##############################6-1###################

SQL> CREATE TABLE Table1

2 (A CHAR(2),

3 B CHAR(2));

Table created.

SQL> CREATE TABLE Table2

2 (A CHAR(2),

3 B CHAR(2),

4 C VARCHAR2(2),

5 D VARCHAR2(3));

Table created.

SQL> INSERT INTO Table1 (A, B)

2 VALUES ('x1', 'y1');

1 row created.

SQL> INSERT INTO Table1 (A, B)

2 VALUES ('r1', 's1');

1 row created.

SQL> INSERT INTO Table2 (A, B, C, D)

2 VALUES ('x2', 'y2', 'z2', 'w2');

1 row created.

SQL> INSERT INTO Table2 (A, B, C, D)

2 VALUES ('r2', 's2', 'T2', 'u2');

1 row created.

SQL> SELECT \* FROM Table1;

A B

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

x1 y1

r1 s1

SQL> SELECT \* FROM Table2;

A B C D

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

x2 y2 z2 w2

r2 s2 T2 u2

SQL> SELECT \* FROM Table1 UNION SELECT \* FROM Table2;

SELECT \* FROM Table1 UNION SELECT \* FROM Table2

\*

ERROR at line 1:

ORA-01789: query block has incorrect number of result columns

SQL> SELECT \* FROM Table1 UNION SELECT A,B FROM Table2;

A B

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

r1 s1

r2 s2

x1 y1

x2 y2

SQL> SELECT \* FROM Table1 UNION SELECT B,A FROM Table2;

A B

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

r1 s1

s2 r2

x1 y1

y2 x2

SQL> SELECT \* FROM Table1 UNION SELECT A,C FROM Table2;

A B

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

r1 s1

r2 T2

x1 y1

x2 z2

SQL> SELECT \* FROM Table1 UNION SELECT A,D FROM Table2;

A B

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

r1 s1

r2 u2

x1 y1

x2 w2

SQL> CREATE OR REPLACE VIEW viewx AS

2 SELECT A,B FROM Table2;

View created.

SQL> SELECT \* FROM Table1 UNION SELECT \* FROM viewx;

A B

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

r1 s1

r2 s2

x1 y1

x2 y2

#############################6-2######################

SQL> l

1 SELECT s.sname, s.class, c.course\_num

2 FROM Stu s, Grrep g, Sec c

3 WHERE s.stno(+)=g.student\_number

4 AND (g.section\_id=c.section\_id AND c.course\_num LIKE 'COSC%')

5\* AND (g.grade='A' OR g.grade='B')

SNAME CLASS COURSE\_NUM

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

Mary 4 COSC3380

Chris 4 COSC3380

Lynette 1 COSC3380

Hillary 1 COSC3380

Phoebe 3 COSC3380

Holly 4 COSC3380

Cedric 2 COSC3380

George 1 COSC3380

Jerry 4 COSC3380

Cramer 3 COSC3380

Fraiser 1 COSC3380

SNAME CLASS COURSE\_NUM

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

Francis 4 COSC3380

Lindsay 1 COSC3380

Stephanie COSC3380

Lujack 1 COSC3701

Mary 4 COSC3701

Brenda 2 COSC1310

Reva 2 COSC1310

Mary 4 COSC1310

Lynette 1 COSC1310

Susan 3 COSC1310

Holly 4 COSC1310

SNAME CLASS COURSE\_NUM

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

Steve 1 COSC1310

Sadie 2 COSC1310

Jessica 2 COSC1310

Chris 4 COSC2025

Mary 4 COSC2025

Brenda 2 COSC3320

Harley 2 COSC3320

Lujack 1 COSC3320

Reva 2 COSC3320

Lineas 1 COSC3320

Reva 2 COSC1310

SNAME CLASS COURSE\_NUM

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

Lujack 1 COSC1310

Lineas 1 COSC1310

35 rows selected.

