

Data

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000]

[10010010]

[10010020]

User Stack

[7ffff590]

[7ffff5a0]

[7ffff5b0]

[7ffff5c0]

[7ffff5d0]

[7ffff5e0]

[7ffff5f0]

[7ffff600]

[7ffff610]

[7ffff620]

[7ffff630]

[7ffff640]

[7ffff650]

[7ffff660]

[7ffff670]

[7ffff680]

[7ffff690]

[7ffff6a0]

[7ffff6b0]

[7ffff6c0]

[7ffff6d0]

[7ffff6e0]

[7ffff6f0]

[7ffff700]

[7ffff710]

Console

Enter the number : 12

0 , 1 , 1 , 2 , 3 , 5 , 8 , 13 , 21 , 34 , 55 , 89 ,

Data
User data segment [10000000]..[10040000]
[10000000]..[1000ffff] 00000000
[10010000]
[10010010]
[10010020]
[10010030]

Console

Enter the number : 41
Enter the number : 43
Twin prime
|

User Stack
[7ffff544]
[7ffff550]
[7ffff560]
[7ffff570]
[7ffff580]
[7ffff590]
[7ffff5a0]
[7ffff5b0]
[7ffff5c0]
[7ffff5d0]
[7ffff5e0]
[7ffff5f0]
[7ffff600]
[7ffff610]
[7ffff620]
[7ffff630]
[7ffff640]
[7ffff650]
[7ffff660]
[7ffff670]
[7ffff680]
[7ffff690]
[7ffff6a0]
[7ffff6b0]

Data

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000]

[10010010]

[10010020]

[10010030]

Console

Enter the number : 5
Enter the number : 8
Not Twin Prime
|

User Stack

[7ffff544]

[7ffff550]

[7ffff560]

[7ffff570]

[7ffff580]

[7ffff590]

[7ffff5a0]

[7ffff5b0]

[7ffff5c0]

[7ffff5d0]

[7ffff5e0]

[7ffff5f0]

[7ffff600]

[7ffff610]

[7ffff620]

[7ffff630]

[7ffff640]

[7ffff650]

[7ffff660]

[7ffff670]

[7ffff680]

[7ffff690]

[7ffff6a0]

[7ffff6b0]

Data

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000]

[10010010]

[10010100]

[10010110]

[10010200]

[10010210]

[10010300]

[10010310]

[10010320]

[10010330]

[10010340]

[10010350]

User Stack

[7ffff530]

[7ffff540]

[7ffff550]

[7ffff560]

[7ffff570]

[7ffff580]

[7ffff590]

[7ffff5a0]

[7ffff5b0]

[7ffff5c0]

[7ffff5d0]

[7ffff5e0]

[7ffff5f0]

[7ffff600]

[7ffff610]

[7ffff620]



Data

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000]

[10010010]

[10010020]

[10010100] Enter the first string : Computer

[10010100] Enter the second string : Organization

[10010110] The concatenated string : ComputerOrganization

[10010200]

[10010210]

[10010300]

[10010310]

[10010320]

[10010330]

[10010340]

[10010350]

User Stack

[7ffff530]

[7ffff540]

[7ffff550]

[7ffff560]

[7ffff570]

[7ffff580]

[7ffff590]

[7ffff5a0]

[7ffff5b0]

[7ffff5c0]

[7ffff5d0]

[7ffff5e0]

[7ffff5f0]

[7ffff600]

[7ffff610]

User data segment [10000000]..[10040000]

[10000000]..[100100ff] 00000000

[10010100]

[10010110]

[10010120]

[10010130]

[10010300]

[10010310]

[10010320]

[10010330]

[10010340]

[10010350]

User Stack

[7ffff530]

[7ffff540]

[7ffff550]

[7ffff560]

[7ffff570]

[7ffff580]

[7ffff590]

[7ffff5a0]

[7ffff5b0]

[7ffff5c0]

[7ffff5d0]

[7ffff5e0]

[7ffff5f0]

[7ffff600]

[7ffff610]

[7ffff620]

[7ffff630]

[7ffff640]

Console

Enter the string : this shows large and small words

The largest words are : shows large small words

The smallest words are : and |

000]..[1000ffff] 00000000

Console

000 Enter the sentence: This program searches and replaces

010 Enter the word you want to search: program

020 Enter the word you want to replace with: program

030 The sentence was: This program searches and replaces

040 The modified sentence is: This program searches and replaces



Console



```
Enter the sentence: This is written in MIPS
Enter the word you want to search: write
Enter the word you want to replace with: written
The word is not present.
The sentence was: This is written in MIPS
```

00]..[1000ffff] 00000000

Console

20 Enter the sentence: this this this
30 Enter the word you want to search: this
40 Enter the word you want to replace with: that
50
60 The sentence was: this this this
70
80 The modified sentence is: that that that|

