**Practical 1:**

**Implementation of Data partitioning through Range and List partitioning**

1. **Range Partitioning**

**1.1 Create table sales with the following columns:**

|  |  |
| --- | --- |
| prod\_id | Number |
| cust\_id | Number |
| time\_id | Date |
| channel\_id | Char |
| promo\_id | Number |
| quantity\_sold | Number |
| amount\_sold | Number |

**Partition this table into 4 using range partition and time\_id as partitioning key. Give partition names as:**

**sales\_q1\_2006, sales\_q2\_2006, sales\_q3\_2006, sales\_q4\_2006.**

**Query:**

CREATE TABLE sales (prod\_id number,

cust\_id number,

time\_id date,

channel\_id char,

promo\_id number,

quantity\_sold number,

amount\_sold number)

PARTITION by range(time\_id)(

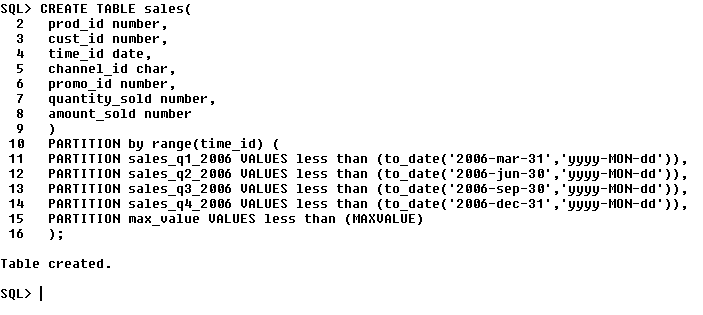
PARTITION sales\_q1\_2006 VALUES less than (to\_date('2006-mar-31','yyyy-MON-dd')),

PARTITION sales\_q2\_2006 VALUES less than (to\_date('2006-jun-31','yyyy-MON-dd')),

PARTITION sales\_q3\_2006 VALUES less than (to\_date('2006-sep-31','yyyy-MON-dd')),

PARTITION sales\_q4\_2006 VALUES less than (to\_date('2006-dec-31','yyyy-MON-dd')));

**Output:**



**Store quarterly data into each partition. For example, partition sales\_q1\_2006 will store records for first quarter 01-jan-2006 to 01-mar-2006**

**sales\_q1\_2006 will store records for second quarter 01-apr-2006 to 01-jun-2006. And so on.**

**Query**:

insert into sales values(46,1298, to\_date('2006-jan-02','yyyy-MON-dd'),'A', 101, 23, 45032);

insert into sales values(5,1838, to\_date('2006-feb-27','yyyy-MON-dd'),'X', 101, 7, 1432);

insert into sales values(1,1848, to\_date('2006-mar-17','yyyy-MON-dd'),'Q', 101, 37, 35032);

insert into sales values(3,9566, to\_date('2006-jun-11','yyyy-MON-dd'),'P', 101, 45, 65032);

insert into sales values(345,6355, to\_date('2006-apr-21','yyyy-MON-dd'),'P', 101, 12, 5032);

insert into sales values(8,3365, to\_date('2006-may-15','yyyy-MON-dd'),'O', 101, 19, 5932);

insert into sales values(180,0707, to\_date('2006-jul-24','yyyy-MON-dd'),'O', 101, 82, 180000);

insert into sales values(6,1011, to\_date('2006-aug-11','yyyy-MON-dd'),'B', 101, 29, 45132);

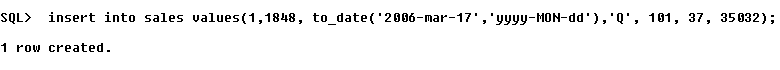
insert into sales values(44,9935, to\_date('2006-oct-18','yyyy-MON-dd'),'M', 101, 34, 4232);

insert into sales values(12,5463, to\_date('2006-oct-10','yyyy-MON-dd'),'M', 101, 3, 452);

insert into sales values(11,4378, to\_date('2006-nov-02','yyyy-MON-dd'),'Y', 101, 8, 4526);

insert into sales values(14,5438, to\_date('2006-dec-25','yyyy-MON-dd'),'Y', 101, 38, 11032);

**Output:**



**Write a command to view records in each partition.**

**Query**:

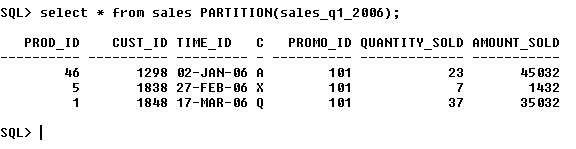
select \* from sales PARTITION(sales\_q1\_2006);

