Available by Anonymous ftp

`gevalt.mit.edu`
`(18.72.1.4)`
`TeX/dblib.tex`

Also over the Andrew File System:
`/afs/athena.mit.edu/user/a/amgreene/TeXhax/dblib.tex`

Random-Access Database

We can rewrite the main loop of Animals:

```
\fields question,yesgoto,nogoto\endfields
\readdatabase{animals.db}
\gotorecord 1
\loop
   \message{\question}\getYN
   \ifyn \gotorecord \yesgoto
     \else \gotorecord \nogoto
   \fi
   \ifnum\recordnumber>0
\repeat
```

Other supported commands:

`\foreachrecord, \writedatabase, \newrecord, \saverecord`

Arrays — Second Method

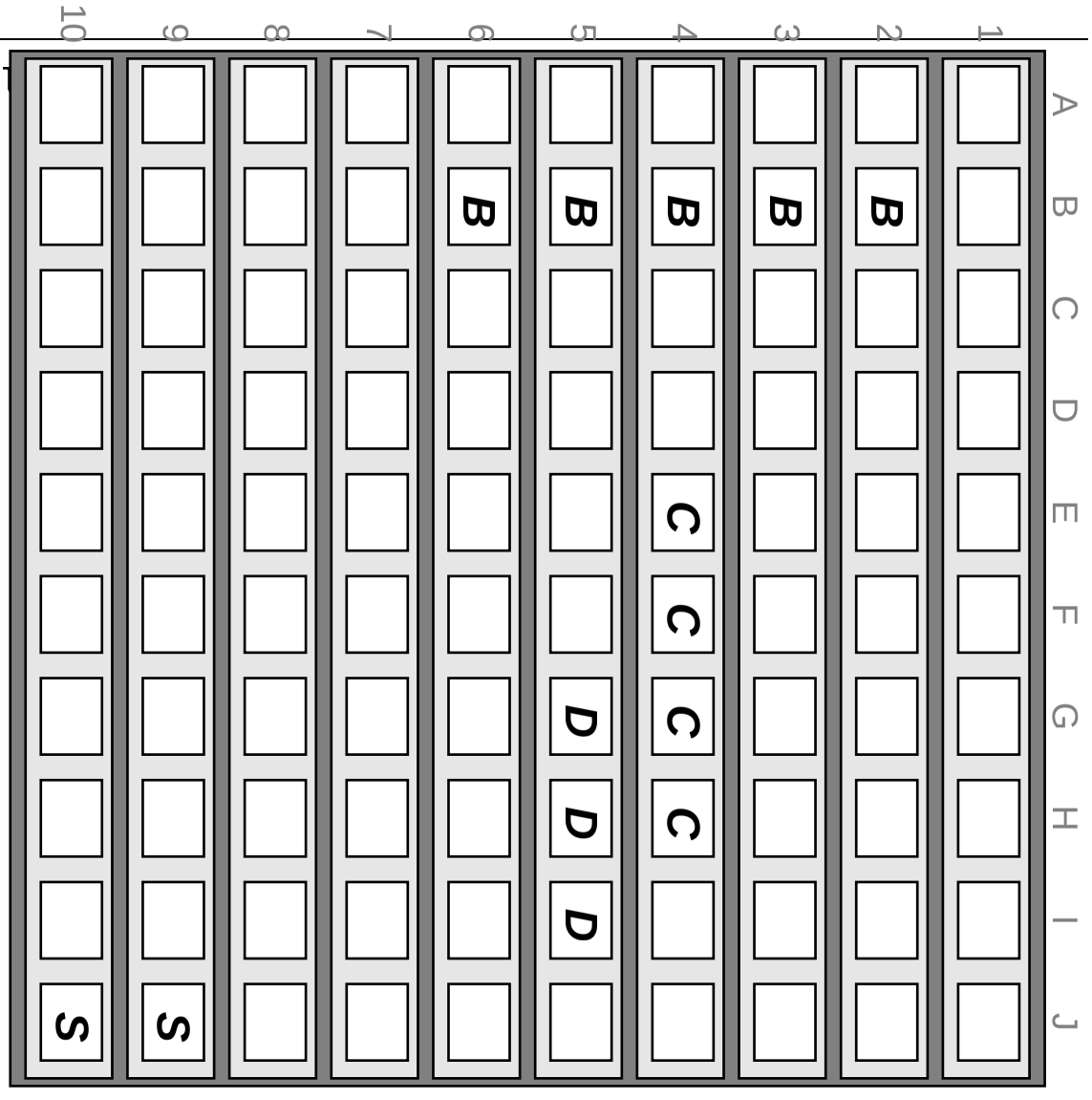
The `get` macro expands to the element value.

```
\def\get#1#2{
   \csname #1.
     \if\relax #2\the\fi
     #2
   \endcsname
}
```

The `put` prefix is used to make the `def` family work with arrays.

```
\def\put#1#2#3{
   \expandafter #1\csname #2.
     \if\relax #3\the\fi
     #3\endcsname
}
```

pot



Battleship™

	1	2	3	4	5	6	7	8	9	10
A									S	S
B		B	B	B	B	B				
C										
D										
E				C						
F				C						
G				C	D					
H				C	D					
I					D					
J										

Database Routines

The `Query` routine selects the next record.

```
\def\Query{
 {\read\inp to \foo                                 %  QUESTION
   \immediate\write16{}
   \message{\foo}
   \GetYN
   \ifyn
     \read\inp to \foo\global\curcode=\foo %  YES-GOTO
     \read\inp to \foo                             %  NO-GOTO
   \else
     \read\inp to \foo                             %  YES-GOTO
     \read\inp to \foo\global\curcode=\foo %  NO-GOTO
   \fi
 }
}
```

Animals

Does it have wings?

Is it pink?

HORSE

FLAMINGO

Does it fly?

EAGLE

PENGUIN

Does it have wings?

Is it pink?

Is it in the TeXbook?

FLAMINGO

Does it fly?

LION

HORSE

EAGLE

PENGUIN

Outline

- Animals
  - Rules
  - TEX code to handle databases
  - Application to “CokeComm”

- Battleship™
  - Rules
  - TEX code to handle arrays
  - Advantages

- Conclusion — The Next Step

TEXreation — Playing Games with TEX's Mind

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