

Question 9 [5 Marks]

Consider the following database table named `water_schemes` :

<i>water_schemes</i>		
scheme_no	district_name	capacity
1	Ajmer	20
1	Bikaner	10
2	Bikaner	10
3	Bikaner	20
1	Churu	10
2	Churu	20
1	Dungargarh	10

The number of tuples returned by the following SQL query is

```
with total(name, capacity) as
```

```
select district_name, sum(capacity)
```

```
from water_schemes
```

```
group by district_name
```

```
with total_avg(capacity) as
```

```
select avg(capacity)
```

```
from total
select name
```

```
from total, total_avg
```

```
where total.capacity >= total_avg.capacity
```

A

1



2



3

D

4

Explanation

First group by district name is performed and total capacities obtained as following

Ajmer 20

Bikaner 40

Charu 30

Dungargarh 10

Then average capacity is computed,

$$\text{Average Capacity} = (20 + 40 + 30 + 10)/4$$
$$= 100/4$$
$$= 25.$$

Finally districts with more than average are selected.

Bikaner is 40 which is greater than average (25)

Charu is 30 which is also greater than average (25).

Therefore answer is 2 tuples.