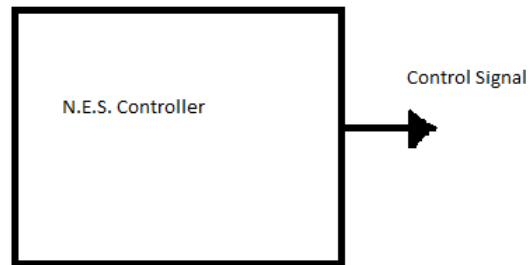


N.E.S. Controller: Level 1



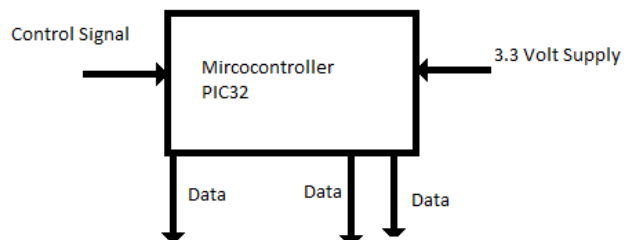
Module: N.E.S. Controller

Inputs: 5V DC Power

Outputs: 8-Bit control signal

Functionality: Sends a particular 8-bit pattern based on button pushes on the controller itself.

Microcontroller: Level 1



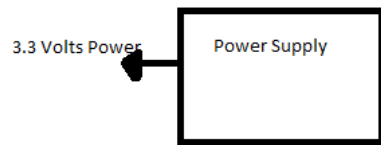
Module: Microcontroller

Inputs: 8-bit control signal, 3.3 volt power

Outputs: Digital data to three device groups (2 decoders and latches)

Functionality: Takes input from the controller and determines which LEDs to light up in the cube, sends data to control logic

Power Supply: Level 1



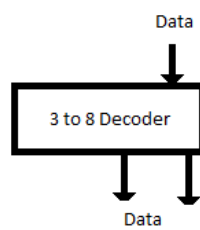
Module: Power Supply

Inputs: None

Outputs: 3.3 Volts Power

Functionality: Provides power to the rest of the circuit

3 to 8 Decoder: Level 1



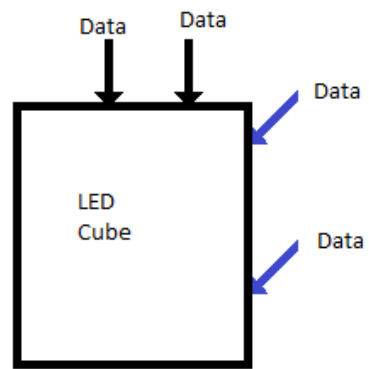
Module: 3 to 8 Decoder

Inputs: Digital Data from Microcontroller

Outputs: Digital Data to the LED Cube or Latches

Functionality: Decodes Data from the microcontroller and passes to the cube or latches

LED Cube: Level 1



Module: LED Cube

Inputs: Digital data from decoder and latches

Outputs: LED Light

Functionality: Takes data and displays LEDs based on data