Task No 01:

Write the MIPS program that will ask for 3 integers from user and displays the result for each addition separately.

Solution:

.data

inputPrompt1: .asciiz "Enter the First Integer: "

inputPrompt2: .asciiz "Enter the Second Integer: "

inputPrompt3: .asciiz "Enter the Third Integer: "

outputPrompt1: .asciiz "Result of First Addition: "

outputPrompt2: .asciiz "\nResult of Second Addition: "

.text

main:

li $v0, 4

la $a0, inputPrompt1

syscall

li $v0, 5

syscall

move $s0 , $v0

li $v0, 4

la $a0, inputPrompt2

syscall

li $v0, 5

syscall

move $s1 , $v0

li $v0, 4

la $a0, inputPrompt3

syscall

li $v0, 5

syscall

move $s2 , $v0

li $v0, 4

la $a0, outputPrompt1

syscall

add $s3 , $s0, $s1

li $v0, 1

move $a0, $s3

syscall

li $v0, 4

la $a0, outputPrompt2

syscall

add $s4 , $s2, $s3

li $v0, 1

move $a0, $s4

syscall

li $v0, 10

syscall

Output:

A white background with black text

Description automatically generated

Task No 02:

Write an MIPS assembly program that takes two 2-digit numbers from user and then add, subtract, divide as well as multiply them and then print the result.

Solution:

.data

inputPrompt1: .asciiz "Enter the First Number: "

inputPrompt2: .asciiz "Enter the Second Number: "

outputPrompt1: .asciiz "Addition Result: "

outputPrompt2: .asciiz "\nSubtraction Result: "

outputPrompt3: .asciiz "\nMultiplication Result: "

outputPrompt4: .asciiz "\nDivision Result: "

.text

main:

li $v0, 4

la $a0, inputPrompt1

syscall

li $v0, 5

syscall

move $s0 , $v0

li $v0, 4

la $a0, inputPrompt2

syscall

li $v0, 5

syscall

move $s1 , $v0

li $v0, 4

la $a0, outputPrompt1

syscall

add $s2 , $s0, $s1

li $v0, 1

move $a0, $s2

syscall

li $v0, 4

la $a0, outputPrompt2

syscall

sub $s3 , $s0, $s1

li $v0, 1

move $a0, $s3

syscall

li $v0, 4

la $a0, outputPrompt3

syscall

mul $s4 , $s0, $s1

li $v0, 1

move $a0, $s4

syscall

li $v0, 4

la $a0, outputPrompt4

syscall

div $s5, $s0, $s1

li $v0, 1

move $a0, $s5

syscall

li $v0, 10

syscall

Output:

A screenshot of a computer

Description automatically generated

Task No 03:

Write MIPS assembly program that calculates your age by taking input of your birth year.

Solution:

.data

inputPrompt1: .asciiz "Enter your Birth Year: "

inputPrompt2: .asciiz "Enter the current year: "

outputPrompt1: .asciiz "Your age is: "

.text

main:

li $v0, 4

la $a0, inputPrompt1

syscall

li $v0, 5

syscall

move $s0 , $v0

li $v0, 4

la $a0, inputPrompt2

syscall

li $v0, 5

syscall

move $s1 , $v0

li $v0, 4

la $a0, outputPrompt1

syscall

sub $s2 , $s1, $s0

li $v0, 1

move $a0, $s2

syscall

li $v0, 10

syscall

Output:

A white background with black text

Description automatically generated

Task No 04:

Write an MIPS assembly program that computes the speed of the car using the values of distance and time input by user.

Solution:

.data

inputPrompt1: .asciiz "Enter Distance: "

inputPrompt2: .asciiz "Enter Time: "

outputPrompt1: .asciiz "Speed of Car is: "

.text

main:

li $v0, 4

la $a0, inputPrompt1

syscall

li $v0, 5

syscall

move $s0 , $v0

li $v0, 4

la $a0, inputPrompt2

syscall

li $v0, 5

syscall

move $s1 , $v0

li $v0, 4

la $a0, outputPrompt1

syscall

div $s2, $s0, $s1

li $v0, 1

move $a0, $s2

syscall

li $v0, 10

syscall

Output:

A screenshot of a computer

Description automatically generated

Task No 05:

Write an MIPS assembly program that converts minutes into seconds (minutes should be input by user).

Solution:

.data

inputPrompt1: .asciiz"Enter time in mintes: "

outputPrompt1: .asciiz"Time in seconds: "

seconds: .word 60

.text

main:

li $v0, 4

la $a0, inputPrompt1

syscall

li $v0, 5

syscall

move $s0, $v0

li $v0, 4

la $a0, outputPrompt1

syscall

lw $s1, seconds

mul $s2, $s0, $s1

move $a0, $s2

li $v0, 1

syscall

li $v0, 10

syscall

Output:

A screenshot of a computer program

Description automatically generated