Data

```
R0 [r0] = 0
R1 [at] = 10010000
R2 [v0] = a
R3 [v1] = 0
R4 [a0] = 10010018
R5 [a1] = 7ffff594
R6 [a2] = 7ffff5a0
R7 [a3] = 0
R8 [t0] = 0
R9 [t1] = 90
R10 [t2] = e9
R11 [t3] = 0
R12 [t4] = 0
R13 [t5] = 90
R14 [t6] = 0
R15 [t7] = 0
R16 [s0] = 0
R17 [s1] = c
R18 [s2] = 0
R19 [s3] = c
R20 [s4] = 0
R21 [s5] = 0
```

```
Memory and registers cleared
```

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```
[10000000]..[1000ffff] 00000000
[10010000] 65746e45 68742072 756e2065 7265626d
[10010010] 00203a20 00202c20 0000000a 00000000
[10010020]..[100200ff] 00000000
```

| | | | | |
|------------|----------|----------|----------|----------|
| [7ffff590] | 00000002 | 7ffff65a | 7ffff64a | 00000000 |
| [7ffff5a0] | 7fffffe1 | 7fffffb7 | 7fffffb6 | 7fffffb4 |
| [7ffff5b0] | 7fffff19 | 7fffffc | 7ffffed8 | 7ffffeb1 |
| [7ffff5c0] | 7ffffe7f | 7ffffe72 | 7ffffe59 | 7ffffe2c |
| [7ffff5d0] | 7ffffe09 | 7fffffd7 | 7ffffdd3 | 7ffffda7 |
| [7ffff5e0] | 7ffffd9e | 7ffff996 | 7ffff958 | 7ffff93b |
| [7ffff5f0] | 7ffff8f2 | 7ffff8e0 | 7ffff8c8 | 7ffff8ad |
| [7ffff600] | 7ffff88f | 7ffff866 | 7ffff848 | 7ffff7dd |
| [7ffff610] | 7ffff7c6 | 7ffff7b2 | 7ffff7a3 | 7ffff78d |
| [7ffff620] | 7ffff763 | 7ffff73a | 7ffff71f | 7ffff6f5 |
| [7ffff630] | 7ffff6e3 | 7ffff6c5 | 7ffff68b | 7ffff679 |
| [7ffff640] | 00000000 | 00000000 | 75730000 | 73696d62 |
| [7ffff650] | 6e6f6973 | 2e31512f | 3a430073 | 6573552f |
| [7ffff660] | 502f7372 | 74697661 | 2f617268 | 6b736544 |
| [7ffff670] | 2f706f74 | 5350494d | 6e697700 | 3d726964 |
| [7ffff680] | 575c3a43 | 4f444e49 | 56005357 | 5f584f62 |
| [7ffff690] | 5f49534d | 54534e49 | 5f4c4c41 | 48544150 |
| [7ffff6a0] | 5c3a433d | 676f7260 | 20d66172 | 656c6946 |
| [7ffff6b0] | 724f5c73 | 656c6361 | 7269565c | 6c617574 |
| [7ffff6c0] | 5c786f42 | 45535500 | 4f525052 | 454c4946 |
| [7ffff6d0] | 5c3a433d | 72657355 | 61505c73 | 68746976 |
| [7ffff6e0] | 55006172 | 4e524553 | 3d454d41 | 69766150 |
| [7ffff6f0] | 61726874 | 45535500 | 4d4f4452 | 5f4e4941 |
| [7ffff700] | 4d414f52 | 50474e49 | 49464f52 | 443d454c |
| [7ffff710] | 544b5345 | 382d504f | 4334242b | 55004443 |

```
Enter the number
: . / : : : : : .
```

```

. . . . . Z . . . . . J . . . . . J . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . r . . . . . Y . . . . . , . . . . .
. . . . . . . . . . . X . . . . . ; . . . . .
. . . . . f . . . . . H . . . . . . . . . . .
c . . . . . : . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . y . . .
s i o n / Q l . s . C : / U s e r s \ P a v i t h r a / D e s k
t o p / M I P S . w i n d i r = _
C : \ W I N D O W S . V B O X =
M S I _ I N S T A L L _ P A T H =
C : \ P r o g r a m _ F i l e
s \ O r a c l e \ V i r t u a l
B o x \ . U S E R P R O F I L E
= C : \ U S E R s \ P a v i t h
r a . U S E R N A M E = P a v i
t h r a . U S E R D O M A I N =
R O A M I N G P R O F I L E = D
E S K T O P - 8 K B 3 C 7 D

```

Console

