

Presentation of the class

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Presentation of the class

- Objectives of the class:
 - Understand the internals of operating systems
 - Know how to interact with the OS from a program
 - Structure of the class:
 - [U] *userland* oriented sessions
 - [K] *kernel* oriented sessions
 - [G] *more general* sessions
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Organization

- Processes
 - CI1 [U] Threads
 - CI2 [U] Concurrent programming
 - CI3 [G] Synchronization
 - CI4 [K] System calls
 - CI5 [K] Interruption and scheduling

- CI6 [**K**] Sprint: finalization of the scheduler
 - Memory
 - CI7 [**U**] Virtual memory
 - CI8 [**K**] Memory Management Unit
 - CI9 [**G**] Architecture
 - CI10 [**K**] Sprint
 - Input/Output
 - CI11 [**U**] Input/Output
 - CI12 [**U**] Synthesis: mini-project
 - CI13 [**K**] File systems
 - CI14 [**K**] Sprint
 - [CI15] Exam (lab)
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Kernel sessions: **XV6**

During the [**K**]sessions, you will develop an OS

- Based on the **xv6** OS
 - On the computer architecture **RISC-V**
 - Development of new OS mechanisms
 - *sprint* sessions:
 - finalization of development
 - evaluation by teachers
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Evaluation

- 20% - Continuous assessment during sprints:
 - *how did you implement this mechanism of the OS?*
 - *what happens if X?*
 - 80% - graded lab exam with several parts :
 - course question(s)
 - explain how you implemented an OS mechanism
 - develop an application
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Evaluation of the class

- At the end of the class, students evaluate the class.

- Objective: improve the class