ADS Experiment 5

Name: Sujay Gangan

PRN: 2122000567

Roll No.: B35

-- RANGE PARTITIONING

```
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)
);
```

```
insert into employees values(0, 'Sumit', 'More', 2541, 101);
insert into employees values(1, 'Jay', 'Bansode', 2251, 101);
insert into employees values(2, 'Sujay', 'Gangan', 2541, 101);
insert into employees values(3, 'Aryan', 'Mangrule', 2642, 101);
insert into employees values(4, 'Tanmay', 'Vidwans', 2645, 102);
insert into employees values(5, 'Soham', 'Sadolkar', 2415, 102);
insert into employees values(6, 'Somnath', 'Kumbhar', 2524, 103);
insert into employees values(7, 'Vaibhav', 'Malvi', 2251, 104);
insert into employees values(8, 'Aditya', 'Belkude', 2541, 105);
insert into employees values(9, 'Pavan', 'Rajmane', 2642, 105);
insert into employees values(10, 'Shreyas', 'Bansode', 2645, 106);
insert into employees values(11, 'Sourabh', 'Shinde', 2415, 107);
insert into employees values(12, 'Sourabh', 'Jadhav', 2524, 108);
insert into employees values(13, 'Samarth', 'Jadhav', 2251, 105);
insert into employees values(14, 'Prasanna', 'Patil', 2541, 104);
insert into employees values(15, 'Vivek', 'Patil', 2642, 103);
insert into employees values(16, 'Shreyas', 'Patil', 2645, 104);
insert into employees values(17, 'Shreyas', 'Shinde', 2415, 107);
insert into employees values(18, 'Pranav', 'Chavan', 2524, 105);
insert into employees values(19, 'Atharva', 'Patil', 2251, 107);
```

-- 1. Retrieve employee details from partition p1 and p2

```
select *
from employees partition(p1) union select * from employees partition(p2);
```

ID	FNAME	LNAME	STORE_ID	DEPARTMENT_ID
5	Soham	Sadolkar	2415	102
6	Somnath	Kumbhar	2524	103
7	Vaibhav	Malvi	2251	104
8	Aditya	Belkude	2541	105
9	Pavan	Rajmane	2642	105
10	Shreyas	Bansode	2645	106
11	Sourabh	Shinde	2415	107
12	Sourabh	Jadhav	2524	108
13	Samarth	Jadhav	2251	105
14	Prasanna	Patil	2541	104

-- 2. Retrieve employee details from partition p0 and p1 where fname begin with 'S'

```
select *
from employees partition(p0)where fname like 'S%' union select * from employees partition(p1)
where fname like 'S%';
```

ID	FNAME	LNAME	STORE_ID	DEPARTMENT_ID
0	Sumit	More	2541	101
2	Sujay	Gangan	2541	101
5	Soham	Sadolkar	2415	102
6	Somnath	Kumbhar	2524	103

-- 3. Count number of employees from each department from p1, p2, p3

```
select department_id, count(*) as Number_of_Employees
from (select * from employees minus select * from employees partition(p0)) group by department_id;
```

DEPARTMENT_ID	NUMBER_OF_EMPLOYEES
107	3
108	1
105	4
104	3
103	2
102	1
106	1

-- HASH PARTITIONING

```
create table sales_hash(
   salesman_id number(5) primary key,
   salesman_name varchar(30),
   sales_amount number(10),
   week_no number(2)
)
partition by hash(salesman_id) partitions 4;

insert into sales_hash values(1, 'Jay', 2251, 1);
insert into sales_hash values(2, 'Sujay', 2541, 1);
insert into sales_hash values(3, 'Aryan', 2642, 2);
insert into sales_hash values(4, 'Tanmay', 2645, 1);
insert into sales_hash values(5, 'Soham', 2415, 1);
insert into sales_hash values(6, 'Somnath', 2524, 3);
insert into sales_hash values(7, 'Vaibhav', 2251, 1);
insert into sales_hash values(8, 'Aditya', 2541, 2);
insert into sales_hash values(9, 'Pavan', 2642, 3);
insert into sales_hash values(10, 'Shreyas', 2645, 3);
```

-- Query for getting the hash values of each partition

```
SELECT TABLE_NAME, PARTITION_NAME
FROM ALL_TAB_PARTITIONS
WHERE table_name = 'SALES_HASH' ORDER BY 1,2;
```

TABLE_NAME	PARTITION_NAME
SALES_HASH	SYS_P640880
SALES_HASH	SYS_P640881
SALES_HASH	SYS_P640882
SALES_HASH	SYS_P640883

-- 1. Retrieve sales details from 2nd partition

```
select *
from sales_hash partition(SYS_P640881);
```

SALESMAN_ID	SALESMAN_NAME	SALES_AMOUNT	WEEK_NO
9	Pavan	2642	3
10	Shreyas	2645	3

-- 2. Retrieve name of salesman & amount from partition 4 where sales amount between 2000 & 5000

```
select salesman_name, sales_amount
from sales_hash partition(SYS_P640883)
where sales_amount between 2000 and 5000;
```

SALESMAN_NAME	SALES_AMOUNT
Jay	2251
Aryan	2642
Tanmay	2645
Vaibhav	2251

-- 3. find average sale amount per week from 3rd partition

```
select week_no, avg(sales_amount)
from sales_hash partition(SYS_P640882)
group by week_no order by week_no;
```

WEEK_NO	AVG(SALES_AMOUNT)
1	2478
2	2541