0perating Systems Course - Team: FtpOs

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Friedle-Taferl-Pöhr operating system

Members:

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Operating System:

- programming language: C
- using GeekOS (GeekOS 0.3.0)
- using Bochs as emulator (x86 Emulator 2.3)

List of contributions:

- Executable Files (ELF Format)
- Segmentation
- System Calls
- Scheduler
- Semaphores
- Virtual Memory and Paging (under final construction)

- TODO: File System
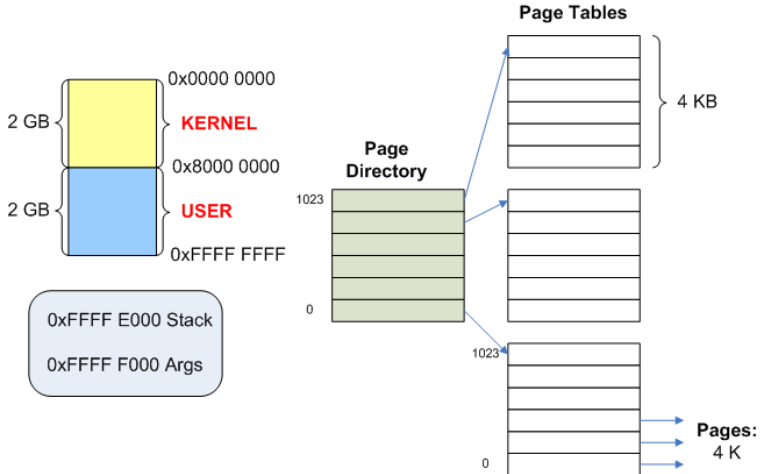
Scheduler, Semaphores

Scheduling

- Round Robin
- Multilevel Feedback Scheduler
- Prio
- switch via a system call:
  int Set_Scheduling_Policy(int policy, int quantum)

Synchronization

- int Create_Semaphore(const char *name, int ival)
- int P(int sem)
- int V(int sem)
- int Destroy_Semaphore(int sem)

Virtual Memory, Paging

Demo overview

Scheduler

- workload.exe [rr|mlf|prio] [quantum]
- Get_Time_Of_Day() system call

Semaphores

- Producer-Consumer Problem
  (long.exe, ping.exe, pong.exe)