

# 1 Tasks

1. Read up on Raspberry Pi architecture and technical details
2. Set up development environment and makefile for minimal kernel
3. Write bootloader and minimal bootable kernel
4. Rewrite kernel and makefile in sustainable manner
5. Write standard library
  - I/O
  - Memory management
  - String stuff
  - Interface for loading modules
6. Paging and Segmentation
7. Interrupts
8. CPU schedulers
  - FCFS
  - RR
  - SJF
  - SRTF
  - P-scheduling non-preemptive, P-scheduling preemptive
  - Lottery Scheduling
  - CFS
  - Multilevel Queue, Multilevel Feedback Queue
  - Staircase Deadline Scheduler
  - $\mathcal{O}(n)$  Scheduler
  - $\mathcal{O}(1)$  Scheduler
  - MuQSS
9. Disk schedulers
  - FCFS
  - SSTF
  - SCAN, C-SCAN, LOOK, C-LOOK
10. IPC
  - Message passing
  - Shared memory
11. Filesystem
  - Persistent
  - On-request
12. Work on real hardware
  - Boot from SD
  - HDMI output
  - Keyboard input