Montgomery Yu Computer Organization Assignment 4: MIPS#1

RAT:

$t0 = X

$11 = Y

$t2 = Z

MIPS Code:

IfElse.asm:

.data

x: .word 12

y: .word 1

txt1: .asciiz " X="

txt2: .asciiz " Y="

txt3: .asciiz " Z="

endl: .asciiz "\n"

.text

.globl main

main: # execution starts here

lw $t0,x

lw $t1,y

beq $t0,$t1,If

addi $t3,$t0,-3 # find x-3 and stor it in $t0

beq $t3,$t1,elseIf

sub $t2,$t0,$t1 #z = x-y

j exit

If: add $t2,$t0,$t1 #z = x+y

j exit

elseIf: li $t2,0 #z = 0

j exit

exit: la $a0,txt1 # print string before x

li $v0,4

syscall

move $a0,$t0 # print x

li $v0,1

syscall

la $a0,txt2 # print string before y

li $v0,4

syscall

move $a0,$t1 # print y

li $v0,1

syscall

la $a0,txt3 # print string before z

li $v0,4

syscall

move $a0,$t2 # print z

li $v0,1

syscall

la $a0,endl # syscal to print out

li $v0,4 # a new line

syscall

li $v0,10 # Exit

syscall # Bye!

OUTPUT:

Graphical user interface, text, application

Description automatically generated