SQL> l

1 SELECT s.sname, s.class, c.course\_num

2 FROM Stu s, Grrep g, Sec c

3 WHERE s.stno(+)=g.student\_number

4 AND (g.section\_id=c.section\_id AND c.course\_num LIKE 'COSC%')

5 AND (g.grade='A' OR g.grade='B')

6\*

SQL> SAVE Q62;

Created file Q62.sql

######################################6-3############################

SQL> l

1 SELECT s.sname, g.grade, c.course\_num

2 FROM Stu s, Grrep g, Sec c

3 WHERE s.stno(+)=g.student\_number

4 AND c.section\_id=g.section\_id

5 AND (c.course\_num LIKE 'COSC%' AND g.grade='A')

6 UNION

7 SELECT s.sname, g.grade, c.course\_num

8 FROM Stu s, Grrep g, Sec c

9 WHERE s.stno(+)=g.student\_number

10 AND c.section\_id=g.section\_id

11\* AND (c.course\_num LIKE 'MATH%' AND g.grade='A')

SNAME GRA COURSE\_NUM

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

Brenda A COSC1310

Brenda A MATH2410

Cedric A COSC3380

Holly A COSC1310

Jerry A COSC3380

Jessica A COSC1310

Lujack A COSC3701

Lynette A COSC1310

Mary A MATH2410

Sadie A COSC1310

Steve A COSC1310

SNAME GRA COURSE\_NUM

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

Susan A COSC1310

12 rows selected.

####################################6-4################################

SQL> SELECT s.sname, s.major

2 FROM Stu s, Grrep g

3 WHERE s.stno(+)=g.student\_number

4 AND g.grade IN ('C');

SNAME MAJOR

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

Brenda COSC

Brenda COSC

Richard ENGL

Richard ENGL

Reva MATH

Donald ACCT

Susan ENGL

Susan ENGL

Monica MATH

Monica MATH

Bill POLY

SNAME MAJOR

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

Bill POLY

Sadie MATH

Sadie MATH

Jessica POLY

Jessica POLY

Steve ENGL

Steve ENGL

Alan COSC

Alan COSC

Alan COSC

Rachel ENGL

SNAME MAJOR

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

Smithly ENGL

Sebastian ACCT

Jake COSC

Losmith CHEM

Genevieve UNKN

Thornton

Lionel

Benny CHEM

Gus ART

Zelda COSC

Zelda COSC

SNAME MAJOR

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

Mario MATH

Mario MATH

Ken POLY

36 rows selected.

###################################6-5##############################

SQL> SELECT s.stno, s.sname, c.course\_num, g.grade

2 FROM Stu s, Grrep g, Sec c

3 WHERE s.stno(+)=g.student\_number

4 AND c.section\_id=g.section\_id

5 AND (c.course\_num LIKE 'COSC%' AND g.grade IN ('A','B'));

STNO SNAME COURSE\_NUM GRA

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

3 Mary COSC3380 B

24 Chris COSC3380 B

34 Lynette COSC3380 B

121 Hillary COSC3380 B

122 Phoebe COSC3380 B

123 Holly COSC3380 B

129 Cedric COSC3380 A

132 George COSC3380 B

142 Jerry COSC3380 A

143 Cramer COSC3380 B

144 Fraiser COSC3380 B

STNO SNAME COURSE\_NUM GRA

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

146 Francis COSC3380 B

155 Lindsay COSC3380 B

157 Stephanie COSC3380 B

14 Lujack COSC3701 A

3 Mary COSC3701 B

8 Brenda COSC1310 A

15 Reva COSC1310 B

3 Mary COSC1310 B

34 Lynette COSC1310 A

49 Susan COSC1310 A

123 Holly COSC1310 A

STNO SNAME COURSE\_NUM GRA

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

127 Steve COSC1310 A

125 Sadie COSC1310 A

126 Jessica COSC1310 A

24 Chris COSC2025 B

3 Mary COSC2025 B

8 Brenda COSC3320 B

19 Harley COSC3320 B

14 Lujack COSC3320 B

15 Reva COSC3320 B

2 Lineas COSC3320 B

15 Reva COSC1310 B

STNO SNAME COURSE\_NUM GRA

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

14 Lujack COSC1310 B

2 Lineas COSC1310 B

35 rows selected.

