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| --- | --- |
| /\* SevSeg Library |  |
|  |  |
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|  |  |
|  | This library allows an Arduino to easily display numbers in decimal format on |
|  | a 7-segment display without a separate 7-segment display controller. |
|  |  |
|  | Direct any questions or suggestions to deanreading@hotmail.com |
|  | See the included readme for instructions. |
|  | \*/ |
|  |  |
|  | // If you use current-limiting resistors on your segment pins instead of the |
|  | // digit pins, then change the '0' in the line below to a '1' |
|  | #define RESISTORS\_ON\_SEGMENTS 0 |
|  | #define MAXNUMDIGITS 8 //Increase this number to support larger displays |
|  |  |
|  |  |
|  | #ifndef SevSeg\_h |
|  | #define SevSeg\_h |
|  |  |
|  | #if defined(ARDUINO) && ARDUINO >= 100 |
|  | #include "Arduino.h" |
|  | #else |
|  | #include "WProgram.h" |
|  | #endif |
|  |  |
|  | // Use defines to link the hardware configurations to the correct numbers |
|  | #define COMMON\_CATHODE 0 |
|  | #define COMMON\_ANODE 1 |
|  | #define N\_TRANSISTORS 2 |
|  | #define P\_TRANSISTORS 3 |
|  | #define NP\_COMMON\_CATHODE 1 |
|  | #define NP\_COMMON\_ANODE 0 |
|  |  |
|  |  |
|  | class SevSeg |
|  | { |
|  | public: |
|  | SevSeg(); |
|  |  |
|  | void refreshDisplay(); |
|  | void begin(byte hardwareConfig, byte numDigitsIn, byte digitPinsIn[], byte segmentPinsIn[]); |
|  | void setBrightness(int brightnessIn); // A number from 0..100 |
|  |  |
|  | void setNumber(long numToShow, byte decPlaces); |
|  | void setNumber(unsigned long numToShow, byte decPlaces); |
|  | void setNumber(int numToShow, byte decPlaces); |
|  | void setNumber(unsigned int numToShow, byte decPlaces); |
|  | void setNumber(char numToShow, byte decPlaces); |
|  | void setNumber(byte numToShow, byte decPlaces); |
|  | void setNumber(float numToShow, byte decPlaces); |
|  |  |
|  | private: |
|  | void setNewNum(long numToShow, byte decPlaces); |
|  | void findDigits(long numToShow, byte decPlaces, byte nums[]); |
|  | void setDigitCodes(byte nums[], byte decPlaces); |
|  |  |
|  | boolean digitOn,digitOff,segmentOn,segmentOff; |
|  | byte digitPins[MAXNUMDIGITS]; |
|  | byte segmentPins[8]; |
|  | byte numDigits; |
|  | byte digitCodes[MAXNUMDIGITS]; |
|  | int ledOnTime; |
|  | const static long powersOf10[10]; |
|  |  |
|  | }; |
|  |  |
|  | #endif //SevSeg\_h |
|  | /// END /// |