

**NAME**

*malloc*, *free* — core memory allocator

**SYNOPSIS**

**char \*malloc(size)**

**free(ptr)**

**int \*ptr;**

**DESCRIPTION**

*Malloc* and *free* provide a simple general-purpose memory allocation package. *Malloc* returns a pointer to a block of at least *size* bytes beginning on a word boundary.

The argument to *free* is a pointer to an area previously allocated by *malloc*; this space is made available for further allocation, but its contents are left undisturbed.

Needless to say, grave disorder will result if the space assigned by *malloc* is overrun or if some random number is handed to *free*.

*Malloc* allocates the first sufficiently large contiguous area of free space found in a circular search from the last block allocated or freed, coalescing adjacent free blocks as it searches. It calls *brk* (see *break(2)*) to get more core from the system when there is no suitable space already free.

**DIAGNOSTICS**

*Malloc* returns a NULL (0) if there is no available memory.

Exit with the message "corrupt arena" means you have stored outside the bounds of a block. To get a core dump, use *adb(1)* to plant a breakpoint on *exit(2)*.