SPACE SET **SUBSET**

(1,2,3,4,5,6) *(2)*

(1,4)

(1,5,6)

(2,3,5,6)

add space set elements to array *find how many elements are equal by comparing the subset with the space set*

```
main:
        addi $s0, $zero, 1
        addi $s1, $zero, 2
        addi $s2, $zero, 3
        addi $s3, $zero, 4
        addi $s4, $zero, 5
        addi $s5, $zero, 6


        addi $t0, $zero, 0

        sw $s0, myArray($t0)
                addi $t0, $t0, 4
        sw $s1, myArray($t0)
                addi $t0, $t0, 4
        sw $s2, myArray($t0)
                addi $t0, $t0, 4
        sw $s3, myArray($t0)
                addi $t0, $t0, 4
        sw $s4, myArray($t0)
                addi $t0, $t0, 4
        sw $s5, myArray($t0)
```

```
addi $t0, $zero, 0
addi $t4, $zero, 1
addi $t5, $zero, 4


beq $t4,$s0,count1
beq $t4,$s1,count1
beq $t4,$s2,count1
beq $t4,$s3,count1
beq $t4,$s4,count1
beq $t4,$s5,count1
beq $t5,$s0,count1
beq $t5,$s1,count1
beq $t5,$s2,count1
beq $t5,$s3,count1
beq $t5,$s4,count1
beq $t5,$s5,count1
```

I made this code for all subset

```
count1:
        addi $t8, $t8, 2

slt $s7,$t7,$t8
beq $s7,$zero,bigger

bigger:
        add $t1,$zero, $t4
        add $t2,$zero, $t5

        add $t4,$zero, 0
        add $t5,$zero, 0
```

then I compared the counters

I kept and saved the most t registers

I made this code for all subset

```
beq $t1,$s1,remove1
beq $t1,$s2,remove2
beq $t1,$s3,remove3
beq $t1,$s4,remove4
beq $t1,$s5,remove5
beq $t2,$s0,remove
beq $t2,$s1,remove1
beq $t2,$s2,remove2
beq $t2,$s3,remove3
beq $t2,$s4,remove4
beq $t2,$s5,remove5
beq $t3,$s0,remove
beq $t3,$s1,remove1
beq $t3,$s2,remove2
beq $t3,$s3,remove3
beq $t3,$s4,remove4
beq $t3,$s5,remove5
beq $t4,$s0,remove
beq $t4,$s1,remove1
beq $t4,$s2,remove2
beq $t4,$s3,remove3
beq $t4,$s4,remove4
beq $t4,$s5,remove5

remove3:
        addi $s3,$zero, 0

remove:
        addi $s0,$zero, 0
remove1:
        addi $s1,$zero, 0

remove2:
        addi $s2,$zero, 0
```

after selecting the largest counter,

I delete elements from the subset

selected from the space set

After all, I compared the remaining elements in the space cluster with the remaining subsets and reached the space cluster.

```
Space Set
1,2,3,4,5,6,
,RESULT
2,3,5,6
,1,4
-- program is finished running --
```

OUTPUT

$zero	0	0x00000000
$at	1	0x10010000
$v0	2	0x0000000a
$v1	3	0x00000000
$a0	4	0x00000004
$a1	5	0x00000000
$a2	6	0x00000002
$a3	7	0x00000000
$t0	8	0x00000018
$t1	9	0x00000002
$t2	10	0x00000003
$t3	11	0x00000005
$t4	12	0x00000006
$t5	13	0x00000003
$t6	14	0x00000006
$t7	15	0x00000003
$s0	16	0x00000001
$s1	17	0x00000004
$s2	18	0x00000000
$s3	19	0x00000000
$s4	20	0x00000000
$s5	21	0x00000000
$s6	22	0x00000001
$s7	23	0x00000004
$t8	24	0x00000004
$t9	25	0x00000000
$k0	26	0x00000002
$k1	27	0x00000006
$gp	28	0x10008000
$sp	29	0x7fffeffc
$fp	30	0x00000000
$ra	31	0x00000000
pc		0x004003bc
hi		0x00000000
lo		0x00000000

$t1,$t2,$t3,$t4 first subset

$s0,s1 space set after deletion

$s6,$s7 second subset

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