**Pintos File System**

* **The initial Pintos file system had a few drawbacks:**

1. On the disc, each file occupies a single contiguous extent.
2. After being created, files cannot grow.
3. One kernel thread may only access the filesystem at a time,
4. There is only one root directory in File System.
5. The root directory can only contain up to 16 directory entries.

* **You must perform these tasks:**

1. File extensions that don't require contiguous disc space.
2. Expandable directories that can accommodate more file entries as required.
3. Hierarchical directories
4. Assistance with quick, concurrent access from numerous kernel threads.

* **Recommended implementation sequence:**

1. File system buffer cache:
2. Makes you consider concurrent access from the beginning
3. File extensions:
4. Recommend using an indexed file layout similar to ext2 (not required)
5. Files do not need to enable truncation or downsizing.
6. Subdirectories.
7. The remaining miscellaneous items:
8. "Current Directory" processing
9. Navigating directory paths and parsing them
10. Facilities for read-ahead and write-behind