

Week 9 Assignment

DBMS

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1. Insert, update, delete on simple views that reflects views and base table.

```
SQL> CREATE VIEW emp_view3305 AS
  2  SELECT Ssn, Fname, Lname, Salary, Dno
  3  FROM employee3305;

View created.

SQL> INSERT INTO emp_view3305 (Ssn, Fname, Lname, Salary, Dno)
  2  VALUES (999999999, 'Test', 'User', 25000, 5);

1 row created.

SQL>
SQL> UPDATE emp_view3305
  2  SET Salary = Salary + 5000
  3  WHERE Ssn = 999999999;

1 row updated.

SQL> DELETE FROM emp_view3305
  2  WHERE Ssn = 999999999;

1 row deleted.
```

2. Insert, delete, update on simple views that violate the constraint such as primary key. Note: primary key of a table is a foreign key on other table.

```
SQL> INSERT INTO emp_view3305 (Ssn, Fname, Lname, Salary, Dno)
  2  VALUES (123456789, 'Duplicate', 'Entry', 30000, 5);
INSERT INTO emp_view3305 (Ssn, Fname, Lname, Salary, Dno)
*
ERROR at line 1:
ORA-00001: unique constraint (CT2024503305.SYS_C0026903) violated

SQL> INSERT INTO emp_view3305 (Ssn, Fname, Lname, Salary, Dno)
  2  VALUES (888888888, 'Invalid', 'Dept', 20000, 99);
INSERT INTO emp_view3305 (Ssn, Fname, Lname, Salary, Dno)
*
ERROR at line 1:
ORA-02291: integrity constraint (CT2024503305.FK_EMP_DEPT) violated - parent
key not found
```

3. Insert, update, delete on complex views that reflects views and base table

```
SQL> CREATE VIEW emp_dept_view3305 AS
  2  SELECT e.Ssn, e.Fname, e.Lname, e.Salary,
  3        d.Dname
  4  FROM employee3305 e
  5  JOIN department3305 d
  6  ON e.Dno = d.Dnumber;

View created.

SQL> INSERT INTO emp_dept_view3305
  2  VALUES (77777777, 'Complex', 'User', 30000, 'Research');
INSERT INTO emp_dept_view3305
*
ERROR at line 1:
ORA-01776: cannot modify more than one base table through a join view

SQL> UPDATE emp_dept_view3305
  2  SET Salary = Salary * 1.10
  3  WHERE Dname = 'Research';

4 rows updated.

SQL> UPDATE emp_dept_view3305
  2  SET Dname = 'Admin';
SET Dname = 'Admin'
*
ERROR at line 2:
ORA-01779: cannot modify a column which maps to a non key-preserved table
```

4. Drop view and perform query on base table and vice versa.

```
SQL> DROP VIEW emp_view3305;
View dropped.

SQL> SELECT * FROM employee3305;
FNAME      M LNAME      SSN      BDATE
-----      - -----      - -----      -
ADDRESS          S      SALARY SUPER_SSN
-----      -
DNO
-----
James        E Borg      888665555 10-NOV-37
450 Stone, Houston TX      M      66000
1
Franklin     T Wong      333445555 08-DEC-65
638 Voss, Houston TX      M      52800 888665555
5
FNAME      M LNAME      SSN      BDATE
-----      - -----      - -----      -
ADDRESS          S      SALARY SUPER_SSN
-----      -
DNO
-----
Jennifer    S Wallace    987654321 20-JUN-41
291 Berry, Bellaire TX      F      51600 888665555
4
Ramesh       K Narayan   666884444 15-SEP-62
975 Fire Oak, Humble TX      M      48070 333445555
FNAME      M LNAME      SSN      BDATE
-----      - -----      - -----      -
ADDRESS          S      SALARY SUPER_SSN
-----      -
DNO
-----
5
Joyce        A English    453453453 31-JUL-72
5631 Rice, Houston TX      F      31625 333445555
5
```

Ahmad	V Jabbar	987987987	29-MAR-69
FNAME	M LNAME	SSN	BDATE
-----	-	-	-
ADDRESS	S	SALARY	SUPER_SSN
-----	-	-	-
DNO			
988 Dallas, Houston TX		M	27500 987654321
4			
John	B Smith	123456789	09-JAN-65
731 Fondren, Houston TX		M	37950 333445555
5			
FNAME	M LNAME	SSN	BDATE
-----	-	-	-
ADDRESS	S	SALARY	SUPER_SSN
-----	-	-	-
DNO			
Alicia	J Zelaya	999887777	19-JAN-68
3321 Castle, Spring TX		F	31350 987654321
4			

8 rows selected.

5. Drop column in base table after creation of view with the respective column and perform select query on view.

```
SQL> CREATE VIEW emp_view3305 AS
  2  SELECT Ssn, Fname, Salary
  3  FROM employee3305;

View created.

SQL> ALTER TABLE employee3305
  2  DROP COLUMN Salary;

Table altered.

SQL> SELECT * FROM emp_view3305;
SELECT * FROM emp_view3305
*
ERROR at line 1:
ORA-04063: view "CT2024503305.EMP_VIEW3305" has errors
```

6. Rename column in base table after creation of view with the respective column and perform select query on view.

```
SQL> alter table employee3305 add salary number(7,2);

Table altered.

SQL> ALTER TABLE employee3305
  2  RENAME COLUMN Fname TO FirstName;

Table altered.

SQL> SELECT * FROM emp_view3305;
SELECT * FROM emp_view3305
*
ERROR at line 1:
ORA-04063: view "CT2024503305.EMP_VIEW3305" has errors
```

7. Rename table in base table after creation of view and perform select query on view.

```
SQL> ALTER TABLE employee3305
  2  RENAME TO employee_new3305;

Table altered.

SQL> SELECT * FROM emp_view3305;
SELECT * FROM emp_view3305
*
ERROR at line 1:
ORA-04063: view "CT2024503305.EMP_VIEW3305" has errors
```

8. Modify data type of a column in base table after creation of view with the respective column and perform select query on view.

```
SQL> ALTER TABLE employee3305
  2  MODIFY Salary VARCHAR(20);

Table altered.

SQL> SELECT * FROM emp_view3305;
SELECT * FROM emp_view3305
*
ERROR at line 1:
ORA-04063: view "CT2024503305.EMP_VIEW3305" has errors
```

9. Create a view from existing view

```
SQL> select * from emp_view3305
  2  ;

SSN      FNAME          LNAME        SALARY
-----  -----
888665555 James          Borg
333445555 Franklin       Wong
987654321 Jennifer       Wallace
666884444 Ramesh         Narayan
453453453 Joyce          English
987987987 Ahmad          Jabbar
123456789 John           Smith
999887777 Alicia         Zelaya

8 rows selected.

SQL> CREATE VIEW emp_salary_view3305 AS
  2  SELECT Ssn, Salary
  3  FROM emp_view3305;

View created.

SQL> SELECT * FROM emp_salary_view3305;

SSN      SALARY
----- 
888665555
333445555
987654321
666884444
453453453
987987987
123456789
999887777

8 rows selected.
```