```
SOL> -- DML OPERATIONS IN VIEWS --
SQL> CREATE OR REPLACE VIEW INSERTDEPT
  2 (
  3 DEPTID,
  4 DEPTNAME,
  5 PLACE
  6)
  7 AS
 8 SELECT
 9 DEPTNO,
 10 DNAME,
 11 LOC
 12 FROM DEPT;
View created.
SQL> DESC DEPT;
Name
                                                                Null?
Type
 DEPTNO
                                                                NOT
NULL NUMBER (2)
DNAME
VARCHAR2 (14)
LOC
VARCHAR2 (13)
SQL> DESC INSERTDEPT;
Name
                                                                Null?
Type
DEPTID
                                                                NOT
NULL NUMBER (2)
DEPTNAME
VARCHAR2 (14)
PLACE
VARCHAR2 (13)
SQL> SELECT * FROM DEPT;
                   LOC
   DEPTNO DNAME
       40 OPERATIONS BOSTON
       10 ACCOUNTING
                       NEW YORK
       20 RESEARCH
                       DALLAS
       30 SALES
                        CHICAGO
SQL> SELECT * FROM INSERTDEPT;
   DEPTID DEPTNAME PLACE
```

```
40 OPERATIONS BOSTON
10 ACCOUNTING NEW YORK
20 RESEARCH DALLAS
         30 SALES
                           CHICAGO
SQL> INSERT INTO INSERTDEPT
  2 VALUES(50, 'SHIPPING', 'CHENNAI');
1 row created.
SQL> SELECT * FROM DEPT;
                     LOC
    DEPTNO DNAME
         50 SHIPPING CHENNAI
        40 OPERATIONS BOSTON
10 ACCOUNTING NEW YORK
20 RESEARCH DALLAS
         30 SALES
                           CHICAGO
SQL> UPDATE INSERTDEPT
  2 SET PLACE = 'MUMBAI'
  3 WHERE DEPTID = 50;
1 row updated.
SQL> SELECT * FROM DEPT;
    DEPTNO DNAME LOC,
        50 SHIPPING MUMBAI
40 OPERATIONS BOSTON
10 ACCOUNTING NEW YORK
        40 OPERATIONS
10 ACCOUNTING NEW DALLAS
CHICAGO
SQL> DELETE FROM INSERTDEPT
  2 WHERE DEPTID \neq 50;
1 row deleted.
SQL> DELETE FROM INSERTDEPT
 2 WHERE DEPTID = 30;
DELETE FROM INSERTDEPT
ERROR at line 1:
ORA-02292: integrity constraint (SCOTT.FK DEPTNO) violated - child record
found
SOL> -- VIEWS WITH CHECK OPTION --
SQL> CREATE OR REPLACE VIEW EDEPT30
  2 AS
```

```
3 SELECT *
 4 FROM EMP
 5 WHERE DEPTNO=30;
View created.
SOL> SELECT * FROM EDEPT30
 2 WHERE ENAME='JAMES';
   EMPNO ENAME
                JOB
                                MGR HIREDATE
COMM DEPTNO
_____ ____
    7900 JAMES CLERK
                                7698 03-DEC-81
30
SQL> SELECT * FROM EDEPT30
2 WHERE ENAME='JONES';
no rows selected
SQL> UPDATE EDEPT30
 2 SET SAL=SAL + 1000
 3 WHERE ENAME='JAMES';
1 row updated.
SQL> SELECT * FROM EDEPT30
 2 WHERE ENAME='JAMES';
   EMPNO ENAME
                   JOB
                                  MGR HIREDATE
                                               SAL
COMM DEPTNO
_ _____
   7900 JAMES
                                7698 03-DEC-81 1950
30
SQL> UPDATE EDEPT30
 2 SET SAL=SAL + 1000
 3 WHERE ENAME='JONES';
0 rows updated.
SQL> DELETE EDEPT30
 2 WHERE ENAME='JAMES';
1 row deleted.
SQL> SELECT * FROM EDEPT30
 2 WHERE ENAME='JAMES';
no rows selected
```

```
SOL> DELETE EDEPT30
  2 WHERE ENAME='JONES';
0 rows deleted.
SQL> INSERT INTO EDEPT30 (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM,
DEPTNO)
  2 VALUES(7935, 'SURESH', 'SALESMAN', 7698, SYSDATE, 2000, 1000, 30);
1 row created.
SQL> INSERT INTO EDEPT30 (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM,
  2 VALUES (7936, 'SUKESH', 'CLERK', 7698, SYSDATE, 2500, NULL,
1 row created.
SQL> ROLLBACK;
Rollback complete.
SQL> CREATE OR REPLACE VIEW EDEPT30
  2 AS
  3 SELECT *
  4 FROM EMP
  5 WHERE DEPTNO=30
  6 WITH CHECK OPTION CONSTRAINT EDEPT30CHKVIEW;
View created.
SQL> INSERT INTO EDEPT30 (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM,
DEPTNO)
                            SALESMAN', 7698, SYSDATE, 2000, 1000, 30);
  2 VALUES (7935, 'SURESH')
1 row created.
SQL> INSERT INTO EDEPT30 (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM,
  2 VALUES (7936, SUKESH', 'CLERK', 7698, SYSDATE, 2500, NULL, 30);
1 row created.
SQL> DELETE FROM EDEPT30
   WHERE EMPNO = 7936;
1 row deleted.
SQL> INSERT INTO EDEPT30 (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM,
DEPTNO)
  2 VALUES (7936, 'SUKESH', 'CLERK', 7698, SYSDATE, 2500, NULL, 20);
INSERT INTO EDEPT30 (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO)
ERROR at line 1:
```

