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Experiment No. 3

Implement Horizontal and Vertical Fragmentation and perform operations

Problem Statement

Create a global conceptual schema emp (eno, ename, city, salary) wit eno as a primary key and insert 10 records.

B27_ADS.sql

```
CREATE TABLE emp (
   eno INT PRIMARY KEY,
   ename VARCHAR(50),
   city VARCHAR(50),
   salary DECIMAL(10, 2)
);

INSERT INTO emp (eno, ename, city, salary) VALUES (1, 'Prachi', 'Miraj', 62000);
INSERT INTO emp (eno, ename, city, salary) VALUES (2, 'Komal', 'Solapur', 55000);
INSERT INTO emp (eno, ename, city, salary) VALUES (3, 'Samiksha', 'Kolhapur', 80000);
INSERT INTO emp (eno, ename, city, salary) VALUES (4, 'amruta', 'Sangli', 25000);
INSERT INTO emp (eno, ename, city, salary) VALUES (5, 'Pranjali', 'Kohapur', 16000);
INSERT INTO emp (eno, ename, city, salary) VALUES (6, 'Vaishnavi', 'Karvir', 13000);
INSERT INTO emp (eno, ename, city, salary) VALUES (7, 'Aditi', 'Rahdhanagari', 22000);
INSERT INTO emp (eno, ename, city, salary) VALUES (8, 'Radhika', 'kolhapur', 24000);
INSERT INTO emp (eno, ename, city, salary) VALUES (9, 'kiran', 'sangli', 9000);
INSERT INTO emp (eno, ename, city, salary) VALUES (10, 'manish', 'miraj', 30000);
```

Welcome Page | B27_ADS.sql

Worksheet | Query Builder

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    eno INT PRIMARY KEY,
    ename VARCHAR(50),
    city VARCHAR(50),
    salary DECIMAL(10, 2)
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INSERT INTO emp (eno, ename, city, salary) VALUES (9, 'kiran', 'sangli', 9000);
INSERT INTO emp (eno, ename, city, salary) VALUES (10, 'manish', 'miraj', 30000);
INSERT INTO emp (eno, ename, city, salary) VALUES (11, 'shreyash', 'sangli', 15000);

select *
from emp;

-- Hrizontal Fragmentation
CREATE TABLE emph1 AS
SELECT * FROM emp WHERE salary <= 15000;

