NAME

    stat, fstat — get file status

SYNOPSIS

    #include <sys/types.h>
    #include <sys/stat.h>

    stat (name, buf)
    char *name;
    struct stat *buf;

    fstat (fildes, buf)
    struct stat *buf;

DESCRIPTION

    Stat obtains detailed information about a named file. *Fstat* obtains the same information about an open file known by the file descriptor from a successful *open, creat, dup* or *pipe*(2) call.

    Name points to a null-terminated string naming a file; *buf* is the address of a buffer into which information is placed concerning the file. It is unnecessary to have any permissions at all with respect to the file, but all directories leading to the file must be readable. The structure pointed to by *buf* has the following structure. The defined types, *ino_t, off_t, time_t,* name various width integer values; *dev_t* encodes major and minor device numbers; their exact definitions are in the include file <sys/types.h> (see *types*(7)).

```
/*              @(#)stat.h      3.1              */
struct          stat
{
                dev_t           st_dev;
                ino_t           st_ino;
                int             st_mode;
                int             st_nlink;
                int             st_uid;
                int             st_gid;
                dev_t           st_rdev;
                off_t           st_size;
                time_t          st_atime;
                time_t          st_mtime;
                time_t          st_ctime;
};

#define         S_IFMT          0170000                 /* type of file */
#define                         S_IFDIR         0040000 /* directory */
#define                         S_IFCHR         0020000 /* character special */
#define                         S_IFBLK         0060000 /* block special */
#define                         S_IFREG         0100000 /* regular */
#define                         S_IFMPC         0030000 /* multiplexed char special */
#define                         S_IFMPB         0070000 /* multiplexed block special */
#define         S_ISUID         0004000                 /* set user id on execution */
#define         S_ISGID         0002000                 /* set group id on execution */
#define         S_ISVTX         0001000                 /* save swapped text even after use */
#define         S_IREAD         0000400                 /* read permission, owner */
#define         S_IWRITE        0000200                 /* write permission, owner */
#define         S_IEXEC         0000100                 /* execute/search permission, owner */
```

    When *fildes* is associated with a pipe, *fstat* reports an ordinary file with an i-node number, restricted permissions, and a not necessarily meaningful length.

SEE ALSO

    ls(1), fs(5), types(7)

DIAGNOSTICS

    Zero is returned if a status is available; −1 if the file cannot be found.

ASSEMBLER

    (stat = 18.)

    sys stat; name; buf

    (fstat = 28.)
    (file descriptor in r0)
    sys fstat; buf