li $v0, 4

li $a0, 0

syscall

li $v0, 5

syscall

//put value 3 in $v0

mov $t0, $v0

li $v0, 5

syscall

//put value 5 in $v0

mov $t1, $v0

li $t2, 0

li $t3, 1

li $t4, 13

sub $t0, $t0, $t3

add $t2, $t2, $t1

sw $t2,1($t4)

sub $t0, $t0, $t3

add $t2, $t2, $t1

sw $t2,2($t4)

sub $t0, $t0, $t3

add $t2, $t2, $t1

sw $t2,3($t4)

mov $a0, $t2

li $v0, 1

syscall

**Week 5**

|  |  |  |
| --- | --- | --- |
| $0 | $zero | 0 |
| $1 |  |  |
| $2 | $v0 |  |
| $3 | $v1 |  |
| $4 | $a0 |  |
| $5 | $a1 |  |
| $6 | $a2 |  |
| $7 | $a3 |  |
| $8 | $t0 |  |
| $9 | $t1 |  |
| $10 | $t2 |  |
| $11 | $t3 |  |
| $12 | $t4 |  |
| $13 | $t5 |  |
| $14 | $t6 |  |
| $15 | $t7 |  |
| $16 | $s0 |  |
| $17 | $s1 |  |
| $18 | $s2 |  |
| $19 | $s3 |  |
| $20 | $s4 |  |
| $21 | $s5 |  |
| $22 | $s6 |  |
| $23 | $s7 |  |
| $24 | $t8 |  |
| $25 | $t9 |  |
| $26 |  |  |
| $27 |  |  |
| $28 | $gp | 0 |
| $29 | $sp | 42 |
| $30 | $fp |  |
| $31 | $ra |  |

3 Questions:

1) What appears on console?

2) What is routine doing?

3) How could you reduce lines of MIPS code?

|  |  |
| --- | --- |
| M[0] | 00000045 |
| M[1] | 0000004E |
| M[2] | 00000054 |
| M[3] | 00000045 |
| M[4] | 00000052 |
| M[5] | 00000020 |
| M[6] | 00000032 |
| M[7] | 00000020 |
| M[8] | 0000004E |
| M[9] | 00000055 |
| M[10] | 0000004D |
| M[11] | 00000053 |
| M[12] | 00000000 |
| M[13] |  |
| M[14] |  |
| M[15] |  |
| M[16] |  |
| M[17] |  |
| M[18] |  |
| M[19] |  |
| M[20 |  |
| M[21] |  |
| M[22] |  |
| M[23] |  |
| M[24] |  |
| M[25] |  |
| M[26] |  |
| M[27] |  |
| M[28] |  |
| M[29] |  |
| M[30] |  |
| M[31] |  |
| M[32] |  |
| M[33] |  |
| M[34] |  |
| M[35] |  |
| M[36] |  |
| M[37] |  |
| M[38] |  |
| M[39] |  |
| M[40] |  |
| M[41] |  |
| M[42] |  |