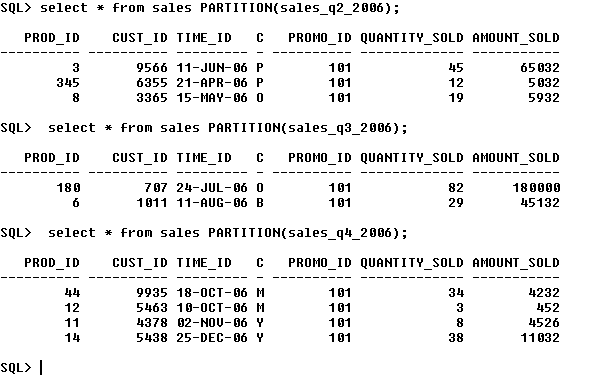
select \* from sales PARTITION(sales\_q2\_2006);

select \* from sales PARTITION(sales\_q3\_2006);

select \* from sales PARTITION(sales\_q4\_2006);

**Output:**



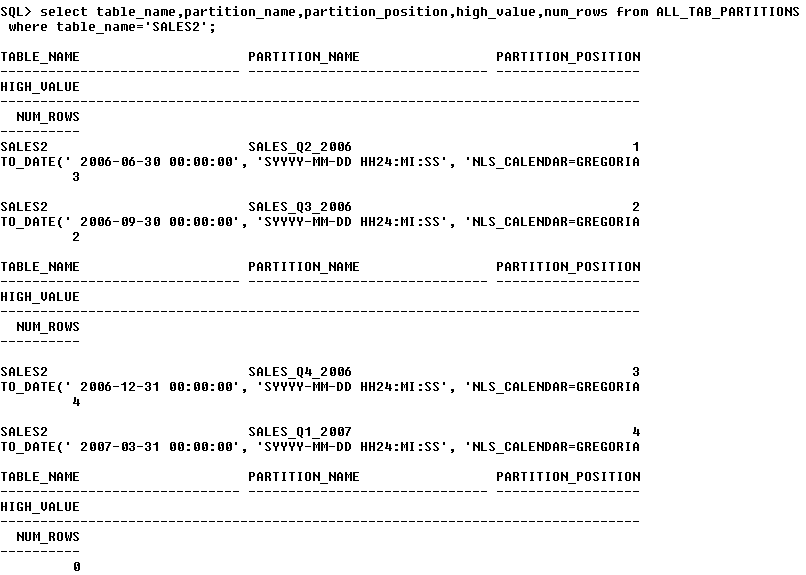


**Write a command to display the partition structure.**

**Query**:

select table\_name,partition\_name,partition\_position,high\_value,num\_rows from ALL\_TAB\_PARTITIONS where table\_name='SALES2';

**Output:**

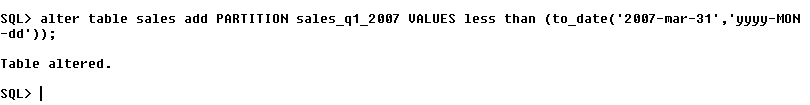


**Write a command to add a new partition called sales\_q1\_2007 for the next quarter value.**

**Query**:

alter table sales add PARTITION sales\_q1\_2007 VALUES less than (to\_date('2007-mar-31','yyyy-MON-dd'));

**Output:**

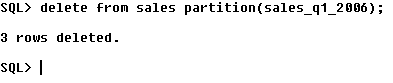


**Write a command to delete all records from partition sales\_q1\_2006.**

**Query**:

delete from sales partition(sales\_q1\_2006);

**Output:**

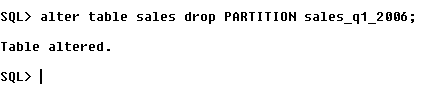


**Write a command to delete a partition.**

**Query**:

alter table sales drop PARTITION sales\_q1\_2006;

**Output:**



**List Partitioning**

**1.2 Create table Student with the following columns:**

|  |  |
| --- | --- |
| Student\_id | Number |
| Student\_name | Number |
| Student\_dob | Date |

**Create list partition with student\_name as partition key. Create following two partitions.**

**stu\_divA with values 'a','b','c','d','e','f','g','h','i','j','k'**

**stu\_divB with values 'n','o','p','q','r','s','t','u','v','w','x','y','z'**

**Query**:

create table STUDENT (

student\_id number,

student\_name char,

student\_dob date

)

