Jackson	Web Sales	B		.08

12 rows selected.

SQL>

SQL>

SQL> --12.

```
SQL> SELECT SalesRepID, (SalesRepFName || ' ' || SalesRepLName) AS
"SalesRep_Name", D.DeptID, DeptName
  2 FROM SALESREP_AT S, DEPARTMENT_AT D
  3 WHERE S.DeptID = D.DeptID AND CommClass = 'A'
  4 ORDER BY D.DeptID, SalesRepID;
```

SALESREPID SalesRep_Name

DEPTID DEPTNAME

-----		-----	
10 Alice Jones		10 Store Sales	

```

SQL>
SQL> --13.
SQL>
SQL> SELECT OrderID AS "Order_ID", TO_CHAR(SUM(ProdPrice * ProdQty), '$999.99') AS
"Order_Total"
  2  FROM ORDERDETAIL_AT O
  3  WHERE OrderID = 104
  4  GROUP BY OrderID;

```

Order_ID	Order_To
----------	----------

104	\$432.50
-----	----------

```

SQL>
SQL> --14.
SQL> SELECT TO_CHAR((SUM(ProdPrice)/COUNT(ProdID)), '$999.99') AS "Avg_Price"
  2  FROM ORDERDETAIL_AT;

```

Avg_Pric

\$17.56

```

SQL>
SQL> --15.
SQL> SELECT P.ProdID AS "ProductID", P.ProdName AS "Name", TO_CHAR(P.ProdPrice,
'$999.99') AS "Price"
  2  FROM PRODUCT_At P, ORDERDETAIL_AT O
  3  WHERE P.ProdID = O.ProdID
  4  GROUP BY P.ProdID, P.ProdName, P.ProdPrice
  5  HAVING COUNT(O.OrderID) = (
  6  SELECT MAX(ProdCount) FROM (
  7  SELECT COUNT(OrderID) AS ProdCount, ProdID
  8  FROM ORDERDETAIL_AT
  9  GROUP BY ProdID));

```

ProductID	Name	Price
-----------	------	-------

121	BD Hammer	\$8.00
-----	-----------	--------

610	3M Duct Tape	\$1.75
-----	--------------	--------

```

SQL>
SQL>
SQL>
SQL> --16.
SQL>
SQL> SELECT ProdCatID AS "Cat_ID", ProdID AS "Prod_ID", ProdName AS "Prod_Name",
TO_CHAR(ProdPrice, '$999.99') AS " Price"
  2 FROM PRODUCT_AT
  3 WHERE (ProdCatID, ProdPrice) IN
  4 (SELECT ProdCatID, MIN(ProdPrice)
  5 FROM PRODUCT_AT
  6 GROUP BY ProdCatID);

```

Cat_ID	Prod_ID	Prod_Name	Price
1	123	Acme Pry Bar	\$5.00
2	229	BD Power Drill	\$50.00
3	380	Acme Yard Stick	\$1.25
4	480	1# BD Screws	\$3.00
5	535	Schlage Door Knob	\$7.50
6	618	3M Masking Tape	\$1.25

6 rows selected.

```

SQL>
SQL> --17.
SQL> SELECT ProdID, ProdName, ProdCatName, TO_CHAR(ProdPrice, '$999.99') AS
"ProdPrice"
  2 FROM PRODUCT_AT P, PRODCAT_AT PC
  3 WHERE P.ProdCatID = PC.ProdCatID AND
  4 ProdPrice > (SELECT AVG(ProdPrice) FROM PRODUCT_AT);

```

PRODID	PRODNAME	PRODCATNAME	ProdPric
228	Makita Power Tools		\$65.00
	Drill		

229 BD Power Dri Power Tools \$50.00

11

235 Makita Power Power Tools \$65.00

Drill

246 Milwaukee Po Power Tools \$179.00

wer Drill

PRODID	PRODNAME	PRODCATNAME	ProdPric
--------	----------	-------------	----------

```
SQL>
SQL>
SQL>
SQL> --18.
SQL>
SQL> SELECT OrderID AS "Order ID", TO_CHAR(OrderDate, 'mm-dd-yyyy') AS "Order Date",
C.CustID AS "Cust ID", (CustFName || ' ' || CustLName) AS "Name", CustPhone AS
"Phone"
  2 FROM CUSTOMER_AT C, ORDER_AT O
  3 WHERE C.CustID = O.CustID AND
  4 OrderDate <= DATE '2022-01-26'
  5 ORDER BY OrderDate, C.CustID;
```

Order ID	Order Date	Cust ID	Name	Phone
----------	------------	---------	------	-------

100	01-24-2022	S100	John Smith	2145551212
-----	------------	------	------------	------------

101	01-25-2022	A120	Jane Adams	8175553434
-----	------------	------	------------	------------

102	01-25-2022	J090	Tim Jones	NULL
-----	------------	------	-----------	------

105	01-26-2022	B200	Ann Brown	8175558918
-----	------------	------	-----------	------------

103	01-26-2022	B200	Ann Brown	8175558918
-----	------------	------	-----------	------------

6 rows selected.

SQL>

SQL>

SQL> --19.

SQL> SELECT CustID, CustFName AS "FirstName", CustLName AS "LastName"

2 FROM CUSTOMER_AT

3 WHERE CustFName LIKE '%A'

4 ORDER BY CustLName;

no rows selected

SQL>

SQL> --20.

SQL> SELECT CustID AS "Customer ID" ,(CustFName || ' ' || CustLName) AS "Name" ,

2 SUBSTR(CustPhone,1,3) || '-' || SUBSTR(CustPhone,4,3) || '-' ||

SUBSTR(CustPhone,7,4) as "Phone"

3 FROM CUSTOMER_AT

4 WHERE SalesRepID = 12;

Custo Name

Phone

A120 Jane Adams

817-555-3434

SQL>

SQL>

SQL>

SQL>

SQL>

SQL> --Turn off Logging

SQL> spool off