ORA-01402: view WITH CHECK OPTION where-clause violation

```
SQL> UPDATE EDEPT30
 2 SET SAL=SAL + 1000
 3 WHERE ENAME='JAMES';
1 row updated.
SQL> UPDATE EDEPT30
 2 SET SAL=SAL + 1000
 3 WHERE ENAME='JONES';
0 rows updated.
SQL> DELETE EDEPT30
 2 WHERE ENAME='JAMES';
1 row deleted.
SOL> DELETE EDEPT30
 2 WHERE ENAME='JONES';
0 rows deleted.
SQL> SELECT * FROM EDEPT30
2 WHERE ENAME = 'JAMES';
no rows selected
SOL> ROLLBACK;
Rollback complete.
SQL> SELECT * FROM EDEPT30
 2 WHERE ENAME = 'JAMES';
   EMPNO ENAME
                   JOB
                                 MGR HIREDATE SAL
COMM DEPTNO
                     ------
    7900 JAMES CLERK 7698 03-DEC-81 950
SQL> SELECT * FROM EDEPT30
 2 WHERE ENAME = 'JONES';
no rows selected
SQL> -- READ ONLY VIEWS --
SOL> CREATE OR REPLACE VIEW EDEPT30
 2 AS
```

3 SELECT \*

```
4 FROM EMP
  5 WHERE DEPTNO=30
  6 WITH READ ONLY;
View created.
SOL> SELECT * FROM EDEPT30;
   EMPNO ENAME
                    JOB
                                   MGR HIREDATE
                                                         SAL
COMM DEPTNO
                    MANAGER 7839 01-MAY-81
     7698 BLAKE
                                                        2850
30
                    SALESMAN 7698 28-SEP-81
     7654 MARTIN
1400
       30
     7499 ALLEN
                                   7698 20-FEB-81
                    SALESMAN
                                                        1600
300
          30
     7844 TURNER
                                   7698 08-SEP-81
                    SALESMAN
0
        30
     7900 JAMES CLERK
                                                         950
30
                                    7698 22-FEB-81
    7521 WARD
                   SALESMAN
                                                       1250
500
          30
6 rows selected.
SQL> UPDATE EDEPT30
  2 SET SAL=SAL + 1000
  3 WHERE ENAME='JAMES';
SET SAL=SAL + 1000
ERROR at line 2:
ORA-42399: cannot perform a DML operation on a read-only view
SQL> -- Differable Constraints --
SQL> CREATE TABLE MyMaster
 2 (
     MastID
                NUMBER (2)
  3
     CONSTRAINT MastIDPK PRIMARY KEY,
  5
      MastName VARCHAR2(10)
      CONSTRAINT MastNameCHK
  6
    CONSTRAINI MASCHAMOCILIO
CHECK (MastName = UPPER (MastName)),
      MastDate DATE
  9
     CONSTRAINT MastDateNN NOT NULL
 10
     );
Table created.
SQL> INSERT INTO MyMaster(MastID, MastName, MastDate)
  2 VALUES(10, 'MASTER10', '10-OCT-07');
```

