C written
DBMS

Tecchia,
Ritter

Introdcution

Domain and
Require-
ments

Target Group
of the
software

Knowledge
level required

Software
drawbacks

C written DBMS

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Overview of the presentation

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1 Introdcution

2 Domain and Requirements

3 Target Group of the software

4 Knowledge level required

5 Software drawbacks

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.

DATABASE MANAGEMENT SYSTEM

APPLICATIONS   OTHER DBMS   USERS

DBMS
Define,record,Query, Update,Manage data

Storage area

Relational database   Hierarchic database   Flat files database   Objects database
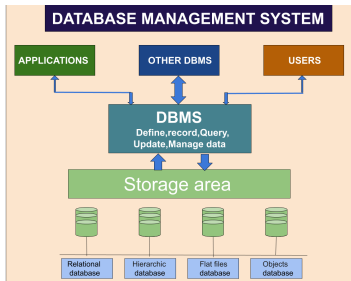
- DBMS stands for Database Management system.

- A DBMS is a tool for storing retrieving stored data.

- DMBS are needed anywhere you have a data.

- 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...)

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

.[RegEx]*

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

Name	Privilege
lorenzotecchia...	⇕ Read & Write
staff	⇕ Read only
everyone	⇕ Read only
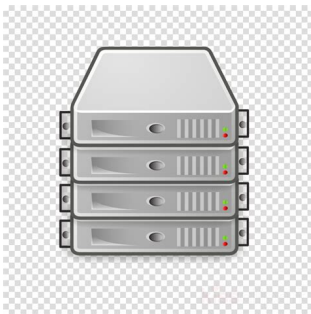
Different users would
have many servers
between them, so the
DBMS should be able to
switch between them.

Different data types

```
int main (void)
std::vector<bool>
is_prime(100, true); for(int i =
2; i < 100; i +
+)if(is_prime[i])std :: cout << types."";
```

Tables of RDBMSs
(Relational DBMSs)
would have different
attributes and so the
need for different data
types. $for(int j = i; j < 100; is$

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

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

```
(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.

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).

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)

What are the target group of the software?

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

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

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

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

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