SQL> SAVE Q65a;

Created file Q65a.sql

SQL> CREATE VIEW viewQ65a AS

2 @Q65a;

View created.

SQL> SELECT s.stno, s.sname, c.course\_num, g.grade

2 FROM Stu s, Grrep g, Sec c

3 WHERE s.stno(+)=g.student\_number

4 AND c.section\_id=g.section\_id

5 AND (c.course\_num LIKE 'MATH%');

STNO SNAME COURSE\_NUM GRA

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

2 Lineas MATH2410 D

3 Mary MATH2410 A

8 Brenda MATH2410 A

10 Richard MATH2410

13 Kelly MATH5501

13 Kelly MATH2410 B

14 Lujack MATH2410 B

14 Lujack MATH2410

15 Reva MATH2410 C

15 Reva MATH2410 F

17 Elainie MATH2410

STNO SNAME COURSE\_NUM GRA

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

19 Harley MATH2410 D

142 Jerry MATH2333

143 Cramer MATH2333

144 Fraiser MATH2333

145 Harrison MATH2333

146 Francis MATH2333

147 Smithly MATH2333

148 Sebastian MATH2333

151 Losmith MATH5501

153 Genevieve MATH5501

155 Lindsay MATH5501

STNO SNAME COURSE\_NUM GRA

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

157 Stephanie MATH5501

158 Thornton MATH5501

163 Lionel MATH5501

161 Benny MATH5501

160 Gus MATH5501

27 rows selected.

SQL> SAVE Q65b;

Created file Q65b.sql

SQL> CREATE VIEW viewQ65b AS

2 @Q65b;

View created.

SQL> SELECT stno FROM viewQ65a

2 MINUS

3 SELECT stno FROM viewQ65b;

STNO

----------

24

34

49

121

122

123

125

126

127

129

132

11 rows selected.

SQL> SELECT stno FROM viewQ65b

2 MINUS

3 SELECT stno FROM viewQ65a

4 ;

STNO

----------

10

13

17

145

147

148

151

153

158

160

161

STNO

----------

163

12 rows selected.

##############################6-6####################

SQL> CREATE TABLE R1

2 (name VARCHAR2(20),

3 salary NUMBER(2));

Table created.

SQL> CREATE TABLE R2

2 (salary NUMBER(2),

3 name VARCHAR2(20));

Table created.

SQL> INSERT INTO R1

2 VALUES ('James', 10);

1 row created.

SQL> INSERT INTO R1

2 VALUES ('Tim', 20);

1 row created.

SQL> INSERT INTO R1

2 VALUES ('Dave', 30);

1 row created.

SQL> INSERT INTO R2

2 VALUES (10, 'James')

3 ;

1 row created.

SQL> INSERT INTO R2

2 VALUES (20, 'Tim');

1 row created.

SQL> INSERT INTO R2

2 VALUES (30, 'DAVE');

1 row created.

SQL> SELECT \* FROM R1;

NAME SALARY

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

James 10

Tim 20

Dave 30

SQL> SELECT \* FROM R2;

SALARY NAME

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

10 James

20 Tim

30 DAVE

SQL> SELECT \* FROM R1

2 UNION

3 SELECT \* FROM R2;

SELECT \* FROM R1

\*

ERROR at line 1:

ORA-01790: expression must have same datatype as corresponding expression

SQL> SELECT \* FROM R1

2 UNION

3 SELECT name, salary FROM R2;

NAME SALARY

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

DAVE 30

Dave 30

James 10

Tim 20

\*\*\*\*\*\*\*\*YOU CAN FORCE THEIR UNION BY ALIGNING THE DATA TYPES

SQL> DROP TABLE R1;

Table dropped.

SQL> DROP TABLE R2;

Table dropped.