

Filesystem Design

Specifications:

- Based on UFS.
- Block size 512B.
- Filesize 1KB.
- Filesize 64KB.
- Max disk size ~32MB.

Block Types:

- Superblock(s)
- Magic strings, 4B.
- Blocks Num, 2B.
- Inode blocks Num, 2B.
- Inodes Num, 2B.
- Reserved(Padding), 2B.
- Boot sector, 500B.

Inode blocks:

- Inodes
- Valid/Type field, 1B.
- Filename, 11B.
- File/Dir size, 2B.
- Direct pointers, 16B.
- Indirect pointers, 2B.

Data blocks.

- Filesystem API:
 - Disk Descriptor struct.
 - Bitmap, 1B.
 - Superblock, superblock struct.
 - DriveNo, 1B.
 - Functions (Main ones)
 - format.
 - crtbitmap.
 - reservebitmap.
 - releasebitmap.
 - show.
 - searchin.
 - mountfs.
 - umountfs.
 - createin.
 - reservein.
 - releasein.
 - writein.
 - filedetails.