```
Enter the number : 12
0 , 1 , 1 , 2 , 3 , 5 , 8 , 13 , 21 , 34 , 55 , 89 ,
```

QSPin

File Simulator Registers Text Segment Data Segment Window Help

FP Regs

Int Regs [16]

Data

Text

Int Regs [16]

PC = 4000ac

EPC = 0

Cause = 0

BadVAddr = 0

Status = 3000ff10

HI = 1

LO = 1

R0 [r0] = 0

R1 [at] = 10010000

R2 [v0] = a

R3 [v1] = 0

R4 [a0] = 10010024

R5 [a1] = 1

R6 [a2] = 7ffff5a0

R7 [a3] = 1

R8 [t0] = 2b

R9 [t1] = 0

R10 [t2] = 0

R11 [t3] = 1

R12 [t4] = 0

R13 [t5] = 29

R14 [t6] = 0

R15 [t7] = 0

R16 [s0] = 0

R17 [s1] = 1

R18 [s2] = 0

R19 [s3] = 0

R20 [s4] = 0

R21 [s5] = 0

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000] 65746e45 68742072 756e2065 7265626d Enter the number

[10010010] 00203a20 20746f4e 6e697754 69725020 : . Not Twin Pri

[10010020] 000a656d 6e697754 69727020 000a656d me . . Twin prime . .

[10010030]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z . . . J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J . . .

[7ffff5b0] 7fffff19 7ffffefc 7ffffed8 7ffffeb1

[7ffff5c0] 7ffffe7f 7ffffe72 7ffffe59 7ffffe2c r . . . Y . . . , . . .

[7ffff5d0] 7ffffe0e 7ffffdf7 7ffffdd3 7ffffda7

[7ffff5e0] 7ffffd99 7ffff996 7ffff958 7ffff93b X . . . ; . . .

[7ffff5f0] 7ffff8f2 7ffff8e0 7ffff8c8 7ffff8ad

[7ffff600] 7ffff88f 7ffff866 7ffff848 7ffff7dd f . . . H

[7ffff610] 7ffff7c6 7ffff7b2 7ffff7a3 7ffff78d

[7ffff620] 7ffff763 7ffff73a 7ffff71f 7ffff6f5 c . . . :

[7ffff630] 7ffff6e3 7ffff6c5 7ffff68b 7ffff679 Y . . .

[7ffff640] 00000000 00000000 75730000 73696d62 s u b m i s

[7ffff650] 6e6f6973 2e32512f 3a430073 6573552f s i o n / Q 2 . s . C : / U s e

[7ffff660] 502f7372 74697661 2f617268 6b736544 r s / P a v i t h r a / D e s k

[7ffff670] 2f706f74 5350494d 6e697700 3d726964 t o p / M I P S . w i n d i r =

[7ffff680] 575c3a43 4f444e49 56005357 5f584f42 C : \ W I N D O W S . V B O X _

[7ffff690] 5f49534d 54534e49 5f4c4c41 48544150 M S I _ I N S T A L L _ P A T H

[7ffff6a0] 5c3a433d 676f7250 206d6172 656c6946 = C : \ P r o g r a m F i l e

[7ffff6b0] 724f5c73 656c6361 7269565c 6c617574 s \ O r a c l e \ V i r t u a l

[7ffff6c0] 5c786f42 45535500 4f525052 454c4946 B o x \ . U S E R P R O F I L E

[7ffff6d0] 5c3a433d 72657355 61505c73 68746976 = C : \ U s e r s \ P a v i t h

[7ffff6e0] 55006172 4e524553 3d454d41 69766150 r a . U S E R N A M E = P a v i

[7ffff6f0] 61726874 45535500 4d4f4452 5f4e4941 t h r a . U S E R D O M A I N _

[7ffff700] 4d414f52 50474e49 49464f52 443d454c R O A M I N G P R O F I L E = D

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Memory and registers cleared

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Console

Enter the number : 41

Enter the number : 43

Twin prime

|

QtSPin

File Simulator Registers Text Segment Data Segment Window Help

FP Regs

Int Regs [16]

Data

Text

Int Regs [16]

PC = 4000c4

EPC = 0

Cause = 0

BadVAddr = 0

Status = 3000ff10

HI = 1

LO = 1

R0 [r0] = 0

R1 [at] = 10010000

R2 [v0] = a

R3 [v1] = 0

R4 [a0] = 10010014

R5 [a1] = 7ffff594

R6 [a2] = 7ffff5a0

R7 [a3] = 1

R8 [t0] = 5

R9 [t1] = 0

R10 [t2] = 0

R11 [t3] = 3

R12 [t4] = 2

R13 [t5] = 5

R14 [t6] = 0

R15 [t7] = 0

R16 [s0] = 0

R17 [s1] = 1

R18 [s2] = 0

R19 [s3] = 0

R20 [s4] = 0

R21 [s5] = 0

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000] 65746e45 68742072 756e2065 7265626d Enter the number

[10010010] 00203a20 20746f4e 6e697754 69725020 : . Not Twin Pri

[10010020] 000a656d 6e697754 69727020 000a656d me . . Twin prime . .

[10010030]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z . . . J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J . . .

[7ffff5b0] 7fffff19 7ffffefc 7ffffed8 7ffffeb1