1 row created. SQL> INSERT INTO MyMaster (MastID, MastName, MastDate) 2 VALUES(11, 'MASTER11', '11-OCT-07'); 1 row created. SQL> INSERT INTO MyMaster (MastID, MastName, MastDate) 2 VALUES(12, 'MASTER12', '12-OCT-07'); 1 row created. SQL> COMMIT; Commit complete. SQL> SELECT \* FROM MyMaster; MASTID MASTNAME MASTDATE 10 MASTER10 10-OCT-07 11 MASTER11 11-OCT-07 12 MASTER12 12-OCT-07 SQL> INSERT INTO MyMaster (MastID, MastName, MastDate) 2 VALUES(12, 'MASTER12', '12-OCT-07'); INSERT INTO MyMaster(MastID, MastName, MastDate) ERROR at line 1: ORA-00001: unique constraint (SCOTT.MASTIDPK) violated SQL> CREATE TABLE MyMasterDF 2 ( 3 MastID NUMBER(2)
4 CONSTRAINT MastIDDFPK PRIMARY KEY
5 INITIALLY DEFERRED DEFERRABLE,
6 MastName VARCHAR2(10)
7 CONSTRAINT MastNameDFCHK
8 CHECK(MastName = UPPER(MastName))
9 INITIALLY DEFERRED DEFERRABLE, 10 MastDate DATE 11 CONSTRAINT MastDateDFNN NOT NULL 12 INITIALLY DEFERRED DEFERRABLE 13 ); Table created. SQL> INSERT INTO MyMasterDF(MastID, MastName, MastDate) 2 VALUES(10, 'MASTER10', '10-OCT-07'); 1 row created.

SOL> ED Wrote file afiedt.buf 1 INSERT INTO MyMasterDF(MastID, MastName, MastDate) 2\* VALUES(11, 'MASTER11', '11-OCT-07') SQL> / 1 row created. SQL> ED Wrote file afiedt.buf 1 INSERT INTO MyMasterDF(MastID, MastName, MastDate) 2\* VALUES (12, 'MASTER12', '12-OCT-07') SOL> / 1 row created. SQL> SELECT \* FROM MyMaster; MASTID MASTNAME MASTDATE \_\_\_\_\_ \_\_\_ 10 MASTER10 10-OCT-07 11 MASTER11 11-OCT-07 12 MASTER12 12-OCT-07 SQL> INSERT INTO MyMasterDF (MastID, MastName, MastDate) 2 VALUES (12, 'MASTER12', '12-OCT-07'); 1 row created. SQL> SELECT \* FROM MyMaster; MASTID MASTNAME MASTDATE -----10 MASTER10 10-OCT-07 11 MASTER11 11-OCT-07 10 MASTER10 12 MASTER12 12-OCT-07 SQL> SELECT \* FROM MyMasterDF; MASTID MASTNAME MASTDATE 10 MASTER10 10-OCT-07 11 MASTER11 11-OCT-07 12 MASTER12 12-OCT-07 12 MASTER12 12-OCT-07 SQL> COMMIT; COMMIT

ERROR at line 1:

ORA-02091: transaction rolled back

ORA-00001: unique constraint (SCOTT.MASTIDDFPK) violated

SQL> SELECT \* FROM MyMasterDF;

no rows selected

SQL> SPOOL OFF

