# A demonstration of some simple MIPS instructions
# used to test QtSPIM

# Declare main as a global function
.globl main

# All program code is placed after the
# .text assembler directive
.text

# The label 'main' represents the starting point
main:
    li $t2, 25    # Load immediate value (25) HERE HERE
    lw $t3, value # Load the word stored in value (see bottom)
    add $t4, $t2, $t3 # Add
    sub $t5, $t2, $t3 # Subtract
    sw $t5, Z       # Store the answer in Z (declared at the bottom)

# Exit the program by means of a syscall.
# There are many syscalls - pick the desired one
# by placing its code in $v0. The code for exit is "10"

li $v0, 10   # Sets $v0 to "10" to select exit syscall
syscall     # Exit

# All memory structures are placed after the
# .data assembler directive
.data

# The .word assembler directive reserves space
# in memory for a single 4-byte word (or multiple 4-byte words)
# and assigns that memory location an initial value
# (or a comma separated list of initial values)
value:    .word 12
Z:         .word 0