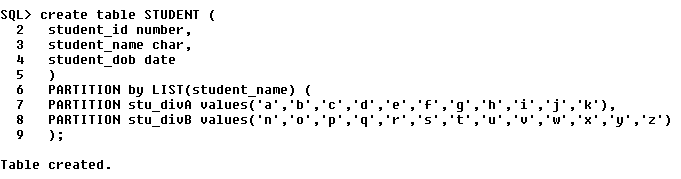
PARTITION by LIST(student\_name) (

PARTITION stu\_divA values('a','b','c','d','e','f','g','h','i','j','k'),

PARTITION stu\_divB values('n','o','p','q','r','s','t','u','v','w','x','y','z')

);

**Output:**



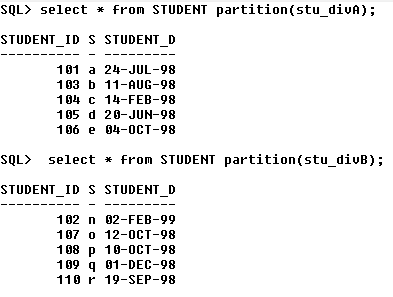
**Write a command to view records in each partition.**

**Query**:

select \* from STUDENT partition(stu\_divA);

select \* from STUDENT partition(stu\_divB);

**Output:**

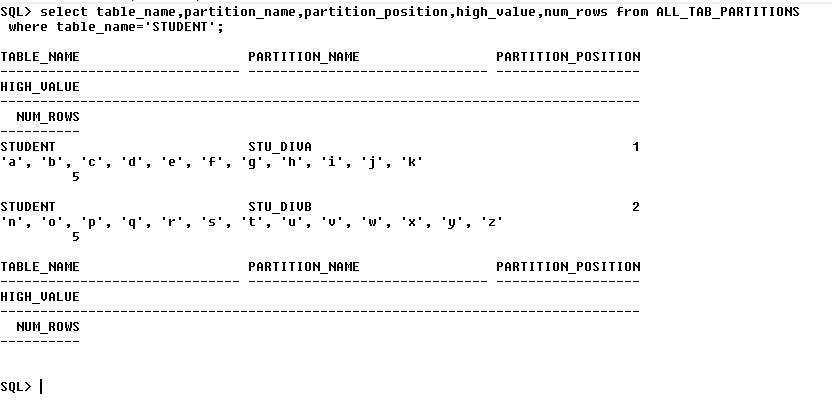


**Write a command to display the partition structure.**

**Query**:

select table\_name, partition\_name, partition\_position, high\_value, num\_rows from ALL\_TAB\_PARTITIONS where table\_name='STUDENT';

**Output:**



**Write a command to add a new partition called stu\_null for the null values.**

**Query**:

alter table STUDENT add PARTITION stu\_null VALUES (NULL);

**Output:**



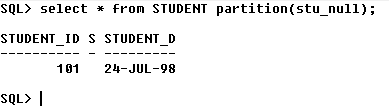
**Write a command to display records from stu\_null partition.**

**Query**:

insert into STUDENT(student\_id,student\_dob) values(101,to\_date('24-07-1998','dd-MM-yyyy')); //Inserting Values

select \* from STUDENT partition(stu\_null);

**Output:**



**Write a command to add a new partition called stu\_default for the default values.**

**Query**:

alter table STUDENT add PARTITION stu\_default VALUES (DEFAULT);

**Output:**

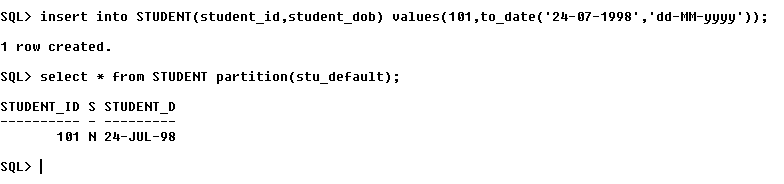


**Write a command to display records from stu\_default partition.**

**Query**:

select \* from STUDENT partition(stu\_default);

**Output: Created a table with default value for student\_name field as ‘N’**

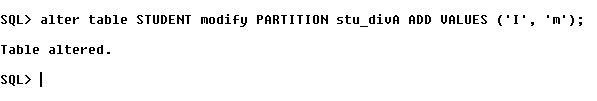


**Write a command to add values ‘l’ and ‘m’ in a partition stu\_divA**

**Query**:

alter table STUDENT modify PARTITION stu\_divA ADD VALUES ('I', 'm');

**Output:**



**Write a command to display records from stu\_divA partition.**

**Query**:

select \* from STUDENT partition(stu\_divA);

**Output:**

