QtSpim

FP Regs | Int Regs [16] | Data | Text

Int Regs [16]

```
PC        = 400148
EPC       = 0
Cause     = 0
BadVAddr  = 0
Status    = 3000ff10

HI        = 0
LO        = 0

R0  [r0]  = 0
R1  [at]  = 10010000
R2  [v0]  = a
R3  [v1]  = 0
R4  [a0]  = 10010021
R5  [a1]  = 10010074
R6  [a2]  = 1001004c
R7  [a3]  = 10010074
R8  [t0]  = a
R9  [t1]  = 9
R10 [t2]  = 24
R11 [t3]  = a
R12 [t4]  = 64
R13 [t5]  = 6e
R14 [t6]  = 10010098
R15 [t7]  = 0
R16 [s0]  = 1001009c
```

Data

```
User data segment [10000000]..[10040000]
[10000000]..[1000ffff]    00000000
[10010000]    61727241  3a412079  72410020  20796172    A r r a y   A :   . A r r a y
[10010010]    00203a42  61727241  3a432079  202c0020    B :   . A r r a y   C :   . ,
[10010020]    00000a00  00000001  00000002  00000003    . . . . . . . . . . . . . . . .
[10010030]    00000004  00000005  00000006  00000007    . . . . . . . . . . . . . . . .
[10010040]    00000008  00000009  0000000a  00000009    . . . . . . . . . . . . . . . .
[10010050]    00000008  00000007  00000006  00000005    . . . . . . . . . . . . . . . .
[10010060]    00000004  00000003  00000002  00000001    . . . . . . . . . . . . . . . .
[10010070]    00000064  0000000a  0000000a  0000000a    d . . . . . . . . . . . . . . .
[10010080]    0000000a  0000000a  0000000a  0000000a    . . . . . . . . . . . . . . . .
[10010090]    0000000a  0000000a  0000006e  0000000a    . . . . . . . . . . . . n . . .
[100100a0]..[1003ffff]    00000000

User Stack [7ffff644]..[80000000]
[7ffff644]    00000002  7ffff717  7ffff6fd    . . . . . . . . . . . . . . . .
[7ffff650]    00000000  7ffffffe1  7fffffb9  7ffff82    . . . . . . . . . . . . . . . .
[7ffff660]    7ffffff46  7ffffff15  7fffff00  7fffffedc    F . . . . . . . . . . . . . . .
[7ffff670]    7ffffeaa  7fffe79  7fffe51  7fffe44    . . . . y . . . . Q . . . . D . . .
[7ffff680]    7fffffe2d  7fffe02  7fffdec  7fffdd5    - . . . . . . . . . . . . . . . .
[7ffff690]    7fffffdb3  7fffda5  7fffa62  7fffa24    . . . . . . . . b . . . $ . . .
[7ffff6a0]    7fffa09  7fff9ec  7fff9a2  7fff990    . . . . . . . . . . . . . . . .
[7ffff6b0]    7fffff978  7fff95d  7fff939  7fff910    x . . . . ] . . . . 9 . . . . .
[7ffff6c0]    7fffff8f2  7fff887  7fff870  7fff85c    . . . . . . . . . . . p . . . \ .
[7ffff6d0]    7ffff84d  7fff837  7fff80f  7fff7e8    M . . . . 7 . . . . . . . . . .
[7ffff6e0]    7fff7d5  7fff7b3  7fff7a3  7fff787    . . . . . . . . . . . . . . . .
```

Memory and registers cleared

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Proj1 - Notepad

```
# Data section
.data

        ArrNA: .asciiz "Array A: "        # Used to print the array names
        ArrNB: .asciiz "Array B: "
        ArrNC: .asciiz "Array C: "
        format:        .asciiz ", "        # Used to format the array values
        newline:       .asciiz "\n"        # Prints a newline

        # Arrays A, B, and C. To modify C change th evalues of A and/or B
        # Note: the arrays must be of equal length
        ArrA: .word 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
        ArrB: .word 9, 8, 7, 6, 5, 4, 3, 2, 1, 100
        ArrC: .word 0, 0, 0, 0, 0, 0, 0, 0, 0, 0

        SIZE:   .word 10

# Text section
.text
.globl main

print_Arr:

        move $s0, $a1

        li $t0, 0
        la $t1, SIZE
        lw $t1, ($t1)
        sub $t1, $t1, 1

        print_loop:

        bgt $t0, $t1, end_loop

        lw $a0, ($s0)
        li $v0, 1
        syscall

        beq $t0, $t1, no_form

        la $a0, format  # load ','
        li $v0, 4
        syscall

        no_form:

        addi $s0, $s0, 4
        addi $t0, $t0, 1
        j print_loop


        end_loop:

        la $a0, newline
        li $v0, 4
        syscall

        jr $ra


add_Arr:

        move $s1, $a1   # loading arrays to add
        move $s2, $a2   # using diffrent s reigsters to prevent overlapp
```

Console

```
Array A: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Array B: 9, 8, 7, 6, 5, 4, 3, 2, 1, 100
Array C: 10, 10, 10, 10, 10, 10, 10, 10, 10, 110
```