1. Individually Latched (like SRAM)
	1. 12 x 8 Transistor Arrays (ULN2803, Current Sink, DK = $1.16 each)
	2. 12 x 74259 – 3 to 8 Line Addressable Latch (We Have)
	3. 1 x 74154 – 4 to 16 line decoder (We Have)
		1. Or 2 x 3 to 8 line and a 1 to 2 line decoder
* Uses 8 bits for control
	+ 3 for LED Address (Addressable Latches)
	+ 4 for Latch selection (Decoder)
	+ 1 for LED Level
* Decoder runs Latch enable
* Can also use an 9th line for a master clear (latch)
* Can also use an 10th/11th line for a “no change” state (Decoder)
* Advantages
	+ LED’s are constantly driven
	+ Only 7 / 8 lines to control 128 outputs
	+ Changes are on demand and individualized
		- No “constant” refresh needed between changes
* Disadvantages
	+ A Lot Of Chips / Wiring (25 for the LEDs + 8051 + Sensors)
	+ Higher Cost ($30)
1. Addressed LEDs - columns / rows (Like DRAM)
	1. 1 x 4017 – Johnson Counter (We Have)
	2. 1 x 8 Transistor Array (ULN2803, Current Sink, DK = $1.16 each)
	3. 8 x TIP31A Transistors (Current Sink,
	4. 2 x 8 Transistor Array (UDN2891, Current Source, DK = $2.13 each)
* Uses 14 bits for control
	+ 2 for the Johnson Counter (Current Sink, Row?)
	+ 12 for the Transistor Array (Current Source, Column?)
* Advantages:
	+ Fewer Chips (4 for the LEDs + 8051 + Sensors)
	+ Cheaper ($6)
* Disadvantages
	+ LED’s are only “on” part of the time
		- Possible flickering if the refresh time is > 20ms
	+ More control lines needed (14 vs. 7-9)
	+ Must be constantly refreshed
	+ Higher Currents needed to maintain brightness/continuity and could fry LEDs