Hello-World

MM-hello-world-V1.asm

```
1  # Comsc210 Assignment 1 Hello World
2
3  # Programmer: T Newman
4  # Date:       1/8/24
5
6  .data #this is where we define strings, arrays, constants and other data
7
8  message: .asciiz "Hello world 2024"
9
10 .text #this is the text section where we put our instrutions
11
12 la $a0, message #load addressof messgae into register $a0
13 li $v0, 4   #load immediate value 4 into register $v0
14 syscall # syscall for 'print a string function'
15
```

Line: 1 Column: 1 ☑ Show Line Numbers

Mars Messages | Run I/O

```
Hello world 2024
-- program is finished running (dropped off bottom) --
```

Clear

Sum-Integers

MM-hello-world-V1.asm | MM-Sum-Integers-V1.asm

```
1  # Comsc210 : Assignment 1 - Sum of Integers
2
3  #Programmer : M Manjos
4
5  #Date 1/25/2024
6
7  .data
8          prompt: .asciiz "\n Please input a value for N: "
9          result: .asciiz "\n The sum of the integers from 1 to N is "
10         bye: .asciiz "\n **** Have a good day ****"
11
12 .globl main
13
14 .text
15
16 main:
17         li $v0, 4 # system call code for Print String
18         la $a0, prompt # load address of prompt into $a0
19         syscall # print the prompt message
20         li $v0, 5 # system call code for Read Integer
21         syscall # reads the value of N into $v0
22         blez $v0, end # branch to end if $v0 < = 0
23         li $t0, 0 # clear register $t0 to zero
24
25 loop:
26         add $t0,$t0,$v0 # sum of integers in register $t0
27         addi $v0,$v0,-1 # summing integers in reverse order
28         bnez $v0, loop  # branch to loop if $v0 is != zero
29         li $v0, 4       # system call code for Print String
30         la $a0, result  # load address of message into $a0
31         syscall         # print the string
```

```
31         syscall         # print the string
32         li $v0, 1       # system call code for Print Integer
33         move $a0, $t0   # move value to be printed to $a0
34         syscall         # print sum of integers
35         b main          # branch to main
36
37 end:
38         li $v0, 4       # system call code for Print String
39         la $a0, bye     # load address of msg. into $a0
40         syscall         # print the string
41         li $v0, 10      # terminate program run and
42         syscall         # return control to system
43
```

Mars Messages | Run I/O

Clear

```
Hello world 2024
-- program is finished running (dropped off bottom) --


Please input a value for N: 10

The sum of the integers from 1 to N is 55
Please input a value for N: 8

The sum of the integers from 1 to N is 36
Please input a value for N:
```