SELECT
    * FROM emph1
```

Script Output | Query Result

SQL | All Rows Fetched: 11 in 0.006 seconds

	ENO	ENAME	CITY	SALARY
1	1	Prachi	Miraj	62000
2	2	Komal	Solapur	55000
3	3	Samiksha	Kolhapur	80000
4	4	amruta	Sangli	25000
5	5	Pranjali	Kohapur	16000
6	6	Vaishnavi	Karvir	13000
7	7	Aditi	Rahdhanagari	22000
8	8	Radhika	kolhapur	24000
9	9	kiran	sangli	9000
10	10	manish	miraj	30000
11	11	shreyash	sangli	15000

-- Hrizontal Fragmentation

Horizontal Fragmentation:

Divide emp into horizontal fragments using the condition that emph1 contains the tuples with salary<=15000 and emph2 with salary>15000.

CREATE TABLE emph1 AS

SELECT * FROM emp WHERE salary <= 15000;

SELECT * FROM emph1

CREATE TABLE emph2 AS

SELECT * FROM emp WHERE salary > 15000;

--Vertical fragmentation

Vertical Fragmentation:

Divide emp into vertical fragments using the condition that empv1 contains the attributes (eno, ename) and empv2 contains the attributes (eno, city, salary)

CREATE TABLE empv1 AS

SELECT eno, ename FROM emp;

CREATE TABLE empv2 AS

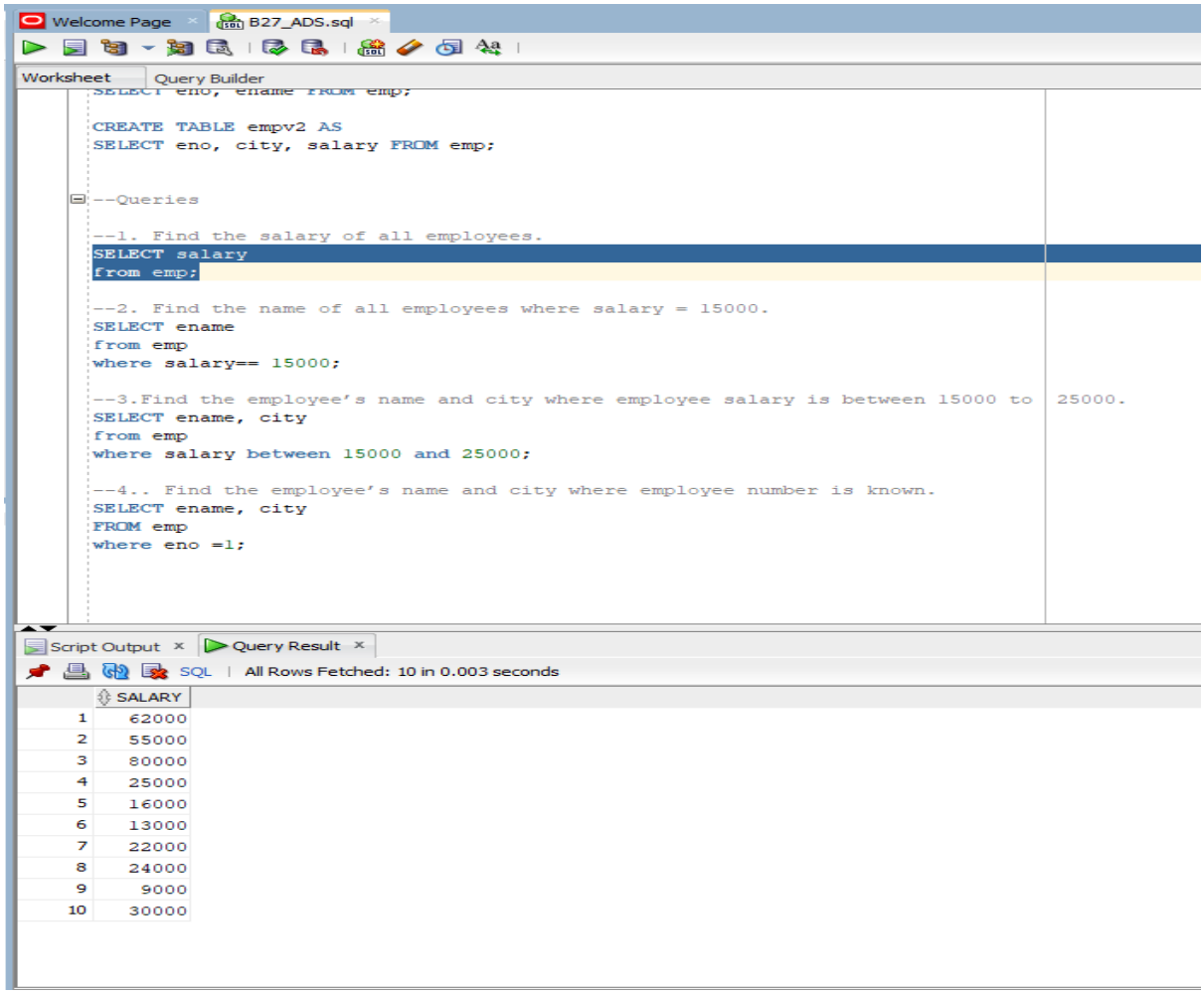
SELECT eno, city, salary FROM emp;

--Queries

--1. Find the salary of all employees.

SELECT salary

from emp;



--2. Find the name of all employees where salary = 15000.

SELECT ename

from emp

where salary== 15000;

```
--2. Find the name of all employees where salary = 15000.
SELECT ename
from emp
where salary= 15000;

--3.Find the employee's name and city where employee salary is between 150
SELECT ename, city
from emp
where salary between 15000 and 25000;

--4.. Find the employee's name and city where employee number is known.
SELECT ename, city
FROM emp
where eno =1;
```

ipt Output × | Query Result ×

SQL | All Rows Fetched: 1 in 0.001 seconds

	ENAME
1	shreyash

--3.Find the employee□s name and city where employee salary is between 15000 to 25000.

SELECT ename, city

from emp

where salary between 15000 and 25000;

```
--3.Find the employee's name and city where employee salary is between 15000 to 25000
SELECT ename, city
from emp
where salary between 15000 and 25000;

--4.. Find the employee's name and city where employee number is known.
SELECT ename, city
FROM emp
where eno =1;
```

ipt Output × | Query Result ×

SQL | All Rows Fetched: 5 in 0.001 seconds

	ENAME	CITY
1	amruta	Sangli
2	Pranjali	Kohapur
3	Aditi	Rahdhanagari
4	Radhika	kolhapur
5	shreyash	sangli

--4.. Find the employee's name and city where employee number is known.

SELECT ename, city

FROM emp

where eno =1;

```
--4.. Find the employee's name and city where employee number is known.
SELECT ename, city
FROM emp
where eno =1;
```

ipt Output x | Query Result x

SQL | All Rows Fetched: 1 in 0.001 seconds

	ENAME	CITY
1	Prachi	Miraj