Q NO 1: Write an assembly language program which takes two numbers from user and add them and show the result on console.

.data

str1: .asciiz "Enter first number: "

str2: .asciiz "Enter second number: "

result: .asciiz "The result is: "

.text

.globl main

main:

li $v0, 4

la $a0, str1

syscall

li $v0, 5

syscall

move $t0, $v0

li $v0, 4

la $a0, str2

syscall

li $v0, 5

syscall

move $t1, $v0

# Add the numbers

add $t2, $t0, $t1 # $t2 = $t0 + $t1

# Print the result

li $v0, 4

la $a0, result

syscall

# Print the result number

li $v0, 1

move $a0, $t2

syscall

# Exit the program

li $v0, 10 # exit

syscall

Q NO 2: Write an assembly language program which takes two numbers from user and subtract them and show the result on console.

.data

str1: .asciiz "Enter first number: "

str2: .asciiz "Enter second number: "

result: .asciiz "The result is: "

.text

.globl main

main:

li $v0, 4

la $a0, str1

syscall

li $v0, 5

syscall

move $t0, $v0

li $v0, 4

la $a0, str2

syscall

li $v0, 5

syscall

move $t1, $v0

# sub the numbers

sub $t2, $t0, $t1 # $t2 = $t0 - $t1

# Print the result

li $v0, 4

la $a0, result

syscall

# Print the result number

li $v0, 1

move $a0, $t2

syscall

# Exit the program

li $v0, 10 # exit

syscall

Q NO 3: Write an assembly language program which takes two numbers from user and multiply them and show the result on console.

.data

str1: .asciiz "Enter first number: "

str2: .asciiz "Enter second number: "

result: .asciiz "The result is: "

.text

.globl main

main:

li $v0, 4

la $a0, str1

syscall

li $v0, 5

syscall

move $t0, $v0

li $v0, 4

la $a0, str2

syscall

li $v0, 5

syscall

move $t1, $v0

# multiply the numbers

mul $t2, $t0, $t1 # $t2 = $t0 \* $t1

# Print the result

li $v0, 4

la $a0, result

syscall

# Print the result number

li $v0, 1

move $a0, $t2

syscall

# Exit the program

li $v0, 10 # exit

syscall

Q NO 4: Write an assembly language program which takes two numbers from user and devide them and show the result on console.

.data

str1: .asciiz "Enter first number: "

str2: .asciiz "Enter second number: "

result: .asciiz "The result is: "

.text

.globl main

main:

li $v0, 4

la $a0, str1

syscall

li $v0, 5

syscall

move $t0, $v0

li $v0, 4

la $a0, str2

syscall

li $v0, 5

syscall

move $t1, $v0

# devide the numbers

div $t2, $t0, $t1 # $t2 = $t0 / $t1

# Print the result

li $v0, 4

la $a0, result

syscall

# Print the result number

li $v0, 1

move $a0, $t2

syscall

# Exit the program

li $v0, 10 # exit

syscall

Q NO 5: Write assembly program to multiply two numbers using MULT and extract the bit from high and low registers to general purpose registers.

.data

str1: .asciiz "Enter first number: "

str2: .asciiz "Enter second number: "

result1: .asciiz "High part of the result: "

result2: .asciiz "Low part of the result: "

.text

.globl main

main:

li $v0, 4

la $a0, str1

syscall

li $v0, 5

syscall

move $t0, $v0

li $v0, 4

la $a0, str2

syscall

li $v0, 5

syscall

move $t1, $v0

# Multiply the numbers

mult $t0, $t1 # multiply $t0 and $t1

mfhi $t2 # move high part of result to $t2

mflo $t3 # move low part of result to $t3

# Print high part of the result

li $v0, 4

la $a0, result1

syscall

li $v0, 1

move $a0, $t2

syscall

# Print low part of the result

li $v0, 4

la $a0, result2

syscall

li $v0, 1

move $a0, $t3

syscall

# Exit the program

li $v0, 10 # system call for exit

syscall

Q NO 6: Write program to perform AND, OR , NOT operations in MIPS.

.data

result: .asciiz "Result of AND operation: "

.text

.globl main

main:

li $t0,0

li $t1,1

and $t2, $t0,$t1

li $v0, 4

la $a0, result

syscall

li $v0, 1

move $a0, $t2

syscall

li $v0,10

syscall