.data

prompt1: .asciiz "Enter first number: " # Message to prompt user for the first number

prompt2: .asciiz "Enter second number: " # Message to prompt user for the second number

result\_add: .asciiz "Addition result: " # Message before displaying addition result

result\_sub: .asciiz "Subtraction result: " # Message before displaying subtraction result

result\_mul: .asciiz "Multiplication result: " # Message before displaying multiplication result

result\_div: .asciiz "Division result: " # Message before displaying division result

.text

.globl main

main:

# ---- Read first number from user ----

li $v0, 4 # syscall code for print\_string

la $a0, prompt1 # load address of prompt1 into $a0

syscall # print prompt1 message

li $v0, 5 # syscall code for read\_int

syscall # read an integer from user input

move $t0, $v0 # store input in $t0 (first number)

# ---- Read second number from user ----

li $v0, 4 # syscall code for print\_string

la $a0, prompt2 # load address of prompt2 into $a0

syscall # print prompt2 message

li $v0, 5 # syscall code for read\_int

syscall # read an integer from user input

move $t1, $v0 # store input in $t1 (second number)

# ---- Addition:

Enter addition code --------------------------------

li $v0, 4 # syscall code for print\_string

la $a0, result\_add # load message "Addition result: "

syscall # print it

li $v0, 1 # syscall code for print\_int

move $a0, $t2 # move sum into $a0

syscall # print result

# ---- Subtraction: diff = $t0 - $t1 ----

Enter addition code --------------------------------

li $v0, 4

la $a0, result\_sub # print "Subtraction result: "

syscall

li $v0, 1

move $a0, $t2 # print result

syscall

# ---- Multiplication: prod = $t0 \* $t1 ----

Enter addition code --------------------------------

li $v0, 4

la $a0, result\_mul # print "Multiplication result: "

syscall

li $v0, 1

move $a0, $t2

syscall

# ---- Division (safe only if $t1 ≠ 0) ----

do\_division:

Enter addition code --------------------------------

mflo $t2 # move quotient from LO to $t2

li $v0, 4

la $a0, result\_div # print "Division result: "

syscall

li $v0, 1

move $a0, $t2 # print quotient

syscall

exit:

li $v0, 10 # syscall code to exit the program

syscall