



Memory consists of pages and segments.
The fundamental functions for memory is:

- allocate free memory
- free allocated memory
- swap memory

The buddy algorithm is used to find free memory and allocate that memory.

The memory is separated in

- kernel memory (code)
- kernel memory(data)
- module memory (code)
- module memory (data)
- user memory (code)
- user memory (data)

The first bit of memory is privileged by kernel while the rest of the memory is privileged by user and module.

The kernel can reach all of memory, the module can reach all of user and module memory and the user can reach only the user memory.

Kernel memory starts at 0x00001000

Kernel
Memory

User/
Module
memory

Memory allocation

- Find free frames
- Create a page

Functions required:

- get_hole Find holes in virtual memory using buddy system
- get_phy_mem Find physically free frame
- get_part_of_memory Find a partially free frame (slab allocation)

When a page is created there must be a page dir and a page tabell.

Functions concerning pages:

- create_page_dir
- create_page_table
- create_pages
- remove_page

Structures required:

- page_dir
- page_table
- page_entry
- page_parts (slab allocation)
- allocated pages and frames