#######################2-1A,B,C,D#######################

SQL> list

1 Create Table Cust

2\* (customer NUMBER(3))

SQL> /

Table created.

SQL> ;

1 INSERT INTO

2 Cust

3 VALUES

4\* (150)

SQL> /

1 row created.

SQL> ALTER TABLE Cust

2 ADD address VARCHAR2(20);

Table altered.

SQL> UPDATE Cust

2 SET address = '101 1st st';

1 row updated.

SQL> ALTER TABLE Cust

2 ADD balance NUMBER(5);

Table altered.

SQL> UPDATE Cust

2 SET balance = 1500;

1 row updated.

SQL> INSERT INTO Cust (customer, address, balance)

2 VALUES (102, '202 2nd Ave', 1300);

1 row created.

SQL> INSERT INTO Cust (customer, address, balance)

2 VALUES (103, '410 3rd Ave', 1200);

1 row created.

SQL> INSERT INTO Cust (customer, address, balance)

2 VALUES (104, '305 4th Ave', 1000);

1 row created.

SQL> INSERT INTO Cust (customer, address, balance)

2 VALUES (105, '404 3rd St', 900);

1 row created.

SQL> SELECT \*

2 FROM Cust;

CUSTOMER ADDRESS BALANCE

---------- ------------------------------------------------------------ ----------

101 101 1st st 1500

102 202 2nd Ave 1300

103 410 3rd Ave 1200

104 305 4th Ave 1000

105 404 3rd St 900

####################################2-2#####################################

SQL> SELECT \*

2 FROM Cust

3 ORDER BY balance DESC;

CUSTOMER ADDRESS BALANCE

---------- ------------------------------------------------------------ ----------

101 101 1st st 1500

102 202 2nd Ave 1300

103 410 3rd Ave 1200

104 305 4th Ave 1000

105 404 3rd St 900

#####################################2-3####################################

SQL> SELECT sname, class, major

2 FROM Stu

3 WHERE class<=2

4 ORDER BY class DESC;

SNAME CLASS MAJOR

------------------------------------------------------------ ---------- ------------

Brenda 2 COSC

Sebastian 2 ACCT

Smithly 2 ENGL

Alan 2 COSC

Cedric 2 ENGL

Jessica 2 POLY

Sadie 2 MATH

21 rows selected.

################################2-4###########################################

SQL> SELECT balance

2 FROM Cust

3 WHERE balance<=1200;

BALANCE

----------

1200

1000

900

##################################2-5A-J###########################################

SQL> CREATE TABLE Cust1

2 (cnum NUMBER(3),

3 bal NUMBER(5));

Table created.

SQL> INSERT INTO Cust1

2 SELECT customer, balance

3 FROM Cust

4 WHERE customer<105;

4 rows created.

SQL> SELECT \* FROM Cust1;

CNUM BAL

---------- ----------

101 1500

102 1300

103 1200

104 1000

SQL> COMMIT;

Commit complete.

SQL> DELETE FROM Cust1

2 WHERE bal<1300;

2 rows deleted.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL

---------- ----------

101 1500

102 1300

SQL> ROLLBACK;

Rollback complete.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL

---------- ----------

101 1500

102 1300

103 1200

104 1000

SQL> DELETE FROM Cust1

2 WHERE cnum=104;

1 row deleted.

SQL> SAVEPOINT point1;

Savepoint created.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL

---------- ----------

101 1500

102 1300

103 1200

SQL> DELETE FROM Cust1

2 WHERE cnum=103;

1 row deleted.

SQL> SAVEPOINT point2;

Savepoint created.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL

---------- ----------

101 1500

102 1300

SQL> ROLLBACK TO SAVEPOINT point1;

Rollback complete.

::::THE DATA HAS BEEN RESTORED TO SAVEPOINT1::::

SQL> ROLLBACK TO SAVEPOINT point2;

ROLLBACK TO SAVEPOINT point2

\*

ERROR at line 1:

ORA-01086: savepoint 'POINT2' never established in this session or is invalid

::::BECAUSE THE SYSTEM HAS BEEN ROLLEDBACK TO POINT1, POINT2 DOES NOT EXIST BECAUSE IT WAS ESTABLISHED AFTER POINT1::::::

##############################2-6A-I#######################

SQL> COMMIT;

Commit complete.

