ᚹ

42minjoy

This small version of Joy is claimed to be almost free of bugs.

Even so, there can be some surprises.

The reason for maintaining this version of Joy is that it is an order of magnitude smaller than the full version.

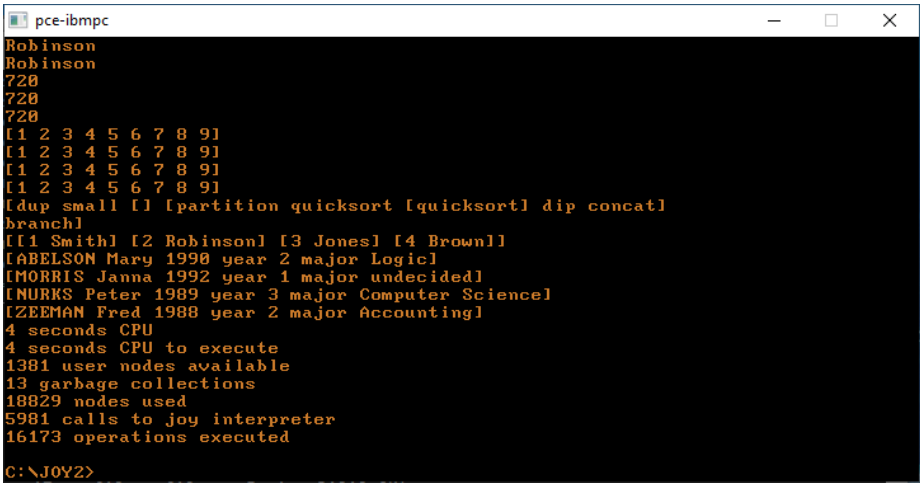
And it has some features that are not present in full Joy, such as scantime expression evaluation.

Retro

This version lends itself to be implemented on old machines, precisely because it is small. It so happened that one of the environments comes with an K&R C compiler, so that is why the sources needed to be changed. Modern compilers can still handle K&R.

MS-DOS 3.3

The first example runs MS-DOS 3.3 on a PC.

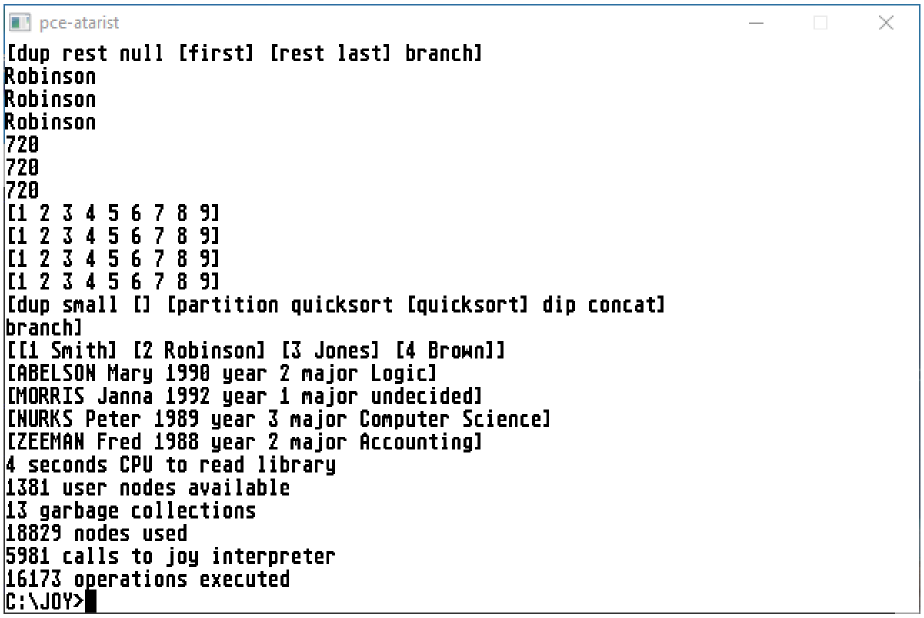


```
Robinson
Robinson
720
720
720
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[dup small [] [partition quicksort [quicksort] dip concat]
branch]
[[1 Smith] [2 Robinson] [3 Jones] [4 Brown]]
[ABELSON Mary 1990 year 2 major Logic]
[MORRIS Janna 1992 year 1 major undecided]
[NURKS Peter 1989 year 3 major Computer Science]
[ZEEMAN Fred 1988 year 2 major Accounting]
4 seconds CPU
4 seconds CPU to execute
1381 user nodes available
13 garbage collections
18829 nodes used
5981 calls to joy interpreter
16173 operations executed

C:\JOY2>
```

