BASICS OF DATABASE

Assignment

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TOPS TECHNOLOGIES

Basics of database

1. What do you understand By Database ?

Ans.- A database is a collection of organized data that's stored electronically in a computer system.

→ Database can store any type of data including number, words, images, videos and files.

→ They are designed to hold large amount of data and allow multiple users to access and query it.

2. What is Normalization?

Ans.- Normalization is the process of organizing data in database.

→ There are few types of normalization forms like : 1NF, 2NF and 3NF.

3. What is Difference between DBMS and RDBMS?

Ans.-

DBMS	RDBMS
DBMS stores data as file.	RDBMS stores data in tabular form.
Normalization is not present.	Normalization is present.
DBMS does not support distributed database.	RDBMS supports distributed database.
Security is less.	More security measures provided.
It supports single user.	It supports multiple users.
Examples : XML etc.	Examples : MySQL, SQL etc.

4. What is MF Cod Rule of RDBMS Systems?

Ans.- Codd's rules are proposed by a computer scientist named Dr. Edgar F. Codd and he also invent the relational model for database management.

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There are 12 MF cod rules of RDBMS systems :

Rule 1: The Information Rule

Rule 2: The Guaranteed Access Rule

Rule 3: Systematic Treatment of NULL Values

Rule 4: Active Online Catalog Rule

Rule 5: The Comprehensive Data Sublanguage Rule

Rule 6: The View Updating Rule

Rule 7: High-level Insert, Update, and Delete

Rule 8: Physical Data Independence

Rule 9: Logical Data Independence

Rule 10: Integrity Independence

Rule 11: Distribution Independence

Rule 12: Non-Subversion Rule

5. What do you understand By Data Redundancy?

Ans.- Data redundancy in DBMS means the repetition of the same data in database.

→ Example :

stu_id	name	age	dept_id	dept_name	dept_head
1	Tony	18	100	CS	DR.Banner
2	Steve	18	100	CS	DR.Banner

6. What is DDL Interpreter?

Ans.- DDL refers to Data Definition Language.

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→ DDL Interpreter interprets the DDL statements and records the generated statements in the table containing metadata.

7. What is DML Compiler in SQL?

Ans.- DML stands for Data Manipulation Language.

→ DML is a computer programming language used for inserting, deleting and updating data in a database.

8. What is SQL Key Constraints writing an Example of SQL Key Constraints?

Ans.- SQL constraints are used to specify rules for the data in a table.

→ There are few commonly used contraints in SQL :

→ NOT NULL
→ UNIQUE
→ PRIMARY KEY
→ FOREIGN KEY
→ CHECK
→ DEFAULT
→ CREATE INDEX

9. What is save Point? How to create a save Point write a Query?

Ans.- Savepoint is a command in SQL that is used with the rollback command.

→ Query :-

BEGIN TRANSACTION;

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> UPDATE customers SET address = 'New Address' WHERE
> id=101;
> SAVEPOINT update_address;
> INSERT INTO orders (customer_id, product_id) VALUES (101,
> 21494354);
> COMMIT;

10. What is trigger and how to create a Trigger in SQL?

Ans.- Trigger is a special type of stored procedure that automatically runs when an event occurs in the database server.

→ Example :

```
DELIMITER $$

CREATE TRIGGER employee1 AFTER INSERT ON employee FOR EACH ROW

BEGIN

        INSERT INTO
        viewtable(Employee_ID,First_name,Last_name,Salary,Joining_date,Department,
action_performed)
        VALUES(new.Employee_ID,new.First_name,new.Last_name,new.Salary,new.Joining_a
te,
new.Department,'Record inserted');

        END
```