

5. Inode Metadata

inode = **index node** (information node)

inode number is index into file system inode table

```
struct stat {
    dev_t      st_dev;      // ID of device containing file
    ino_t      st_ino;      // inode number
    mode_t     st_mode;     // protection
    nlink_t    st_nlink;    // number of hard links
    uid_t      st_uid;      // user ID of owner
    gid_t      st_gid;      // group ID of owner
    dev_t      st_rdev;     // device ID (if special file)
    off_t      st_size;     // total size, in bytes
    blksize_t  st_blksize;  // blocksize for filesystem I/O
    blkcnt_t   st_blocks;   // number of blocks allocated
    time_t     st_atime;    // time of last access
    time_t     st_mtime;    // time of last modification
    time_t     st_ctime;    // time of last status change
};
```

Figure 39.5: The **stat** structure.

[stat\(\)](#) system call, [stat](#) command

```
$ stat j
  File: j
  Size: 3          Blocks: 8          IO Block: 4096   regular file
Device: 902h/2306d Inode: 9981236     Links: 1
Access: (0644/-rw-r--r--)  Uid: ( 1000/   perry)   Gid: ( 1000/   perry)
Access: 2020-06-17 11:06:52.799937997 -0400
Modify: 2020-06-17 11:06:42.512146065 -0400
Change: 2020-06-17 11:06:42.512146065 -0400
 Birth: -
$
```