In fact, a database is most of the time underused as computing
data in the database
to provide various ways to view (on screen or in print) the
to add, delete, and update the data in the database

term designed to
A database management system (DBMS) is a computer sys
A "database" is a collection of related data.

Definitions

Reading

ITROS  class (2001), "SQL File Interpretation", //www.ault.edu/homem/Krish
"Mining (chapter 1), Roman, Steven (1999), "Access Database Design and Program

2000-03-20
Thomas Krishel
Introduction to Database
TRRO Lecture 8
this is just the first three lines...

1788 | C4 | CX | D2 | CT | BD | BM
1790 | D0 | D0 | CT | CV | D6 | D3 | D1 | CP | CT | D7 | D8 | D3 | D7 | D3
1788 | D8 | D6 | CP
1789 | CR | D3 | D1 | D4 | D3 | D7 | CT | D6
1789 | C5 | D3 | DE | CP | D6 | D8 | B8 | CF | BA | BT | BA
1789 | CB | CT | D6 | CT | D2 | CP | CS | CT | CX | D2 | BX | B8 | C3 | BA | BF | BK | BJ
1788 | BD | BL | BL | BD
1788 | BD | BJ | BK | BK
1789 | BW | BD | BD | BH | BE | BJ | BF
1789 | BW | CT | D9 | D8 | D7 | CR | CW | CT | BZ | D6 | CP | D1 | D1 | D3 | D4 | CW | D3 | D2
1789 | C4 | CX | D2 | CT | BF | BM
1789 | BT | CS | CP | CV | CX | D3
1789 | BI | BM | BC | BD
1789 | D3 | D6 | CR | CW | CT | D7 | D8 | D6 | CP
1789 | C7 | D6 | D4 | CW | CT | D9 | D7 | BV | CW | CP | D1 | CQ | CT | D6 | C7 | D6 | CR | CW | CT | D7 | B9
1789 | CP
1789 | CR | D3 | D1 | B9
1789 | C5 | D3 | DE | CP | D6 | D8 | B8 | CF | BA | BT | BA
1789 | CB | CT | D6 | CT | D2 | CP | CS | CT | CX | D2 | BX | B8 | C3 | BA | BF | BK | BJ
1788 | BD | BL | BL | BD
1788 | BD | BJ | BK | BK
1789 | BW | BD | BD | BH | BE | BJ | BF
1789 | BW | CT | D9 | D8 | D7 | CR | CW | CT | BZ | D6 | CP | D1 | D1 | D3 | D4 | CW | D3 | D2
1789 | D8 | CW | CX | D7 | CP | CY | D9 | D7 | D8 | D8 | CW | CT | AC | D6 | D7 | D8 | D8 | CW | D6 | CT | CT | D0 | CX | D2 | CT | D7 | BA | BA | BA
1789 | BX | DC | CP | D1 | D4 | D0 | CT | D8 | CP | CQ | D0 | CT
1789 | BT | CS | CP | D8 | CP | CQ | D0 | CT | CX | D7 | CK | AD | CP | D8 | CX | D8 | CP | D7 | D3 | D2 | CT | D7 | CX | D2 | CV | D0 | CT | D8 | CP | CQ | D0 | CT | BA
1789 | BT | CS | CP | D8 | CP | CQ | D0 | CT | CX | D7 | CK | D6 | CT | D0 | CP | D8 | CX | D3 | D2 | CP | D0 | CX | D8 | CP | D7 | D1 | D3 | D6 | CT | D8 | CP | D2 | D3 | D2 | CT | D7 | CX | D2 | CV | D0 | CT | D8 | CP | CQ | D0 | CT | BA
1789 | C0 | D3 | DB | DB | D3 | D9 | D0 | CS | CP | AD | CP | D8 | CS | CP | D8 | CP | CQ | CP | D7 | CT | D3 | D6 | D8 | CT | D7 | D3 | AC | DC | CS | CP | D8 | CP | D8 | CW | CP | DA | CT | CV | CP | D8 | CW | B9
1789 | CT | D6 | CT | CS | D0 | D3 | D3 | CZ | D0 | CX | CZ | CT | BR

Red look like?

How would a flat database for the soxix data that we have gath
A database is "relational" if it has more than one single table.
A database is "flat" if it has one single table.

Fat and Relational databases

works and tasks...
this is a table of works. Recall that in soxix, we have items.

example table
Example:

<table>
<thead>
<tr>
<th>Item</th>
<th>Itemname</th>
<th>number</th>
</tr>
</thead>
</table>

It will take the form

The table of items

1. a table of items
2. a table of works
3. a table of facts

I suggest to have three tables:

A relational database for socks data

4. deletion anomalies: If we delete all works on an item in the

sense of socks, then we loose the data for the item.

3. insertion anomalies: If we have a new work but we do not

know what tracks it has, we have to leave blank entries

of an "item", but we forget to do it on one of the tracks.

2. update anomalies: Imagine we want to change the number

of the tracks. Many byters are duplicated
we will go through this, somehow.

between 3 and 4 minutes long?

Creating views. If we have data in different tables, it is more

4. Creating views. If we have data in different tables, it is more

easier to find all the information that is dispersed around all

4. Creating views. If we have data in different tables, it is more

1. Maintain integrity. If we remove a work in the table of

3. Maintain integrity. If we remove a work in the table of

works, we must make sure that we delete its tracks from the

works, we must make sure that we delete its tracks from the

tracks of the works.

tracks of the works.

2. Update anonimous. Imagine we want to change the number

2. Update anonimous. Imagine we want to change the number

of a single database. How to split the data database in several

of a single database. How to split the data database in several

databases

databases

Difficulties of relational databases

difficulties of relational databases

| Table of Tracks |

<table>
<thead>
<tr>
<th>Track number</th>
<th>name1</th>
<th>name2</th>
<th>role1</th>
<th>role2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example:

it will take the form

Example:

it will take the form

The table of tracks

The table of tracks

| table of works |

<table>
<thead>
<tr>
<th>role1</th>
<th>name1</th>
<th>role2</th>
<th>name2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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it will take the form

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it will take the form