C written DBMS

Lorenzo Tecchia, Nathan Ritter
lorenzot@zedat.fu-berlin.de
nathan02@fu-berlin.de

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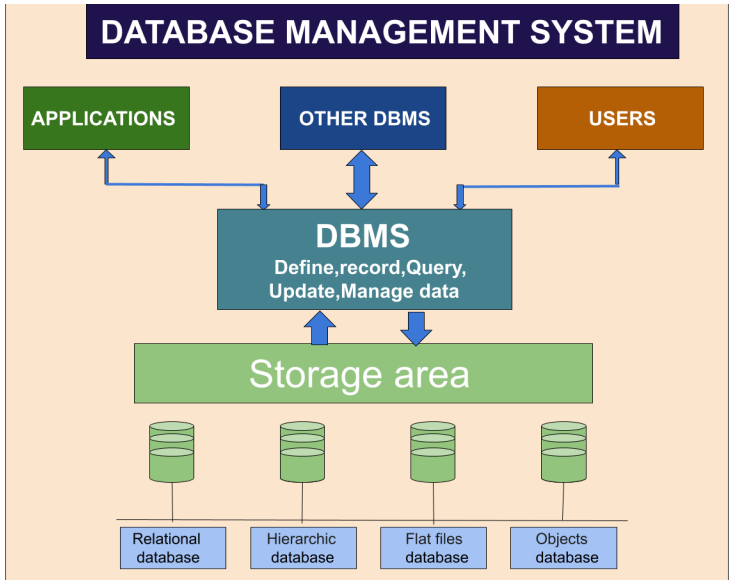
Overview of the presentation

DBMS Idea

Our Project is a DBMS written in the C Language.
Even tho the C language is a very old language it's still widely used nowadays, to write many DBMSs.

What is a DBMS



- DBMS stands for Database Management system.
- A DBMS is a tool for storing retrieving stored data.
- DMBS are needed anywhere you have a data.

Functions of a DBMS

- So what would be the basics functions of a DBMS?
- What are the most crucial capabilities of any modern DBMS?

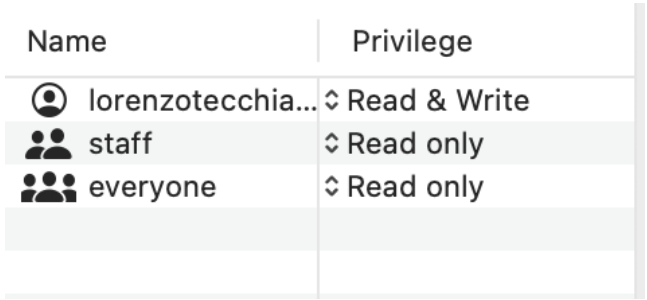
(Security, Library management, server management, Type definition, ecc...)

Libraries for string management

PostgreSQL has the REGEX library, but our software could have any ad hoc library that the customer requires.

Able to manage different users

Different users with different access policy would have to be managed by the DBMS and would have the ability to group them accordingly.



Able to manage different servers

Different users would have many servers between them, so the DBMS should be able to switch between them.

Different data types


```
54  create table mtl.magazine
55  (
56      ISSN_M           varchar,
57      Name_M           varchar,
58      Argument         timestamp,
59      Manager          varchar,
60      YearRelease      date,
61      PublicationPeriod int,
62      AccessMode       text,
63      PublishingHouse serial
64  );
```

Tables of RDBMSs (Relational DBMSs) would have different attributes and so the need for different data types.

Create Indexes


```
34  CREATE INDEX idx_name
35    ON mtl.author (LName, FName);
36
```

Indexes are necessary for fast data retrieval and data parsing. Like primary keys, or the so called indexes.

Security

User shall have passwords to log into their servers, and to make changes to the data itself.

Data retrieval time


```
(execution: 29 ms, fetching: 120 ms)
```

The DBMS should provide functions to monitor the time elapsed for every query done the the servers. And provide any ad-hoc required speed/performance.

Accuracy

Data accuracy means providing capabilities or functions that refer to error-free records that can be used as a reliable source of information.(e.g. not allowing negative numbers for item counting).

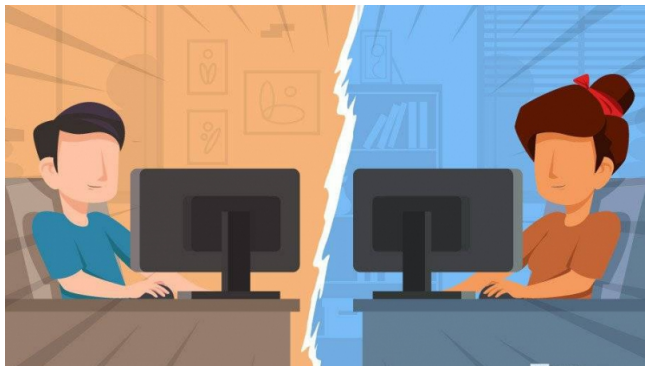
Consistency

In database systems, consistency (or correctness) refers to the requirement that any given database transaction must change affected data only in allowed ways. (e.g. constraints, cascades, triggers)

Target Groups of our Software

What are the target group of the software?

Programmers



Programmers developing Applications/Systems etc. for companies that need to store large amounts of data efficiently and effectively

Customers

What are Our potential Customers?
Well Everyone with an incline for programming and Knowledge of Databases

Programming

Companies

Could shape out the DBMS to their needs, or request specifics functionalities that perfectly meet their needs and requirements.

What level of knowledge is requires to use the software?

Having deeper knowledge of DBMSs will be useful, to provide clever solutions for the same problem, but even newbies can approach the software.

Problems with our software

What problems will we face?
Lots of other DBMS are available and well established, like PostgreSQL or SQLite. (Which are also written in C).

Adaptation/Migration

Changing the DBMS for and existing Database is a very complex process so, companies wouldn't be totally inclined to change to our software(if the already have their own).

The End

THE END