19BCS025

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06/05/2021.

1) yes, it is possible to do all operations in DBMS. Because heap file have index with the ~~stmp~~ emp name field. we acess every ~~data~~ with ~~with~~ this emp name column.

2) (i) DDL is important in representing information because it is used to describe external and logical schemas

(ii) DML is used to access and update data; It is not important for representing data.

3) True; In DBMS, database is stored among multiple users. transactions from the multiple user actions can be interrieved to improve the excution time of users queries. By interlaving actions of different transactions, users need not to wait for previous transaction is fully completed.

4) (i) User must guarantee that his/her transaction does not corrupt data or insert wrong data in the database. In a banking data-base, a user must guarantee that a cash withdraw transaction accurately models the amount a person removes from his/her account.

(ii) DBMS must guarantee that transaction

are executed fully and independently of other transactions. An essential property of a DBMS is that a transaction should excute atomically, or as it is the only transaction running. Also, transactions will either complete fully, or will be aborted and the database returned to it's initial state. This ensures that the database remains consistent.

7) → Relational Algebra

$\rho(R_1, \text{Catalog})$
$\rho(R_2, \text{Catalog})$
$\pi_{R_1.Pid} \sigma_{R1.Pid = R2.Pid \wedge R1.Sid16 =} =$
$= R2.Sid (R1 \times R_2).$

→ SQL

SELECT C. Sid
FROM Catalog C

Where Exist (SELECT Cl.Sid)
       FROM Catalog Cl WHERE
       Cl.Pid = C.Pid AND ~~Cl.Sid~~
       Cl.Sid6 = C.Sid.

8)   Invalid query.   ← output

     ⇒ This relational algebra statement
   does not return anything because of
   the sequence of Projection operators
   once the Sid is projected, it is
   the only field in the set.
   Therefore, projecting on some
   will not return anything.

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a) Query on Emp schema that could be automatically updated by updating Emp.

CREATE VIEW Senior Emp (eid, name, age, salary).
AS SELECT E.eid, E.ename, E.age, E.salary
FROM Emp E
WHERE E.age > 50.

5) Yes, we can determine the primary key of realtion with help of instance.