

Computer Labs: Project – Proposal

2º MIEIC

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Project Proposal

- ▶ Half to one page description of:
 1. of the functionalities desired,
 2. of the devices used and their role in the program
- ▶ Must be rewritten in class, if the instructor does not accept it
- ▶ The following devices are **mandatory** (max. score: 65%):
 - ▶ Video card in **graphics** mode
 - ▶ Timer
 - ▶ Keyboard
- ▶ You must use the mouse, so that you can use the RTC or the serial port
 - ▶ What is the RTC? And the serial port?

Project specification: Beginning of 8th lab class (2nd class of Lab 5)

- ▶ Refinement of the proposal
 - ▶ We will talk about it within a 1 week.

Project Examples

- ▶ Games: timer, keyboard, mouse, graphics mode (=standard)
- ▶ Two user games: standard and serial port
- ▶ Electronic calendar: standard and RTC
- ▶ Music composer/player: standard
- ▶ Text editor: standard
- ▶ Typing tutor: timer, keyboard, graphics mode (=required)
- ▶ File transfer between PCs: standard and serial port
- ▶ Chat between PCs: standard and serial port
- ▶ Drawing/paint program: standard and serial port
- ▶ Video player with a VP8 video decoder: standard and RTC

Final Project Grading

Difficulty Factor

- ▶ number and type of I/O devices
- ▶ features used of the I/O devices
- ▶ the techniques used
 - ▶ interrupt vs. polling
 - ▶ application-independent handlers
 - ▶ events (to handle asynchrony)
 - ▶ state machines
- ▶ computer graphics (not as relevant as you may think)
 - ▶ use of mode different from the one in Lab 5
 - ▶ double buffering
 - ▶ animation
 - ▶ collision detection
- ▶ use and extent of assembly programming

Originality Factor