

Chris Fisher and Kenny Bui

ECE 153B

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Kitty Laser Pointer Project Proposal

Overview/Goal/Purpose

The goal of this project is to create a Wii-nunchuk controlled laser pointer for cats to play with. The Z button on the nunchuk will turn the entire system on or off. Additionally, the C button will turn the laser on or off. The user can use the nunchuk's joystick to signal to two servo motors to move up and down or left and right respectively. The serial interface protocols include I²C to communicate with the Wii-nunchuk and UART to display how the system is operating on a termite terminal.

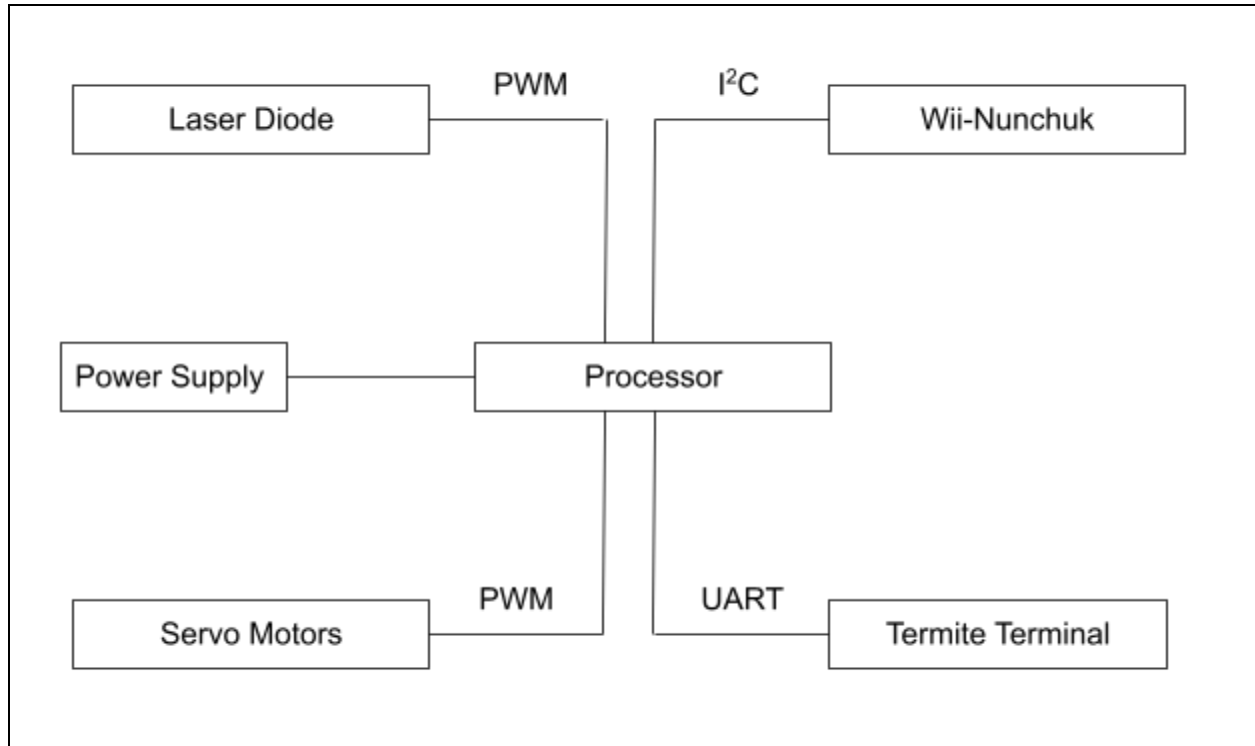
Peripherals

- 2 Servo Motors
- Laser Diode
- Wii-nunchuk

Serial interface protocols

- UART
- I²C

Block diagram



Responsibility list for everyone in group

- Chris
 - Acquire all servo motors and laser diode
 - Find which pins must be used for communication between our peripherals.
 - Help program the Nucleo board
- Kenny
 - Buy wii-nunchuk and nunchuk adapter
 - Help program the Nucleo Board

Software structure

System is default off

- Infinite while(1) loop
 - If system is off

- While(system off)
 - Check for wii-nunchuk input (button z) to turn system on
- Else if system is on
 - While(system on)
 - Check for wii-nunchuk input
 - If up/down/left/right
 - Activate motors to rotate laser accordingly
 - If button z
 - Turn off the system
 - If button c
 - Toggle the laser