SQL> ALTER TABLE Cust1

2 ADD date\_opened DATE;

Table altered.

SQL> UPDATE Cust1

2 SET date\_opened='01-JAN-09';

3 rows updated.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 01-JAN-09

102 1300 01-JAN-09

103 1200 01-JAN-09

SQL> COMMIT;

Commit complete.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 01-JAN-09

102 1300 01-JAN-09

103 1200 01-JAN-09

SQL> UPDATE Cust1

2 SET bal=0;

3 rows updated.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 0 01-JAN-09

102 0 01-JAN-09

103 0 01-JAN-09

SQL> ROLLBACK;

Rollback complete.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 01-JAN-09

102 1300 01-JAN-09

103 1200 01-JAN-09

SQL> UPDATE Cust1

2 SET date\_opened='21-OCT-10'

3 WHERE cnum=102;

1 row updated.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 01-JAN-09

102 1300 21-OCT-10

103 1200 01-JAN-09

SQL> DESC Cust1;

Name Null? Type

----------------------------------------------------------------------------------- -------- --------------------------------------------------------

CNUM NUMBER(3)

BAL NUMBER(5)

DATE\_OPENED DATE

SQL> COMMIT;

Commit complete.

SQL> ALTER TABLE Cust1

2 MODIFY bal NUMBER(8,2);

Table altered.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 01-JAN-09

102 1300 21-OCT-10

103 1200 01-JAN-09

SQL> UPDATE Cust1

2 SET bal=888.88

3 WHERE cnum=102;

1 row updated.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 01-JAN-09

102 888.88 21-OCT-10

103 1200 01-JAN-09

SQL> COMMIT;

Commit complete.

SQL> DESC Cust1;

Name Null? Type

----------------------------------------------------------------------------------- -------- --------------------------------------------------------

CNUM NUMBER(3)

BAL NUMBER(8,2)

DATE\_OPENED DATE

SQL> ALTER TABLE Cust1

2 MODIFY bal NUMBER(3,2);

MODIFY bal NUMBER(3,2)

\*

ERROR at line 2:

ORA-01440: column to be modified must be empty to decrease precision or scale

::::bal CANNOT BE CHANGED TO A SMALLER SCALE BECAUSE IT WOULD RESULT IN LOST DATA::::::::

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 01-JAN-09

102 888.88 21-OCT-10

103 1200 01-JAN-09

SQL> UPDATE Cust1

2 SET date\_opened=SYSDATE;

3 rows updated.

SQL> SELECT \*

2 FROM Cust1;

CNUM BAL DATE\_OPENED

---------- ---------- ---------------

101 1500 27-MAY-15

102 888.88 27-MAY-15

103 1200 27-MAY-15

SQL> COMMIT;

Commit complete.

SQL> DROP TABLE Cust1;

Table dropped.

SQL> SELECT \*

2 FROM TAB;

TNAME TABTYPE CLUSTERID

------------------------------------------------------------------------------------------ --------------------- ----------

STU SYNONYM

SEC SYNONYM

RM SYNONYM

PRQ SYNONYM

GRREP SYNONYM

DEPTOM SYNONYM

D2M SYNONYM

CUST TABLE

COU SYNONYM

13 rows selected.

#################################2-7#################################

SQL> SELECT sname, major, class

2 FROM Stu

3 WHERE major='ART'

4 AND class=3;

SNAME MAJOR CLASS

------------------------------------------------------------ ------------ ----------

Gus ART 3

#################################2-8#################################

SQL> SELECT sname, major, class

2 FROM Stu

3 WHERE major='ART'

4 OR class=3;

SNAME MAJOR CLASS

------------------------------------------------------------ ------------ ----------

Susan ENGL 3

Monica MATH 3

Phoebe ENGL 3

Rachel ENGL 3

Cramer ENGL 3

Losmith CHEM 3

Gus ART 3

7 rows selected.

#########################################2-9############################

SQL> SELECT sname, major, class

2 FROM Stu

3 WHERE class

4 BETWEEN 2 AND 4;

SNAME MAJOR CLASS

------------------------------------------------------------ ------------ ----------

Mary COSC 4

Brenda COSC 2

Kelly MATH 4

Reva MATH 2

Harley POLY 2

Donald ACCT 4

Chris ACCT 4

Susan ENGL 3

Monica MATH 3

Phoebe ENGL 3

Holly POLY 4

27 rows selected.