

Documents for Pintos

Contributors

- Wenxuan Guo
 - wrote the code for threads
 - wrote the code for syscall related to process management
 - wrote the code for vm
 - helped with debugging
- Yulin Wang
 - wrote the code for syscall related to file system
 - wrote the code for vm
 - helped with debugging
- Yuhuan Yang:
 - wrote the code for threads
 - wrote the code for syscall related to process management
 - helped with git, cmake and other tools
 - helped with debugging
- Qingyao Xu:
 - wrote the code for syscall related to file system
 - helped with debugging

Time Distribution

- threads: 2 days
- userprog: 4 days
- vm: 5 days

Our Design

Virtual Memory

- implement lazy-loading
- two global tables
 - swap table: keep the information of swap disk

- frame table: keep the information of used frames
- two tables for each process
 - supplemental page table: record additional information of pages, such as dirty bits, necessary status for file loading
 - mmap table: keep track of all mmap-ed files and according pages

Difficulties

- priority donation
- multi-thread debugging
- process management
- synchronization