

Name - Aman Yadav

Roll no - 20207005

Subject - Database Management System

Enroll - GUV/20/05105

Date - 25-01-2022

Course - B.Sc. Cs (3rd Sem.)Part - BAns No - 1

1. DDL - DDL is also known as Data definition language helps you to define the database structure or schema while data definition language used to create database schema. This allow you to store shared data and improve integrity of data independence.
2. DML - DML is know as Data manipulation language allow you to manage the data stored in the database. DML commands only affect one or more rows. This offers efficient human interaction.

⊛ Difference between DDL and DML

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. DDL commands used to create database 2. create, drop, alter, truncate etc. are DDL commands. 3. it defines the column of a table | <ol style="list-style-type: none"> 1. DML command used to manipulate and populate database 2. insert, update, delete, merge etc. are DML commands. 3. It adds or update the row of table |
|---|---|

⊛ DDL Commands

create: create statement is used to define the database structure schema:

syntax - create table Aman (
eid int,
ename varchar (50));

Drop - drop commands removes table from database,

syntax - Drop table Aman;

2) alter - alter command allow you to alter structure of db.
to add new column in previous table,

syntax - alter table Aman address varehas(20);

truncate - this will ~~create~~ delete all the rows from table and free the space containing the table.

syntax - truncate table Aman;

★ DML commands

insert - this command is used to insert data into row of table.

syntax. insert into Aman values (1, 'Aman', 'Janggir'), (2, 'Garima', 'Raipur');

update - this is used to modify value of ~~a common~~ column

syntax - update Aman set address = 'Janggir' where eid = 2;

delete - this command is used to remove one or more rows from a table

syntax - delete from Aman where eid = 1;

Ans NO - 4

Transaction - A transaction can be defined as group of tasks. A single task is the minimum processing unit which can't be divided further

example - suppose a bank employee transfers rs. 500 from a's account to b's account. The very simple and small transaction involves low-levels task

a's account

open-account (a)

old-balance = a.balance

new-balance = old-balance - 500

a.balance = new-balance

close-account (a)

b's account

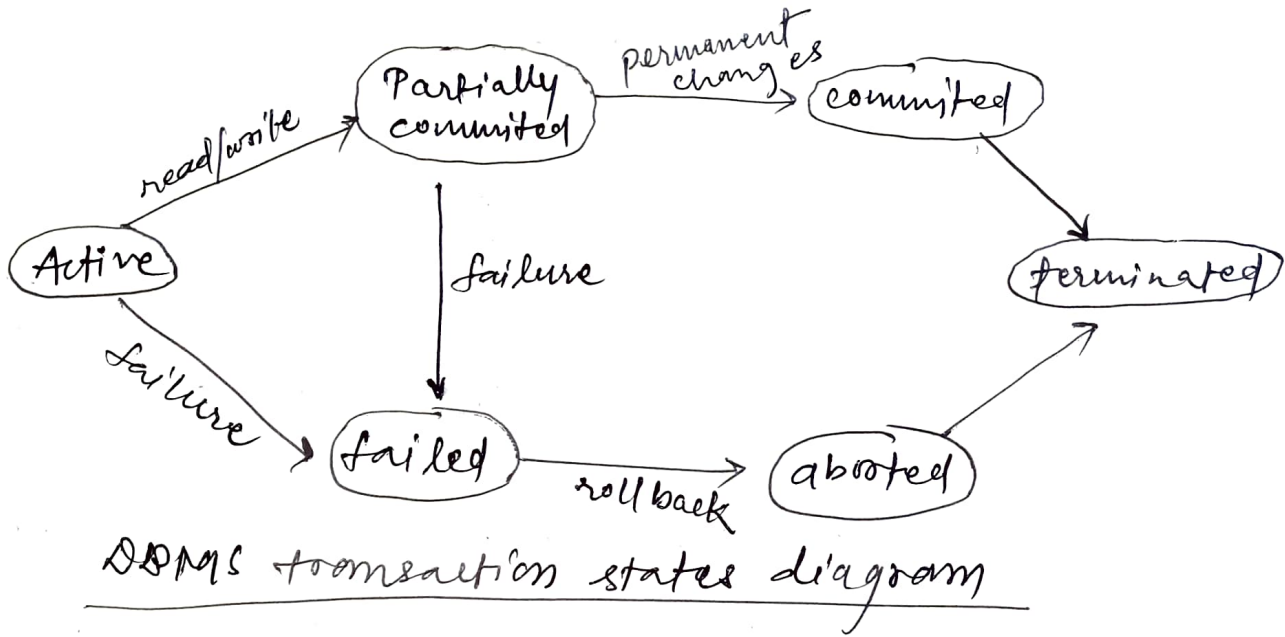
open-account (b)

old-balance = b.balance

new-balance = old-balance
+ 500

b.balance = new-balance

close-account (b)



Ans NO - 3

⊛ BCNF - Boyce - codd normal form is based on functional dependencies that take into account all candidate key in a relation. However BCNF also has additional constraint compared with general definition of 3NF.

A relation is in BCNF, if x is a superkey for every functional dependence $x \rightarrow y$ in a given relation. In other words we can say that a relation is in BCNF iff every determinant is candidate key. $x \rightarrow y$ here x is determinant, and y is dependent.

BCNF decomposition may ~~also~~ always not possible with dependency preserving, however it always satisfies lossless join operation.

Example - for the relation $R(A, B, C, D)$ with functional dependencies as $\{A \rightarrow B, A \rightarrow C, C \rightarrow D, C \rightarrow A\}$:

candidate keys $\rightarrow \{A, C\}$
 as closure of $A = \{A, B, C, D\}$
 $C = \{A, B, C, D\}$

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PART-A

Answers — 1. (b) Like operator

2. (b) select username, password from users;

3. (b) a view is a virtual table which result of executing a pre-compiled query. A view is not part of the physical database schema, while regular tables are.

4 (b) 9

5. (d) feature has two 0's in it any, position.

6. (a) select city, temperature, condition from weather where condition not in ('sunny', 'cloudy');