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// led_blink.c
// blink the LED: turn ON for 1/2 sec then OFF for 1/2 sec
// write to the LCD display: "ON" or "OFF"

#define F_CPU 14745600
#include <avr/io.h>
#include <avr/pgmspace.h>
#include "../libnerdkits/delay.h"
#include "../libnerdkits/lcd.h"

// PC4 (pin 27) is LED anode
// lcd_init() initializes the LCD display
// ------------------------------------------------
  int main() {
  // fire up the LCD
  lcd_init();
  lcd_home();

  // PC4 (pin 27) is output for LED
  // DDRx sets pins as inputs or outputs
  // we OR DDRC with a bitmask that is all zeros
  // except for a one in the PC4 slot
  DDRC = DDRC | (1<<PC4);
  // We could have defined the bits
  // explicitly in binary with DDRC = 0b00010000
  // or used the statement DDRC |= (1<<PC4);
  // ------------------------------------------------

  // the loop starts here
  while(1) {

  // turn on LED
  PORTC = PORTC | (1<<PC4);

  // print "ON" message to LCD display
  lcd_line_one();
  lcd_write_string(PSTR("        ON          "));
  lcd_line_two();
  lcd_write_string(PSTR("                    "));
  lcd_line_three();
  lcd_write_string(PSTR("                    "));
  lcd_line_four();
  lcd_write_string(PSTR("                    "));

  //delay for 500 milliseconds
    delay_ms(500);

  // turn off LED
  PORTC = PORTC & ~(1<<PC4);

  // print "OFF" message to LCD display
  lcd_line_one();
  lcd_write_string(PSTR("        OFF         "));
  lcd_line_two();
  lcd_write_string(PSTR("                    "));
  lcd_line_three();
  lcd_write_string(PSTR("                    "));
  lcd_line_four();
  lcd_write_string(PSTR("                    "));

  //delay for 500 milliseconds
    delay_ms(500);
```

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  }
  return 0;
}
```