[7ffff5c0] 7ffffe7f 7ffffe72 7ffffe59 7ffffe2c r . . . Y . . . , . . .

[7ffff5d0] 7ffffe0e 7ffffdf7 7ffffdd3 7ffffda7

[7ffff5e0] 7ffffd99 7ffff996 7ffff958 7ffff93b X . . . ; . . .

[7ffff5f0] 7ffff8f2 7ffff8e0 7ffff8c8 7ffff8ad

[7ffff600] 7ffff88f 7ffff866 7ffff848 7ffff7dd f . . . H

[7ffff610] 7ffff7c6 7ffff7b2 7ffff7a3 7ffff78d

[7ffff620] 7ffff763 7ffff73a 7ffff71f 7ffff6f5 c . . . :

[7ffff630] 7ffff6e3 7ffff6c5 7ffff68b 7ffff679 y . . .

[7ffff640] 00000000 00000000 75730000 73696d62 s u b m i s

[7ffff650] 6e6f6973 2e32512f 3a430073 6573552f s i o n / Q 2 . s . C : / U s e

[7ffff660] 502f7372 74697661 2f617268 6b736544 r s / P a v i t h r a / D e s k

[7ffff670] 2f706f74 5350494d 6e697700 3d726964 t o p / M I P S . w i n d i r =

[7ffff680] 575c3a43 4f444e49 56005357 5f584f42 C : \ W I N D O W S . V B O X _

[7ffff690] 5f49534d 54534e49 5f4c4c41 48544150 M S I _ I N S T A L L _ P A T H

[7ffff6a0] 5c3a433d 676f7250 206d6172 656c6946 = C : \ P r o g r a m F i l e

[7ffff6b0] 724f5c73 656c6361 7269565c 6c617574 s \ O r a c l e \ V i r t u a l

[7ffff6c0] 5c786f42 45535500 4f525052 454c4946 B o x \ . U S E R P R O F I L E

[7ffff6d0] 5c3a433d 72657355 61505c73 68746976 = C : \ U s e r s \ P a v i t h

[7ffff6e0] 55006172 4e524553 3d454d41 69766150 r a . U S E R N A M E = P a v i

[7ffff6f0] 61726874 45535500 4d4f4452 5f4e4941 t h r a . U S E R D O M A I N _

[7ffff700] 4d414f52 50474e49 49464f52 443d454c R O A M I N G P R O F I L E = _

Console

Enter the number : 5

Enter the number : 8

Not Twin Prime

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QtSPIM

File Simulator Registers Text Segment Data Segment Window Help

FP RegsInt Regs [16]

Int Regs [16]

PC = 4000dc

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] = 10010000

R5 [a1] = 100

R6 [a2] = 7ffff5a0

R7 [a3] = 0

R8 [t0] = 0

R9 [t1] = 0

R10 [t2] = 0

R11 [t3] = a

R12 [t4] = 10010100

R13 [t5] = 10010200

R14 [t6] = 0

R15 [t7] = 0

R16 [s0] = 0

R17 [s1] = 1001000b

R18 [s2] = 10010105

R19 [s3] = 10010206

R20 [s4] = 0

R21 [s5] = 0

DataText

Data

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000] 6c6c6548 726f576f 000a646c 00000000 H e l l o W o r l d

[10010010]..[100100ff] 00000000

[10010100] 6c6c6548 00000a6f 00000000 00000000 H e l l o

[10010110]..[100101ff] 00000000

[10010200] 6c726f57 00000a64 00000000 00000000 W o r l d

[10010210]..[100102ff] 00000000

[10010300] 65746e45 68742072 69662065 20747372 E n t e r t h e f i r s t

[10010310] 69727473 3a20676e 6e450020 20726574 s t r i n g : . E n t e r

[10010320] 20656874 6f636573 7320646e 6e697274 t h e s e c o n d s t r i n

[10010330] 203a2067 65685400 6e6f6320 65746163 g : . T h e c o n c a t e

[10010340] 6574616e 74732064 676e6972 00203a20 n a t e d s t r i n g : .

[10010350]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z . . . J

[7ffff5a0] 7fffffe1 7fffffb7 7fffffb6 7fffff4a J . . .

[7ffff5b0] 7fffff19 7fffffec 7ffffed8 7ffffeb1

[7ffff5c0] 7ffffe7f 7ffffe72 7ffffe59 7ffffe2c r . . . Y . . . , . .

[7ffff5d0] 7ffffe0e 7ffffdf7 7ffffdd3 7ffffda7

[7ffff5e0] 7ffffd99 7ffff996 7ffff958 7ffff93b X . . . ; . . .

[7ffff5f0] 7fffff8f2 7fffff8e0 7fffff8c8 7fffff8ad

[7ffff600] 7ffff88f 7ffff866 7ffff848 7ffff7dd f . . . H

[7ffff610] 7ffff7c6 7ffff7b2 7ffff7a3 7ffff78d

[7ffff620] 7ffff763 7ffff73a 7ffff71f 7ffff6f5 c . . . :

[7ffff630] 7ffff6e3 7ffff6c5 7ffff68b 7ffff679 y . . .

[7ffff640] 00000000 00000000 75730000 73696d62 s u b m i s

[7ffff650] 6e6f6973 2e33512f 3a430073 6573552f s i o n / Q 3 . s . C : / U s e

[7ffff660] 502f7372 74697661 2f617268 6b736544 r s / P a v i t h r a / D e s k

[7ffff670] 2f706f74 5350494d 6e697700 3d726964 t o p / M I P S . w i n d i r =

