

## Code

```
/*
```

kaç tane array girdiğinizin ya da arrayin boyutunun bir önemi yok.

Sadece her verdiğiniz arrayin bitimine (son elemanı olarak) -2 koymanız gerekir ve en son arrayin

Sonuna -3 koymanız gerekmektedir. Aşağıda gösterildiği gibi -2 arrayin bittiğini , -3 ise sonuncu array olduğunu göstermektedir. Bu işlem yapıldığı sürece arrayin boyutu ya da kaç tane array olduğu önemsizdir , istenilen kadar girilebilir.

```
*/
```

```
.data
```

```
Union: .word 13 , 15 , 18 , 22 , 25 , -2
```

```
myArray1: .word 13 , 18 , 25 , -2
```

```
myArray2: .word 11 , 15 , -2
```

```
myArray3: .word 13 , 15 , -2
```

```
myArray4: .word 22 , 25 , -2
```

```
myArray5: .word 18, -2, -3
```

```
// aşağıdakiler consola bastırırken güzel gözüksün diye tanımladığımız bazı labellar
```

```
space: .ascii " "
```

```
newLine: .ascii "\n"
```

```
countofmatch: .ascii "\n count of match is : "
```

```
unionset: .ascii "\n Union set is U "
```

```
subset: .ascii "\n S"
```

```
openbracket: .ascii "{ "
```

```
closebracket: .ascii "} \n"
```

```
comma: .ascii ", "
```

```
.text
```

```
main:
```

```
// kullanılan fonksiyonları ve amaçlarını yazacağım sadece
```

// basically it prints union element on the console

printUnionset:

```
lw $s6, Union($t0) # take next array value
beq $s6, -2, EndofPrintUnionSet # untill end of the union
    addi $t0, $t0, 4 # increment index
j printUnionset
```

EndofPrintUnionSet:

```
jal searchAllSubsetsInUnion // search all subsets in union
afterSearchAllSubsetsInUnion:
    jal exitProgram // end the program
```

// after main

searchAllSubsetsInUnion:

```
move $t2, $0 # init the count number
lw $s5, 0($t3) # take next array value to search
beq $s5, -3, afterSearchAllSubsetsInUnion
    jal searchArrayInArray
    afterSearchArrayInArray:
        addi $t3, $t3, 4 # increment index
        addi $t1, $t1, 1 # holds which array (subset number )
    j searchAllSubsetsInUnion
```

searchArrayInArray:

```
lw $s5, 0($t3) # take next array value to search
addi $t0, $zero, 0 # init Union array index
beq $s5, -2, afterSearchArrayInArray # untill end of the array
    jal searchValueInArray
    afterSearchValueInArray:
        addi $t3, $t3, 4 # increment index
    j searchArrayInArray
```

searchValueInArray:

```
lw $s6, Union($t0) # take next array value
beq $s6, -2, notFound # untill end of the array
```

beq \$s5, \$s6, found # if it is found , check the value match

addi \$t0, \$t0, 4 # increment index

j searchValueInArray

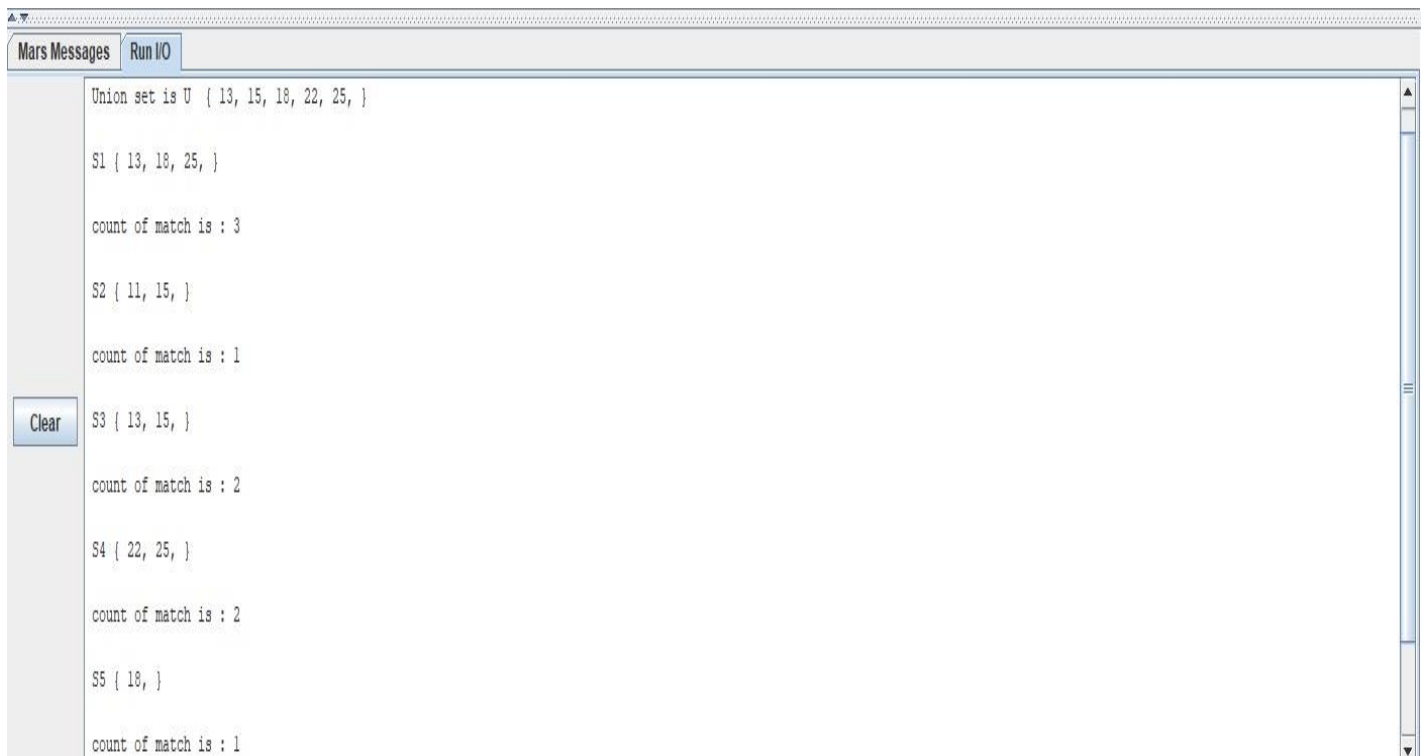
notFound: #tell the console it is not found

j afterSearchValueInArray

found: #tell the console it is found

addi \$t2, \$t2, 1 # increase count how many matches have been done

j afterSearchValueInArray



```
Union set is U { 13, 15, 18, 22, 25, }  
  
S1 { 13, 18, 25, }  
count of match is : 3  
  
S2 { 11, 15, }  
count of match is : 1  
  
S3 { 13, 15, }  
count of match is : 2  
  
S4 { 22, 25, }  
count of match is : 2  
  
S5 { 18, }  
count of match is : 1
```

// eksik olan kısım en az sayıda subset leri seçip union oluşturmaması