Corrupted Machine Code

Below is the machine code where there is a single bit flip in the following fields

Bitflips highlighted in orange

Assembly code placed below it’s binary counterpart

00000001001010000101000000100000 -> Rd field

Changed from ADD $t2, $t1, $t2

To ADD $t2, $t1, $t0

00100001000010110000000000000101

ADDI $t3, $t0, #0x5

00000001001010100110000000100100

AND $t4, $t1, $t2

00110001100011010000000000001111 -> Rs field

Changed from ANDI $t5, $t6 , #0xF

To ANDI $t5, $t4, #0xF

00010001101000000000000000110100

BEQ $t5, $zero, #0x34

00010101011011010000000000110100

BNE $t5, $t3, #0x34

00000001110010000000000000011010

DIV $t6, $t0

00000000000000000111100000010000 -> Rt field

Code went from unable to compile to

MFHI $t7

00000000000000001100000000010010

MFLO $t8

00000001001010100000000000011000

MULT $t1, $t2

00000001011011001100100000100101 -> Funct field

Code went from unable to compile to

OR $t9, $t3, $t4

00110111001100000000000011111111

ORI $s0, $t9, #0xFF

00000001000010011000100000101010

SLT $s1, $t0, $t1

00101001000100100000000000001010

SLTI $s2, $t0, #0xA

00000001001010101001100000100010

SUB $s3, $t1, $t2

00111100000101110100000000000000

LUI $s7, #0x4000

10001110111101000000000000000000

LW $s4, #0x0($s7)

10101110111101010000000000000100 -> opcode field

SW $s5, #0x4($s7)

00111100000101100001001000110100

LUI $s6, #0x1234