**Report**

**(Day 5)**

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**Objective:**

* To design and simulate a system using the AT89C51 microcontroller, AC0808 and resistance variable to measure voltage by the LED’s as output

Inputs:

* where the clock act as clock input in ADC0808 , where the variable resistor acting as input and connected to the port 26 ,power supply at port 12 of ADC0808 , port 22,23,24,25 of ADC0808 to port 25,23,22,21 of AT89C51 and from P3.0 to P3.7 of AT89C51 act as input to the leds

Outputs:

* where the leds work as the ouput when the variable resistor we changes in the workplace

**Logic:** Pin declarations are made for control signals (ALE, OE, SC, EOC) and address lines (ADDR\_A, ADDR\_B, ADDR\_C).

 A delay function (MSDelay) is defined for introducing delays.

 In the main function, ADC\_Value is initialized and port configurations are set.

 Control signals (ALE, OE, SC) are set low initially.

 The program enters an infinite loop for continuous ADC operation.

 The input channel is selected using ADDR\_A, ADDR\_B, and ADDR\_C pins.

 Delays are introduced for stabilization and timing.

 ALE is enabled to initiate conversion, followed by a delay.

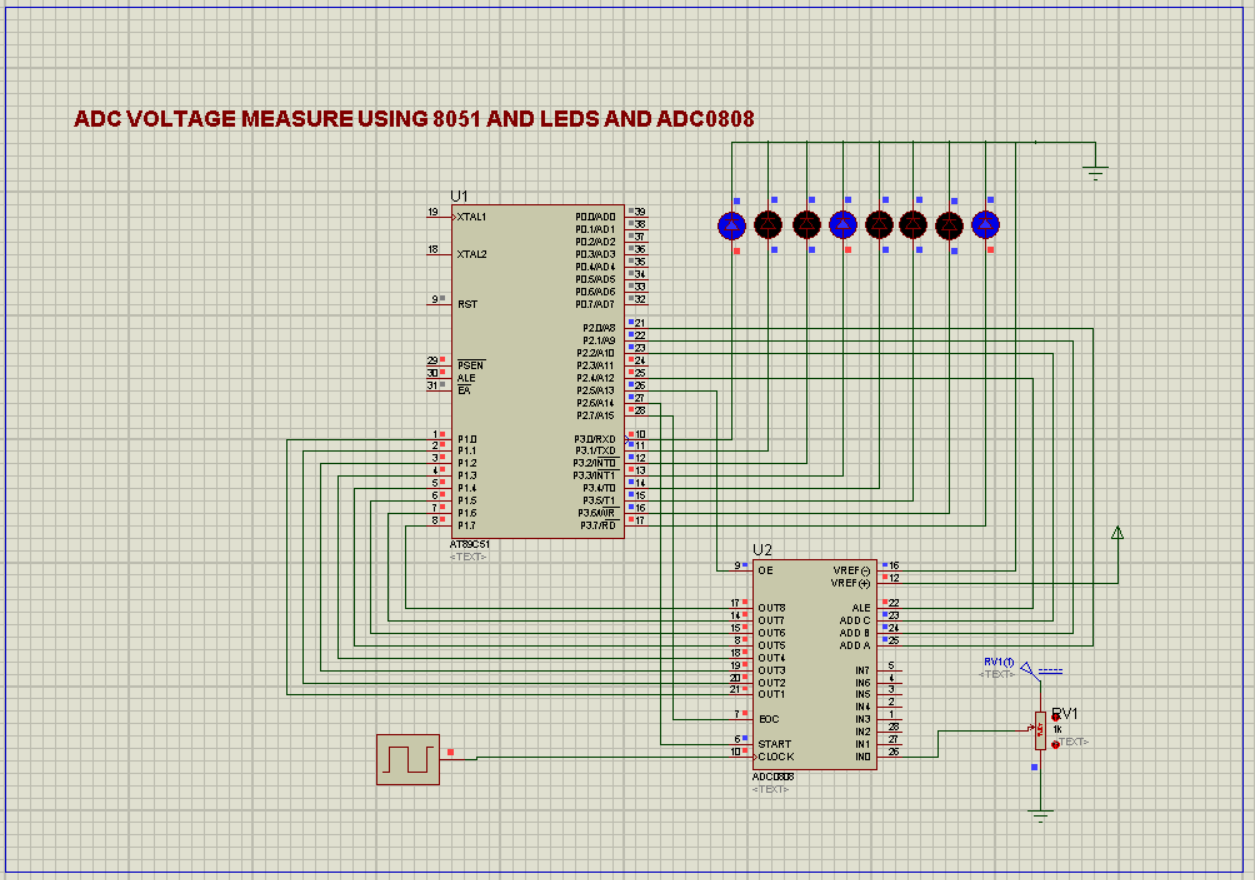
 SC signal is set high to start conversion.

 EOC is monitored for conversion completion.

 Once conversion is done, the digital value is read from Port 1 (P1) and stored.

 OE is cleared to allow data transmission from the ADC.

Results:



Code:

#include <reg51.h>

sbit ALE = P2^4;

sbit OE = P2^5;

sbit SC = P2^6;

sbit EOC = P2^7;

//Declaring the input selection pin

sbit ADDR\_A = P2^0;

sbit ADDR\_B = P2^1;

sbit ADDR\_C = P2^2;

//void MSDelay(unsigned int);

void MSDelay(unsigned int delay)

{

unsigned int i,j;

for(i=0;i<delay;i++)

for(j=0;j<1275;j++);

}

void main()

{

unsigned char ADC\_Value = 0;

P1 = 0xFF;

EOC = 1;

ALE = 0;

OE = 0;

SC = 0;

while(1)

{

ADDR\_C = 0;

ADDR\_B = 0;

ADDR\_A = 0;

MSDelay(10);

ALE = 1;

MSDelay(10);

SC = 1;

MSDelay(10);

ALE = 0;

SC = 0;

while(EOC==1);

//while(EOC==0);

OE=1;

MSDelay(10);

ADC\_Value= P1;

P3 = ADC\_Value;

OE = 0 ;

}

}

Common mistakes How do I overcome:

* the common mistakes I made during this design that is where the connection mismatch happened and taken the other components different components comparing the circuit design workplace
* the solution that I overcome of this problem is exploring the more time on the circuit design and the components and taken more time practicing which connections should made between the components