[7ffff680] 575c3a43 4f444e49 56005357 5f584f42 C : \ W I N D O W S . V B O X

Console

Enter the first string : Hello

Enter the second string : World

The concatenated string : HelloWorld

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QtSpim

File Simulator Registers Text Segment Data Segment Window Help

FP RegsInt Regs [16]

Int Regs [16]

PC = 4000dc

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] = 10010000

R5 [a1] = 100

R6 [a2] = 7ffff5a0

R7 [a3] = 0

R8 [t0] = 0

R9 [t1] = 0

R10 [t2] = 0

R11 [t3] = a

R12 [t4] = 10010100

R13 [t5] = 10010200

R14 [t6] = 0

R15 [t7] = 0

R16 [s0] = 0

R17 [s1] = 10010015

R18 [s2] = 10010108

R19 [s3] = 1001020d

R20 [s4] = 0

R21 [s5] = 0

Data

Text

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000] 706d6f43 72657475 6167724f 617a696e C o m p u t e r O r g a n i z a

[10010010] 6e6f6974 0000000a 00000000 00000000 t i o n

[10010020]..[100100ff] 00000000

[10010100] 706d6f43 72657475 0000000a 00000000 C o m p u t e r

[10010110]..[100101ff] 00000000

[10010200] 6167724f 617a696e 6e6f6974 0000000a O r g a n i z a t i o n

[10010210]..[100102ff] 00000000

[10010300] 65746e45 68742072 69662065 20747372 E n t e r t h e f i r s t

[10010310] 69727473 3a20676e 6e450020 20726574 s t r i n g : . E n t e r

[10010320] 20656874 6f636573 7320646e 6e697274 t h e s e c o n d s t r i n

[10010330] 203a2067 65685400 6e6f6320 65746163 g : . T h e c o n c a t e

[10010340] 6574616e 74732064 676e6972 00203a20 n a t e d s t r i n g : .

[10010350]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z . . . J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J

[7ffff5b0] 7fffff19 7ffffefc 7ffffed8 7ffffeb1

[7ffff5c0] 7ffffe7f 7ffffe72 7ffffe59 7ffffe2c r . . . Y . . . , . .

[7ffff5d0] 7ffffe0e 7ffffdf7 7ffffdd3 7ffffda7

[7ffff5e0] 7ffffd99 7ffff996 7ffff958 7ffff93b X . . . ; . . .

[7ffff5f0] 7ffff8f2 7ffff8e0 7ffff8c8 7ffff8ad

[7ffff600] 7ffff88f 7ffff866 7ffff848 7ffff7dd f . . . H

[7ffff610] 7ffff7c6 7ffff7b2 7ffff7a3 7ffff78d

[7ffff620] 7ffff763 7ffff73a 7ffff71f 7ffff6f5 c . . . :

[7ffff630] 7ffff6e3 7ffff6c5 7ffff68b 7ffff679 Y

[7ffff640] 00000000 00000000 75730000 73696d62 s u b m i s

[7ffff650] 6e6f6973 2e33512f 3a430073 6573552f s i o n / Q 3 . s . C : / U s e

[7ffff660] 502f7372 74697661 2f617268 6b736544 r s / P a v i t h r a / D e s k

[7ffff670] 2f706f74 5350494d 6e697700 3d726964 t o p / M I P S . w i n d i r =

Console

Enter the first string : Computer

Enter the second string : Organization

The concatenated string : ComputerOrganization

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QtSPin

File Simulator Registers Text Segment Data Segment Window Help

FP Regs

Int Regs [16]

Data

Text

Int Regs [16]

PC = 400298

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] = 10010348

R5 [a1] = 100

R6 [a2] = 7ffff5a0

R7 [a3] = 0

R8 [t0] = a

R9 [t1] = 0

R10 [t2] = 3

R11 [t3] = a

R12 [t4] = 1

R13 [t5] = 0

R14 [t6] = 0

R15 [t7] = 0

R16 [s0] = 0

R17 [s1] = 0

R18 [s2] = 10010121

R19 [s3] = 0

R20 [s4] = 0

R21 [s5] = 0

User data segment [10000000]..[10040000]

[10000000]..[100100ff] 00000000

[10010100] 73696874 6f687320 6c207377 65677261 t h i s s h o w s l a r g e

[10010110] 646e6120 616d7320 77206c6c 7364726f a n d s m a l l w o r d s

[10010120] 0000000a 00000000 00000000 00000000

[10010130]..[100102ff] 00000000

[10010300] 65746e45 68742072 74732065 676e6972 E n t e r t h e s t r i n g

[10010310] 00203a20 20656854 6772616c 20747365 : . T h e l a r g e s t

[10010320] 64726f77 72612073 203a2065 68540a00 w o r d s a r e : . . T h

[10010330] 6d732065 656c6c61 77207473 7364726f e s m a l l e s t w o r d s

