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**Experiment No. 4: Implementation of Range and Hash Partitioning**

**Range Partition:**

**Consider a table named employees with schema emp (id int, fname varchar(25) not null, lname varchar(25) not null, store\_id int not null, department\_id int not null) with id as a primary key and insert 20 records with id ranges from 1 to20.**

**Make 4 partitions by range:**

**P0: id < 5**

**P1: id < 10**

**P2: id < 15**

**P3: id < 20 or Maxvalue.**

create table employees( id int primary key, fname varchar(25) not null, lname varchar(25)not null, store\_id int not null, department\_id int not null

)

PARTITION BY RANGE (id) (

PARTITION p0 VALUES LESS THAN (5),

PARTITION p1 VALUES LESS THAN (10),

PARTITION p2 VALUES LESS THAN (15),

PARTITION p3 VALUES LESS THAN (20),

PARTITION p4 VALUES LESS THAN (MAXVALUE)

);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (2, 'Jane', 'Smith', 1, 101);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (3, 'Sam', 'Brown', 2, 102);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (4, 'Sue', 'Davis', 2, 102);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (5, 'Tom', 'White', 1, 103);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (6, 'Sara',

'Miller', 1, 103);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (7, 'Tim', 'Wilson', 2, 104);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (8, 'Sophie', 'Taylor', 2, 104);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (9, 'Steve', 'Moore', 3, 105);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (10, 'Jake', 'Thomas', 3, 105);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (11, 'Jess', 'Johnson', 3, 106);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (12, 'Jill', 'Clark', 3, 106);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (13, 'Jim', 'Martinez', 1, 107);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (14, 'Joan', 'Hernandez', 1, 107);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (15, 'Jack', 'Lopez', 2, 108);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (16, 'Jason', 'Gonzalez', 2, 108);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (17, 'Julia', 'Perez', 3, 109);

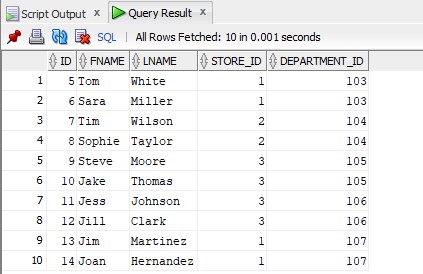
INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (18, 'Javier', 'Martinez', 3, 109);

INSERT INTO employees (id, fname, lname, store\_id, department\_id) VALUES (19,

'Joseph', 'Ramirez', 1, 110);

**1. Retrieve employee details from partition P1 and P2.**

SELECT \* FROM employees WHERE id >= 5 AND id < 15;



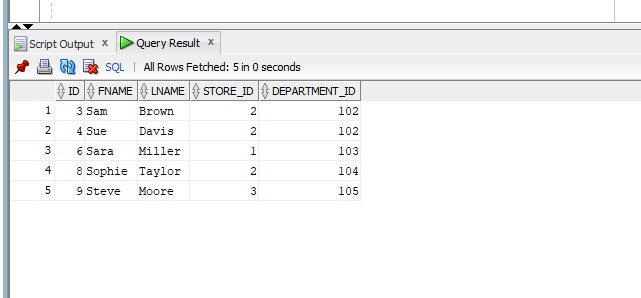
**2.Retrieve employee details from partition P0 and P1 where fname begin with ‘S’.**

**Ans:**

SELECT \* FROM employees

WHERE id < 10

AND fname LIKE 'S%';



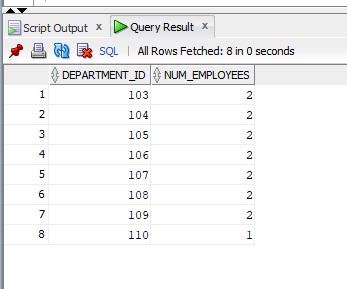
**3.(Count number of employees from each department from p1, p2 and p3.) Ans:**

SELECT department\_id, COUNT(\*) AS num\_employees

FROM employees

WHERE id >= 5 AND id < 20

GROUP BY department\_id;



**Hash Partition:**

**Consider a table named sales\_hash with schema (salesman\_id number(5), salesman\_name varchar2(30), sales\_amount number(10), week\_no number(2)) with salesman\_id as primary key and insert at least 10 records.**

**Create 4 partitions using hash partitioning.**

create table sales\_hash( salesman\_id number(5) primary key, salesman\_name varchar2(30), sales\_amount number (10), week\_no number(2)

)

partition by hash(salesman\_id)

PARTITIONS 4;

drop table sales\_hash;

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (1, 'Arjun Rao', 1500, 1);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (2, 'Priya Sharma', 2000, 2);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (3, 'Ravi Kumar', 3000, 3);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (4, 'Anita Verma', 4000, 4);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (5, 'Sandeep Patel', 2500, 5);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES

(6, 'Neha Yadav', 3500, 6);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (7, 'Rajesh Gupta', 2200, 7);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (8, 'Priyanka Mehta', 2700, 8);

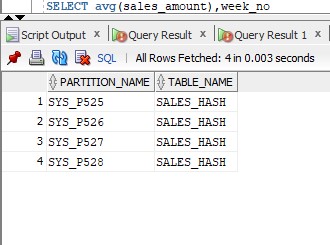
INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (9, 'Amit Singh', 5000, 9);

INSERT INTO sales\_hash (salesman\_id, salesman\_name, sales\_amount, week\_no) VALUES (10, 'Rohit Kapoor', 1800, 10);

SELECT partition\_name, table\_name

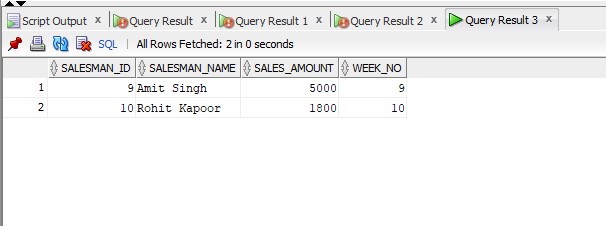
FROM all\_tab\_partitions

WHERE table\_name = 'SALES\_HASH';



**1.Retrieve sales details from 2nd partition.**

SELECT \* FROM sales\_hash PARTITION (SYS\_P526);

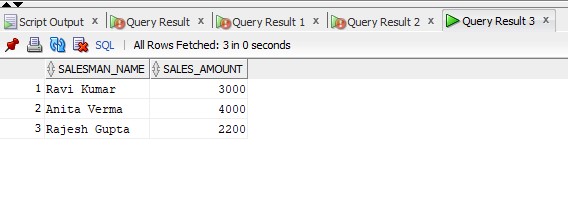


2**.Retrieve name of sales mans and amount from 4th partition where sale amount between 2000 and 5000.**

SELECT salesman\_name, sales\_amount

FROM sales\_hash PARTITION (sys\_p528)

WHERE sales\_amount BETWEEN 2000 AND 5000;



**3.Find average sale amount per week from 3rd partition.**

SELECT avg(sales\_amount),week\_no from sales\_hash PARTITION (sys\_p527) group by week\_no order by week\_no;

