Basic File operations

Unix

- create (name)
- open (name, how)
- read(fd, buf, len)
- write(fd, buf, len)
- sync(fd)
- seek(fd, pos)
- close (fd)
- unlink(name)

Windows

- CreateFile(name, CREATE)
- CreateFile(name, OPEN)
- ReadFile (handle, ...)
- WriteFile (handle, ...)
- FlushFileBuffers (handle, ...)
- SetFilePointer(handle, ...)
- CloseHandle (handle, ...)
- DeleteFile (name)
- CopyFile (name)
- MoveFile (name)

How to Track File's Data

Disk management

- Need to keep track of where file contents are on disk
- Must be able to use this to map byte offset to disk block
- Structure tracking a file's blocks is called an index node or inode
- inodes must be stored on disk, too

Things to keep in mind while designing file structure

- Most files are small
- Much of the disk is allocated to large files
- Many of the I/O operations are made to large files
- Want good sequential and good random access (what do these require?)