605.611 - Foundations of Computer Architecture

Assignment 06 - MIPS Machine Code Translation

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1. Translate the following MIPS assembly language instructions into machine code.

    (a) `ORI $T0, $ZERO, 15`

    (b) `ADDI $T1, $ZERO, 3`

    (c) `ADD $T1, $ZERO $T1`

    (d) `SUB $T2, $T0, $S0`

    (e) `SLT $S0, $T1, $T3`

    (f) `SRA $T2, $S2, 2`

    (g) `ANDI $V0, $ZERO, 1`

    (h) `LW $T0, 4($T1)`

    (i) `SW T2, 4($S1)`

2. Translate the following MIPS machine code into MIPS assembly language.

    (a) 0x2010000a

    (b) 0x34110005

    (c) 0x012ac022

    (d) 0x00184082

    (e) 0x030f9024