[10010340] 65726120 00203a20 00000020 00000000 a r e :

[10010350]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z . . . J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J . . .

[7ffff5b0] 7fffff19 7ffffefc 7ffffed8 7ffffeb1

[7ffff5c0] 7ffffe7f 7ffffe72 7ffffe59 7ffffe2c r . . . Y . . . , . . .

[7ffff5d0] 7ffffe0e 7ffffdf7 7ffffdd3 7ffffda7

[7ffff5e0] 7ffffd99 7ffff996 7ffff958 7ffff93b X . . . ; . . .

[7ffff5f0] 7ffff8f2 7ffff8e0 7ffff8c8 7ffff8ad

[7ffff600] 7ffff88f 7ffff866 7ffff848 7ffff7dd f . . . H

[7ffff610] 7ffff7c6 7ffff7b2 7ffff7a3 7ffff78d

[7ffff620] 7ffff763 7ffff73a 7ffff71f 7ffff6f5 c . . . :

[7ffff630] 7ffff6e3 7ffff6c5 7ffff68b 7ffff679 Y . . .

[7ffff640] 00000000 00000000 75730000 73696d62 s u b m i s

[7ffff650] 6e6f6973 2e34512f 3a430073 6573552f s i o n / Q 4 . s . C : / U s e

[7ffff660] 502f7372 74697661 2f617268 6b736544 r s / P a v i t h r a / D e s k

[7ffff670] 2f706f74 5350494d 6e697700 3d726964 t o p / M I P S . w i n d i r =

[7ffff680] 575c3a43 4f444e49 56005357 5f584f42 C : \ W I N D O W S . V B O X _

[7ffff690] 5f49534d 54534e49 5f4c4c41 48544150 M S I _ I N S T A L L _ P A T H

[7ffff6a0] 5c3a433d 676f7250 206d6172 656c6946 = C : \ P r o g r a m F i l e

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Console

Enter the string : this shows large and small words
The largest words are : shows large small words
The smallest words are : and |

QtSpim

File Simulator Registers Text Segment Data Segment Window Help

FP Regs

Int Regs [16]

Data

Text

Int Regs [16]

PC = 400298

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] = 10010348

R5 [a1] = 100

R6 [a2] = 7ffff5a0

R7 [a3] = 0

R8 [t0] = a

R9 [t1] = 0

R10 [t2] = 1

R11 [t3] = a

R12 [t4] = 1

R13 [t5] = 0

R14 [t6] = 0

R15 [t7] = 0

R16 [s0] = 0

R17 [s1] = 0

R18 [s2] = 1001011a

R19 [s3] = 0

R20 [s4] = 0

R21 [s5] = 0

User data segment [10000000]..[10040000]

[10000000]..[100100ff] 00000000

[10010100] 73696874 20736920 72702061 6172676f t h i s i s a p r o g r a

[10010110] 6e69206d 70696d20 00000a73 00000000 m i n m i p s

[10010120]..[100102ff] 00000000

[10010300] 65746e45 68742072 74732065 676e6972 E n t e r t h e s t r i n g

[10010310] 00203a20 20656854 6772616c 20747365 : . T h e l a r g e s t

[10010320] 64726f77 72612073 203a2065 68540a00 w o r d s a r e : . . T h

[10010330] 6d732065 656c6c61 77207473 7364726f e s m a l l e s t w o r d s

[10010340] 65726120 00203a20 00000020 00000000 a r e :

[10010350]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z . . . J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J

[7ffff5b0] 7fffff19 7ffffefc 7ffffed8 7ffffeb1

[7ffff5c0] 7ffffe7f 7ffffe72 7ffffe59 7ffffe2c r . . . Y . . . , . . .

[7ffff5d0] 7ffffe0e 7ffffdf7 7ffffdd3 7ffffda7

[7ffff5e0] 7ffffd99 7ffff996 7ffff958 7ffff93b X . . . ; . . .

[7ffff5f0] 7ffff8f2 7ffff8e0 7ffff8c8 7ffff8ad

[7ffff600] 7ffff88f 7ffff866 7ffff848 7ffff7dd f . . . H

[7ffff610] 7ffff7c6 7ffff7b2 7ffff7a3 7ffff78d

[7ffff620] 7ffff763 7ffff73a 7ffff71f 7ffff6f5 c . . . :

[7ffff630] 7ffff6e3 7ffff6c5 7ffff68b 7ffff679

[7ffff640] 00000000 00000000 75730000 73696d62 s u b m i s

[7ffff650] 6e6f6973 2e34512f 3a430073 6573552f s i o n / Q 4 . s . C : / U s e

[7ffff660] 502f7372 74697661 2f617268 6b736544 r s / P a v i t h r a / D e s k

[7ffff670] 2f706f74 5350494d 6e697700 3d726964 t o p / M I P S . w i n d i r =

[7ffff680] 575c3a43 4f444e49 56005357 5f584f42 C : \ W I N D O W S . V B O X _

[7ffff690] 5f49534d 54534e49 5f4c4c41 48544150 M S I _ I N S T A L L _ P A T H

[7ffff6a0] 5c3a433d 676f7250 206d6172 656c6946 = C : \ P r o g r a m F i l e

[7ffff6b0] 724f5c73 656c6361 7269565c 6c617574 s \ O r a c l e \ V i r t u a l

