PHY 301 2018 Final Project

PHYS 301 - Digital Electronics Lecture / Laboratory

| Demonstration Program B | | | | |
|-------------------------|---------|----------|------------|--|
| P Step | PGM MEM | DATA MEM | BCD OUTPUT | |
| 0 | NOP | | - | |
| 1 | CLR | | 0 | |
| 2 | LDA | 0x32 | 0 | |
| 3 | ADI | 0x19 | 0 | |
| 4 | NOP | | 0 | |
| 5 | LCA | | 75 | |
| 6 | SBI | 0x50 | 75 | |
| 7 | LCA | | 5 * | |
| 8 | ADI | 0x22 | 5 * | |
| 9 | LCA | | 29 | |
| 10 | STA | 0x01 | 29 | |
| 11 | NOP | | 29 | |
| 12 | LDA | 0x17 | 29 | |
| 13 | ADD | 0x01 | 29 | |
| 14 | LCA | | 52 | |
| 15 | SUB | 0x01 | 52 | |
| 16 | LCA | | 23 | |
| 17 | SUBU | 0x01 | 23 | |
| 18 | LCA | | 6 | |
| 19 | LDA | 0x03 | 6 | |
| 20 | SBI | 0xA0 | 6 | |
| 21 | LCA | | 7 * | |
| 22 | ADDU | 0x01 | 7 * | |
| 23 | LCA | | 22 (29) | |

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| Demonstration Program B | | | | |
|-------------------------|---------|----------|------------|--|
| P Step | PGM MEM | DATA MEM | BCD OUTPUT | |
| 24 | SBI | 0xA0 | 22 (29) | |
| 25 | HLT | | 22 (29) | |
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^{*} indicates a negative result

^{**} indicates an overflow condition