

1

File management

Introduction

- ◆ *Non-volatile*, long-term storage (e.g., disk)
 - ◆ Must store very *large* amount of information
 - ◆ Must *persist* beyond process lifetime
 - ◆ Must be accessible by *multiple* processes at once

Data organization on disks

- ◆ All data organized into equal-sized *blocks* on disk
- ◆ Disk supports two main operations
 - ◆ *Read* block x
 - ◆ *Write* block x
- ◆ Addressing disk blocks directly → too *complex* for users

Data organization on disks

- ◆ OS provides simpler *abstraction* for persistent data
- ◆ This abstraction is called **file system**
 - ◆ *Files*
 - ◆ Named collections of related data in file system
 - ◆ *File* split into blocks as well
 - ◆ Logical blocks *mapped* to physical blocks