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Console

Enter the string : this is a program in mips
The largest words are : program
The smallest words are : a |

QSPin

File Simulator Registers Text Segment Data Segment Window Help

FP RegsInt Regs [16]

DataText

Int Regs [16]

PC = 4002b0

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] = 100101ac

R5 [a1] = 100

R6 [a2] = 19

R7 [a3] = 0

R8 [t0] = a

R9 [t1] = 8

R10 [t2] = 73

R11 [t3] = 72

R12 [t4] = 7

R13 [t5] = a

R14 [t6] = 9

R15 [t7] = 1

R16 [s0] = 100102cd

R17 [s1] = 100100cd

R18 [s2] = 100102ac

R19 [s3] = 0

R20 [s4] = 100102de

R21 [s5] = 100101ce

Data

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000] 65746e45 68742072 65732065 6e65746e Enter the senten

[10010010] 203a6563 746e4500 74207265 77206568 ce : . Enter the w

[10010020] 2064726f 20756f79 746e6177 206f7420 ord you want to

[10010030] 72616573 203a6863 746e4500 74207265 search : . Enter t

[10010040] 77206568 2064726f 20756f79 746e6177 he word you want

[10010050] 206f7420 6c706572 20656361 68746977 to replace with

[10010060] 5400203a 77206568 2064726f 6e207369 : . The word is n

[10010070] 7020746f 65736572 0a2e746e 65685400 ot present . . The

[10010080] 6e657320 636e6574 61772065 00203a73 sentence was : .

[10010090] 6568540a 646f6d20 65696669 65732064 . The modified se

[100100a0] 6e65746e 69206563 00203a73 73696874 ntence is : . this

[100100b0] 6f727020 206d7267 72616573 73656863 progrm searches

[100100c0] 646e6120 70657220 6563616c 00000a73 and replaces . .

[100100d0]..[100101ab] 00000000

[100101ac] 73696874

[100101b0] 6f727020 6d617267 61657320 65686372 this

[100101c0] 6e612073 65722064 63616c70 00007365 program searche

[100101d0]..[100102ab] 00000000

[100102ac] 676f7270

[100102b0] 000a6d72 00000000 00000000 00000000 s and replaces . .

[100102c0] 00000000 70657200 6563616c 00000a73

[100102d0] 00000000 00000000 00000000 72700000

[100102e0] 6172676f 00000a6d 00000000 00000000

[100102f0] 00000000 0a000000 00000000 00000000

[10010300]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J . . .

[7ffff5b0] 7fffff19 7fffffec 7ffffed8 7ffffeb1

Console

Enter the sentence: this progrm searches and replaces

Enter the word you want to search: program

Enter the word you want to replace with: program

The sentence was: this program searches and replaces

The modified sentence is: this program searches and replaces

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QtSPIM

FileSimulatorRegistersText SegmentData SegmentWindowHelp

FP RegsInt Regs [16]

PC = 4002b0

EPC = 0

Cause = 0

BadVAddr = 0

Status = 3000fff10

HI = 0

LO = 0

R0 [r0] = 0

R1 [at] = 10010000

R2 [v0] = a

R3 [v1] = 0

R4 [a0] = 100100ac

R5 [a1] = 100

R6 [a2] = 19

R7 [a3] = 0

R8 [t0] = a

R9 [t1] = 8

R10 [t2] = 53

R11 [t3] = 4d

R12 [t4] = 6

R13 [t5] = a

R14 [t6] = 5

R15 [t7] = 0

R16 [s0] = 100102c9

R17 [s1] = 100100c3

R18 [s2] = 100102ac

R19 [s3] = 0

R20 [s4] = 100102de

R21 [s5] = 100101c3

DataText

User data segment [100000000]..[100400000]

[100000000]..[1000ffff] 00000000

[100100000] 65746e45 68742072 65732065 6e65746e Enter the senten

[100100100] 203a6563 746e4500 74207265 77206568 ce: . Enter the w

[100100200] 2064726f 20756f79 746e6177 206f7420 ord you want to

[100100300] 72616573 203a6863 746e4500 74207265 search: . Enter t

[100100400] 77206568 2064726f 20756f79 746e6177 he word you want

[100100500] 206f7420 6c706572 20656361 68746977 to replace with

[100100600] 5400203a 77206568 2064726f 6e207369 : . The word is n

[100100700] 7020746f 65736572 0a2e746e 65685400 ot present. . The

[100100800] 6e657320 636e6574 61772065 00203a73 sentence was: .

