

NAME

pipe – create a pipe

SYNOPSIS

(pipe = 42.)

sys pipe

(read file descriptor in r0)

(write file descriptor in r1)

pipe(fildes)

int fildes[2];

DESCRIPTION

The *pipe* system call creates an I/O mechanism called a pipe. The file descriptors returned can be used in read and write operations. When the pipe is written using the descriptor returned in r1 (resp. fildes[1]), up to 4096 bytes of data are buffered before the writing process is suspended. A read using the descriptor returned in r0 (resp. fildes[0]) will pick up the data.

It is assumed that after the pipe has been set up, two (or more) cooperating processes (created by subsequent *fork* calls) will pass data through the pipe with *read* and *write* calls.

The Shell has a syntax to set up a linear array of processes connected by pipes.

Read calls on an empty pipe (no buffered data) with only one end (all write file descriptors closed) return an end-of-file. Write calls under similar conditions are ignored.

SEE ALSO

sh (I), read (II), write (II), fork (II)

DIAGNOSTICS

The error bit (c-bit) is set if more than 8 files are already open. From C, a -1 returned value indicates an error.