7.Queries for Creating, Dropping, and Altering Tables, Views, and Constraints

CREATE A SCHEMA FOR SAILORS RELATION

```
SQL> CREATE TABLE SAILORS (

          SID NUMBER,

          SNAME VARCHAR2 (25),

          RATING NUMBER,

          AGE REAL,

          CONSTRAINT SID_CON PRIMARY KEY (SID)

          );
```

CREATE AN INSTANCE FOR SAILORS RELATION

```
SQL> SELECT * FROM SAILORS;


     SID SNAME                                      RATING                    AGE

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

      22 DUSTIN                                        7                 45

      29 BRUTUS                                         1                 33

      31 LUBBER                                        8                 55.5

      32 ANDY                                         8                 25.5

      58 RUSTY                                       10                   35

      64 HORATIO                                        7                 35

      71 ZORBA                                       10                 16

      74 HORATIO                                        9                 35

      85 ART                                        3                          25.5

      95 BOB                                        3                          63.5


10 rows selected.
```

CREATE A SCHEMA FOR BOATS RELATION

```
SQL> CREATE TABLE BOATS (

          BID NUMBER,

          BNAME VARCHAR2 (25),
          COLOR VARCHAR2 (25),
          CONSTRAINT BID_CON PRIMARY KEY (BID)
          );
```

CREATE AN INSTANCE FOR BOATS RELATION

```
SQL> SELECT * FROM BOATS;
    BID BNAME           COLOR
---------- ------------------- ------------------------
    101 INTERLAKE        BLUE
    102 INTERLAKE        RED
    103 CLIPPER         GREEN
    104 MARINE           RED
```

CREATE A SCHEMA FOR RESERVERS RELATION

```
SQL> CREATE TABLE RESERVES (
        SID NUMBER,
        BID NUMBER,
        DAY DATE,
        CONSTRAINT SID_CON PRIMARY KEY (SID),
        FOREIGN KEY (SID) REFERENCES SAILORS (SID).
        FOREIGN KEY (BID) REFERENCES BOATS(BID)
);
```

CREATE AN INSTANCE FOR RESERVES RELATION

```
SQL> SELECT * FROM RESERVES;
    SID      BID                 DAY
---------- ---------- ---------
     22      101                 10-OCT-98
     22      102                  10-OCT-98
     22      103                  10-AUG-98
     22      104                 10-JUL-98
     31      102                  11-NOV-98
```

31	103	11-JUN-98
31	104	11-DEC-98
64	101	09-MAY-98
64	102	09-AUG-98
74	103	09-AUG-98

DROPPING TABLE SYNTAX:

```
DROP TABLE SAILORS
```

```
TABLE DROPPED
```

ALTER TABLE statement is a powerful statement to add, manage or update table structure.

ALTER TABLE Statement to you can do following thing,

- SQL TABLE RENAME
- ADD NEW COLUMN IN TABLE
- MODIFY EXISTING COLUMN IN TABLE
- RENAME COLUMN IN TABLE
- DROP THE EXISTING COLUMN IN TABLE

SYNTAX:

```
ALTER TABLE table_name
   RENAME TO new_table_name;
```

```
SQL> ALTER TABLE userinfo RENAME TO user_info;


Table altered.
SQL> ALTER TABLE user_info
   ADD (city VARCHAR2(30),
        country VARCHAR2(30)
   );


Table altered.
```

Creation of Views:-

Syntax:-

```
CREATE VIEW viewname AS
SELECT columnname,columnname
FROM tablename
WHERE columnname=expression_list;
```

Renaming the columns of a view:-

Syntax:-

```
CREATE VIEW viewname AS
SELECT newcolumnname….
FROM tablename
WHERE columnname=expression_list;
```

Selecting a data set from a view-

Syntax:-

```
SELECT columnname, columnname
FROM viewname
WHERE search condition;
```

Destroying a view-

Syntax:-

DROP VIEW viewname;

Type of SQL Constraints

- PRIMARY KEY: value in specified column must be unique for each row in a table and not a NULL. Primary key used to identify individual records.
- FOREIGN KEY: value in specified column must have reference in another table (That existing record have primary key or any other constraint).
- NOT NULL: Column value must not be a NULL.
- UNIQUE: Check column value must be unique across the given field in table.
- CHECK: Specific condition is specified, which must evaluate to true for constraint to be satisfied.
- DEFAULT: Default value assign if none of the value specified of given field.

- Syntax:

```
   ALTER TABLE table_name

 DROP constraint_name column_name;

SQL> CREATE TABLE emp_info(

    no NUMBER(3,0),
    name VARCHAR(30),
    address VARCHAR(70),
    contact_no VARCHAR(12),
    PRIMARY KEY(no)
);

Table created.
```

```
SQL> CREATE TABLE emp_info(

   no NUMBER(3,0) PRIMARY KEY,

   name VARCHAR(30),

   address VARCHAR(70),

   contact_no NUMBER(12,0)

);


Table created.
```

```
SQL> CREATE TABLE emp_salary(

    no NUMBER(3,0) PRIMARY KEY,

    users_no NUMBER(3,0),

    salary NUMBER(12),

    CONSTRAINT fk_userno FOREIGN KEY (users_no) REFERENCES emp_info(no)

);


Table created.
```