[100100900] 6568540a 646f6d20 65696669 65732064 . The modified se

[100100a00] 6e65746e 69206563 00203a73 73696874 ntence is: . this

[100100b00] 20736920 74697277 206e6574 4d206e69 is written in M

[100100c00] 0a535049 00000000 00000000 00000000 I P S

[100100d00]..[100101ab] 00000000

[100101ac] 73696874

[100101b00] 20736920 74697277 206e6574 4d206e69 t h i s

[100101c00] 00535049 00000000 00000000 00000000 i s w r i t t e n i n M

[100101d00]..[100102ab] 00000000

[100102ac] 74697277

[100102b00] 00000a65 00000000 00000000 00000000 I P S

[100102c00] 00000000 50494d00 6e650a53 0000000a w r i t

[100102d00] 00000000 00000000 00000000 72770000 e

[100102e00] 6e697469 00000a67 00000000 00000000 M I P S . e n

[100102f00] 00000000 0a000000 00000000 00000000 w r

[100103000]..[1003ffff] 00000000

[100103000] 00000000 00000000 00000000 00000000 i t i n g

[100103000] 00000000 0a000000 00000000 00000000

[100103000] 00000000 00000000 00000000 00000000

User stack [7ffff590]..[800000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J

[7ffff5b0] 7fffff19 7fffffec 7ffffed8 7ffffeb1

Console

Enter the sentence: this is written in MIPS

Enter the word you want to search: write

Enter the word you want to replace with: writing

The word is not present.

The sentence was: this is written in MIPS

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QtSPin

File Simulator Registers Text Segment Data Segment Window Help

FP Regs

Int Regs [16]

Int Regs [16]

PC = 4002b0

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] = 100101ac

R5 [a1] = 100

R6 [a2] = 19

R7 [a3] = 0

R8 [t0] = a

R9 [t1] = 5

R10 [t2] = 74

R11 [t3] = a

R12 [t4] = 5

R13 [t5] = a

R14 [t6] = 5

R15 [t7] = 3

R16 [s0] = 100102c9

R17 [s1] = 100100ba

R18 [s2] = 100102b0

R19 [s3] = 0

R20 [s4] = 100102de

R21 [s5] = 100101ba

Data

Text

User data segment [10000000]..[10040000]

[10000000]..[1000ffff] 00000000

[10010000] 65746e45 68742072 65732065 6e65746e Enter the senten

[10010010] 203a6563 746e4500 74207265 77206568 ce : . Enter the w

[10010020] 2064726f 20756f79 746e6177 206f7420 ord you want to

[10010030] 72616573 203a6863 746e4500 74207265 search : . Enter t

[10010040] 77206568 2064726f 20756f79 746e6177 he word you want

[10010050] 206f7420 6c706572 20656361 68746977 to replace with

[10010060] 5400203a 77206568 2064726f 6e207369 : . The word is n

[10010070] 7020746f 65736572 0a2e746e 65685400 ot present . . The

[10010080] 6e657320 636e6574 61772065 00203a73 sentence was : .

[10010090] 6568540a 646f6d20 65696669 65732064 . The modified se

[100100a0] 6e65746e 69206563 00203a73 73696874 ntence is : . this

[100100b0] 69687420 68742073 000a7369 00000000 this this

[100100c0]..[100101ab] 00000000

[100101ac] 74616874 that

[100101b0] 61687420 68742074 00007461 00000000 that that

[100101c0]..[100102ab] 00000000

[100102ac] 73696874 this

[100102b0] 0000000a 00000000 00000000 00000000

[100102c0] 00000000 69687400 00000a73 00000000 this

[100102d0] 00000000 00000000 00000000 68740000 th

[100102e0] 000a7461 00000000 00000000 00000000 at

[100102f0] 00000000 0a000000 00000000 00000000

[10010300]..[1003ffff] 00000000

User Stack [7ffff590]..[80000000]

[7ffff590] 00000002 7ffff65a 7ffff64a 00000000 Z J

[7ffff5a0] 7fffffe1 7fffffb7 7fffff86 7fffff4a J

[7ffff5b0] 7fffff19 7ffffefc 7ffffed8 7ffffeb1

[7ffff5c0] 7ffffe7f 7ffffe72 7ffffe59 7ffffe2c r Y

[7ffff5d0] 7ffffe0e 7ffffdf7 7ffffdd3 7ffffda7

Console

Enter the sentence: this this this

Enter the word you want to search: this

Enter the word you want to replace with: that

The sentence was: this this this

The modified sentence is: that that that

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