Errata of
*Embedded Systems with ARM Cortex-M Microcontrollers in Assembly Language and C*
*Second Edition*
*Second Printing (May 2016)*
ISBN-10: 0982692633
Yifeng Zhu

Correction Date: January 30, 2017

*Thank you all for providing me feedbacks and corrections!*

**Chapter 1. See a Program Running**
- Page 11, Figure 1-10, the NAND gates have active-low set and reset but the truth table uses active-high signals.
- Page 26, Question 10, “Thumb of rule” should be “Rule of thumb”.

**Chapter 2. Data Representation**
- Page 53, Question 4, “approve” should be “prove”.
- Page 53, in Question 7, 8, 9, “the same format as Question 5” should be “the same format as Question 6”.

**Chapter 3. ARM Instruction Set Architecture**

**Chapter 4. Arithmetic and Logic**
- Page 86, Example 4-2, “C = N ^ Mask; // C = 0b1001011 = 0x97” should be “C = N ^ Mask; // C = 0b10010110 = 0x96”
- Page 95, Question 2, item 5, “BFI r3, r1, r0” should be “BFI r3, r1, #4, #8”.

**Chapter 5. Load and Store**

**Chapter 6. Branch and Conditional Execution**
- Page 131, Exercise Question 11. The code has a bug. If a and b are minimum, c is mistakenly returned.

<table>
<thead>
<tr>
<th>Original code</th>
<th>Corrected Code</th>
</tr>
</thead>
</table>
| if (a < b && a < c) {
  min = a;
} else if (b < a && b < c) {
  min = b;
} else {
  min = c;
} | if (a ≤ b && a < c) {
  min = a;
} else if (b < a && b < c) {
  min = b;
} else {
  min = c;
} |

**Chapter 7. Structured Programming**

**Chapter 8. Subroutines**
Chapter 9. 64-bit Data Processing

Chapter 10. Mixing C and Assembly

Chapter 11. Interrupt

Chapter 12. Fixed-point and Floating-point Arithmetic

- In Example 12-3,
  \[
  \text{ASRS } \ r3, r2, \ #31 \quad ; \ [r4:r3 \ r3:r2] \text{ stores sign extended B}
  \]
  \[
  \text{BL} \quad \text{division}_64\_\text{bits} \quad ; \text{Take four input register (}r0:r1, r4:r3 \ r3:r2)\]

Chapter 13. Instruction Encoding and Decoding

Chapter 14. Generic-purpose I/O

Chapter 15. General-purpose Timers

Chapter 16. Stepper Motor Control

Chapter 17. Liquid-crystal Display (LCD)

- Page 407, last paragraph, “The duty ratio of this LCD is 4” should be “The duty ratio of this LCD is 1/4”.
- Page 409, Table 17-2, in the first row, the name of bit 24 should be 3B, instead of 3A.
- Page 410, Figure 17-7, the arrow of the right branch of two decision block is incorrect.
- Page 413, first sentence, “encoding five letters (A-Z)” should be “encoding five letters (A-E)”

Chapter 18. Real-time Clock (RTC)

Chapter 19. Direct Memory Access (DMA)

Chapter 20. Analog-to-Digital Converter

Chapter 21. Digital-to-Analog Converter

Chapter 22. Serial Communication Protocols

Chapter 23. Multitasking

Chapter 24. Digital Signal Processing