

Database Management System

End Sem - Exam

1.

Using emp-name as clustered index is possible only when every employee will have a unique name. If this is ensured, the tuples will be organized according to employee alphabetically.

Using emp-id as clustered index is definitely possible considering ~~emp~~ everyone is already has a unique id assigned to them. The tuples will be organized according to emp id.

Using both emp-name and emp-id as a clustered index may not be possible but it is possible when two names one clustered index and one non-clustered index.

2. DDL is important in creating of objects in DBMS because it describes external and logical Schemas.
- DML is used to access and update data ; It is not important for Representation of the data.

3. It is True.

Because it is to increase the transaction through-put. Assume we have five or ten machines and all machines are connected to single server. If server handles transactions or queries one after the other then it is useless to have so many machines. Hence it doesnot use or execute transactions one after the other.

4.

- a. A user must make sure that his (data) transaction doesn't interrupt or corrupt data in database. For example consider a company which transacts salary for its employees or for buying goods the transaction done must be recorded accurately to avoid confusion and loss or profit of company.

Nikhita. B. K
19BCSO77.

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B. A Database management system must guarantee that the transactions are independent of other transactions. It should execute automatically or as if it is the only transaction running. Also transaction will either complete fully or will be aborted and the database returned to its initial state. This ensures that database remains consistent.

5.

7. $\rho(R_1, \text{Catalog})$
 $\rho(R_2, \text{Catalog})$

$\pi_{R_1.Pid \wedge R_1.Pid = R_2.Pid \wedge R_1.Sid \neq R_2.Sid}$
 $(R_1 \times R_2)$

SQL.

Select C.Pid
From Catalog C
where exists

(

Select C1.Sid

From catalog C1

where C1.Pid = C.Pid And
C1.Sid != C.Sid

)

8.

Nikhita B. K
19BCSO77

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Create View Senior Emp

(

empid, name, age, salary

)

As

Select ~~Emp~~ E.empid, E.name, E.age, E.salary

From Emp E

where E.age > 50