

Filesystem Design

Specifications

- Based on UFS.
- Block size: 512 B.
- Files: 1 K B.
- File size: 64 K B.
- Max disk size: 32 M B.

Block Types

- Super blocks
 - Magic string: 4 B.
 - Blocks Num: 2 B.
 - Inode blocks Num: 2 B.
 - Inodes Num: 2 B.
 - Reserved (Padding): 2 B.
 - Boot sector: 500 B.
- Inode blocks
 - Inodes
 - Valid/Type field: 1 B.
 - File name: 11 B.
 - File/Dir size: 2 B.
 - Direct pointers: 16 B.
 - Indirect pointers: 2 B.
- Data blocks.

Filesystem API

- Disk Descriptor: struct. ^{Disk emulator}
- Bitmap: 1 B.
- Superblock: superblock struct.
- Drive No: 1 B.
- Functions: (Main ones)
 - format.
 - crt bitmap.
 - reserve bitmap.
 - release bitmap.
 - show.
 - search in.
 - mount fs.
 - unmount fs.
 - create in.
 - reserve in.
 - release in.
 - write in.
 - file details.