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while (1) {
    _delay_us(50);
    LED_ON;
    //Start:
    TWCR = (1<<TWINT)|(1<<TWSTA)|(1<<TWEN); //Start transmission
An dieser Stelle hängt sich der I2C Bus auf. die SDA Leitung bleibt auf GND
    while (!(TWCR & (1<<TWINT))); //Wait for Interrupt Flag, startcondition
    //while((TWSR & 0xF8)!= 0x08); //Start condition has been transmitted
    LED_OFF;
    //Send slave address and read/write (1/0)
    TWDR = (0x5A<<1); //0x5A << 1 plus LSB = 0 Master write
    TWCR = (1<<TWINT) | (1<<TWEN); //Initialize the transmission
    while (!(TWCR & (1<<TWINT))); //Wait for Interrupt Flag, address has been sent
    while((TWSR & 0xF8)!= 0x18); //Check for the acknowledgement
    //Send 8-bit-data to the slave
    TWDR = 0x07; //Adress of the temperatur register
    TWCR = (1<<TWINT) | (1<<TWEN); //Initialize the transmission
    while (!(TWCR & (1<<TWINT))); //Wait for Interrupt Flag, register has been
sent
    while((TWSR & 0xF8) != 0x28); //Check for the acknowledgement
    ///Send repeated start condition
    TWCR = (1<<TWINT)|(1<<TWSTA)|(1<<TWEN); //Repeated Start Condition
    while (!(TWCR & (1<<TWINT))); //Wait for Interrupt Flag, startcondition is
sent
    //while((TWSR & 0xF8)!= 0x10); //Check for acknowledgement
    //Send slave address and read/write (1/0)
    TWDR = (0x5A<<1)|(1<<0); //0x5A << 1 plus LSB = 1 Master read
    TWCR = (1<<TWINT) | (1<<TWEN); //Initialize the transmission
    while (!(TWCR & (1<<TWINT))); //Wait for Interrupt Flag, address has been sent
    //while ((TWSR & 0xF8)!= 0x40); //Check for acknowledgement
    //Read the 8-bit-data from the slave
    TWCR = (1<<TWINT) | (1<<TWEN) | (1<<TWEA); //Initialize the transmission, not
the last data to be received
    while (!(TWCR & (1<<TWINT))); //Wait for Interrupt Flag, address has been sent
    //while ((TWSR & 0xF8)!= 0x50); //Check for acknowledgement
    Temperatur_LO = TWDR;
    //Read again 8-bit-data from the slave
    //TWCR = 0b10000100;
    TWCR = (1<<TWINT) | (1<<TWEN); //Initialize the transmission, now the last
data to be received
    while (!(TWCR & (1<<TWINT))); //Wait for Interrupt Flag, address has been sent
    while ((TWSR & 0xF8)!= 0x50); //Check for acknowledgement
    Temperatur_HI = TWDR;
    //Send stop condition
    TWCR= (1<<TWINT)|(1<<TWEN)|(1<<TWSTO);
    while(!(TWCR & (1<<TWSTO))); // Wait till stop condition is transmitted
}

```