TOS 1.04

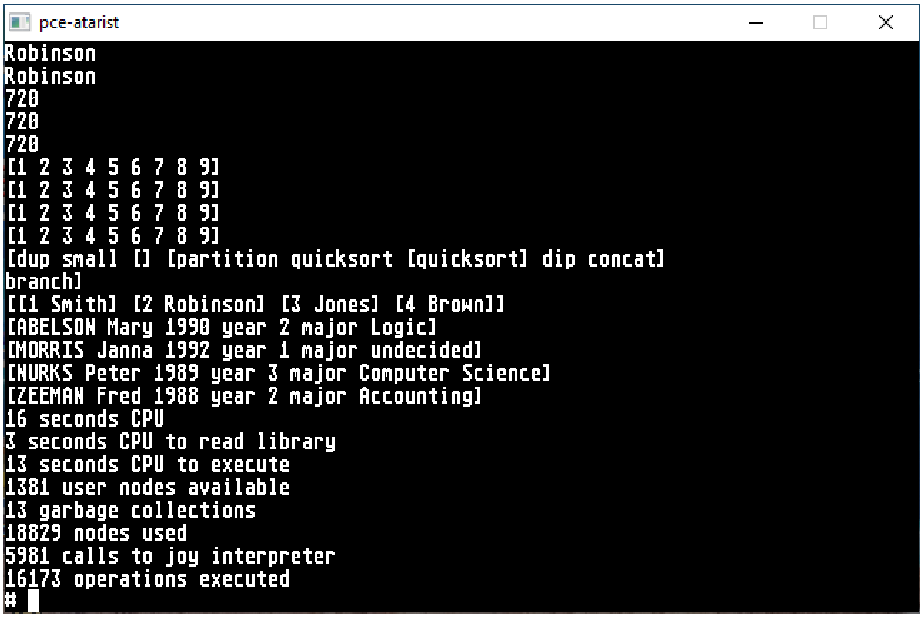
The second example runs TOS 1.04 on an Atari ST.



```
[dup rest null [first] [rest last] branch]
Robinson
Robinson
Robinson
720
720
720
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[dup small [] [partition quicksort [quicksort] dip concat]
branch]
[[1 Smith] [2 Robinson] [3 Jones] [4 Brown]]
[ABELSON Mary 1990 year 2 major Logic]
[MORRIS Janna 1992 year 1 major undecided]
[NURKS Peter 1989 year 3 major Computer Science]
[ZEEMAN Fred 1988 year 2 major Accounting]
4 seconds CPU to read library
1381 user nodes available
13 garbage collections
18829 nodes used
5981 calls to joy interpreter
16173 operations executed
C:\JOY>
```

Minix 1.5

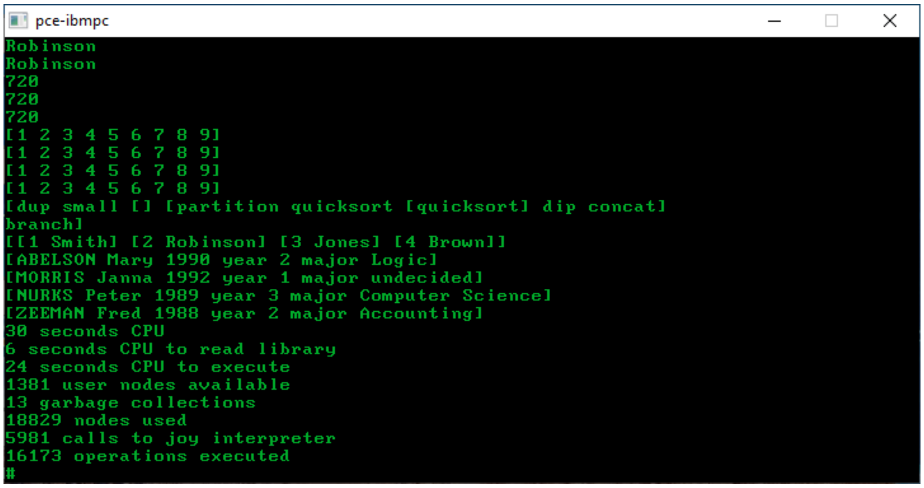
The third example runs Minix 1.5 on an Atari ST. It is this environment that uses a K&R C compiler.



```
Robinson
Robinson
720
720
720
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[dup small [] [partition quicksort [quicksort] dip concat]
branch]
[[1 Smith] [2 Robinson] [3 Jones] [4 Brown]]
[ABELSON Mary 1990 year 2 major Logic]
[MORRIS Janna 1992 year 1 major undecided]
[NURKS Peter 1989 year 3 major Computer Science]
[ZEEMAN Fred 1988 year 2 major Accounting]
16 seconds CPU
3 seconds CPU to read library
13 seconds CPU to execute
1381 user nodes available
13 garbage collections
18829 nodes used
5981 calls to joy interpreter
16173 operations executed
#
```

Minix 2.02

The fourth example runs Minix 2.02 on a PC. This is the last version of Minix that can be run on an original 8088 machine.



```
Robinson
Robinson
720
720
720
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[1 2 3 4 5 6 7 8 9]
[dup small [] [partition quicksort [quicksort] dip concat]
branch]
[[1 Smith] [2 Robinson] [3 Jones] [4 Brown]]
[ABELSON Mary 1990 year 2 major Logic]
[MORRIS Janna 1992 year 1 major undecided]
[NURKS Peter 1989 year 3 major Computer Science]
[ZEEMAN Fred 1988 year 2 major Accounting]
30 seconds CPU
6 seconds CPU to read library
24 seconds CPU to execute
1381 user nodes available
13 garbage collections
18829 nodes used
5981 calls to joy interpreter
16173 operations executed
#
```

Comments

Compiling on old machines shows that the software is portable.

Speed of execution is irrelevant.