

/*OPTIONS FOR A NEW PATTERN GENERATOR THAT USES ALL THE LEDS

IT INTRODUCES

The project I2C subroutine "I2C_Tx_any_segment(segment, digit_num)".

Note:

1. The segments are labelled "a" to "g" and "segment - 'a'" takes on the values 0 to 6
Digits are labelled 0 to 7 and writing to a led toggles it on or off.
2. Logic required to backup the display may look a bit tricky, requires paper and pencil to get it.

The LED dimmer A TEST ROUTINE FOR THE DISPLAY BRIGHTNESS CONTROL.

Uses an Interrupt on key press to toggle the brightness control.

THIS INTRODUCES

1. Project subroutine I2C_Tx(). This transmits data to the PCB 111000_1 Atmega 328 over the I2C bus.
2. Pointers: Look at the ISR: It makes the following subroutine call
I2C_Tx(1, 'W', &Dimmer_control);

The "&" before the variable "Dimmer_control" means that the subroutine "I2C_Tx" expects the calling routine to provide the data memory location (i.e. its address) and uses and possibly modifies whatever data it finds in that memory location.

In this case Proj_2C1 defines a memory location and calls it "Dimmer_control". The subroutine call hands the address of "Dimmer_control" to the subroutine rather than the actual value.

3. Subroutine void I2C_Tx(char num_bytes, char mode, char* s){}.

This is the subroutine being called by I2C_Tx(1, 'Q', &Dimmer_control);

It provides memory locations num_bytes and mode for the 1 and Q.

The -*- signifies that it does not provide memory for variable -s- but expects the calling routine to provide it.

Note: Q is the mini-OS mode that toggles the display brightness.

The pointer is used because I2C_Tx() is also used to send arrays of data (to be considered later).

