

Memory allocator

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Part I

Structure

For the implementation we have used a double linked list of free blocks. Each block (allocated or free) has a meta data composed of :

- one pointer to the next free block
- one pointer to the previous free block
- one value representing the size of your free block

The features we have implemented are :

- allocation using First Fit management of free block
- allocation using Best Fit management of free block
- allocation using Worst Fit management of free block
- the safety check (Forgetting to free memory, Calling free() incorrectly, Corrupting the allocator metadata)
- alignment of blocks (pointer value is equal to a multiple of size)