Báo cáo thực hành giữa kì

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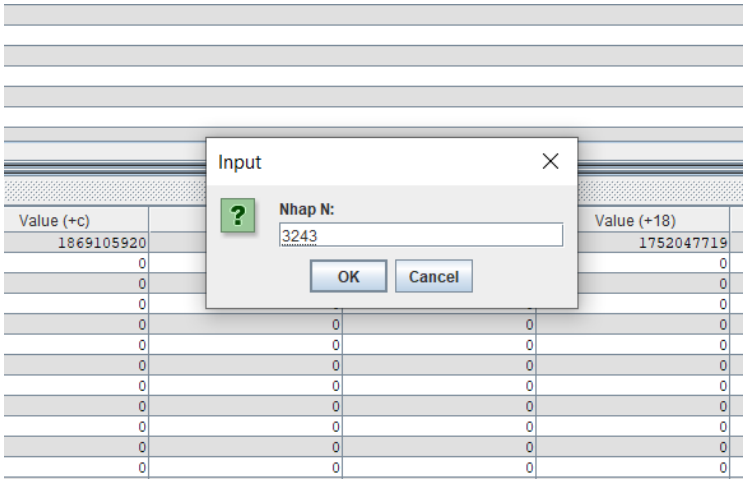
MSSV : 20205064

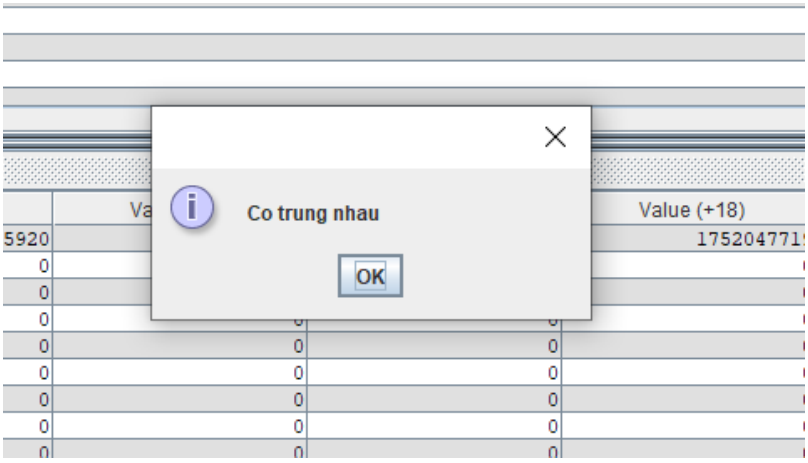
Phần A câu 3

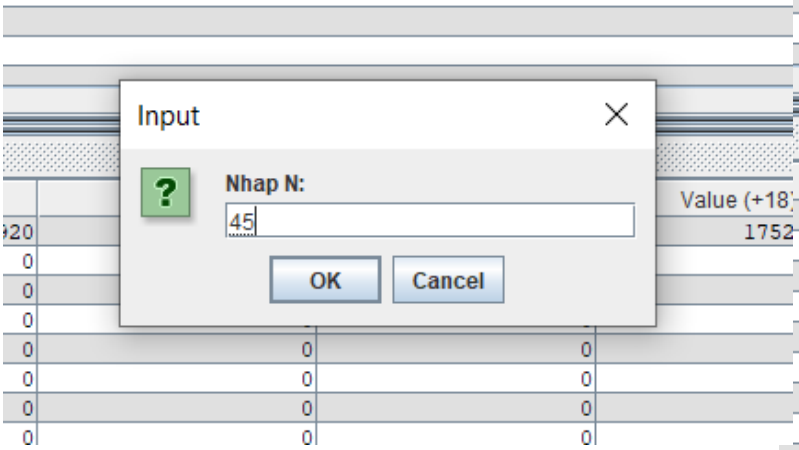
```
.data
N: .asciiz "Nhap N: "
Co: .asciiz "Co "
Khong: .asciiz "Khong "
Trung: .asciiz "trung nhau"
Khongdung: .asciiz "hop le"
.text
        j       main
Cotrung:
        li      $v0, 59
        la      $a0, Co
        la      $a1, Trung
        syscall
        j       exit
Khongtrung:
        li      $v0, 59
        la      $a0, Khong
        la      $a1, Trung
        syscall
        j       exit
Khonghople:
```

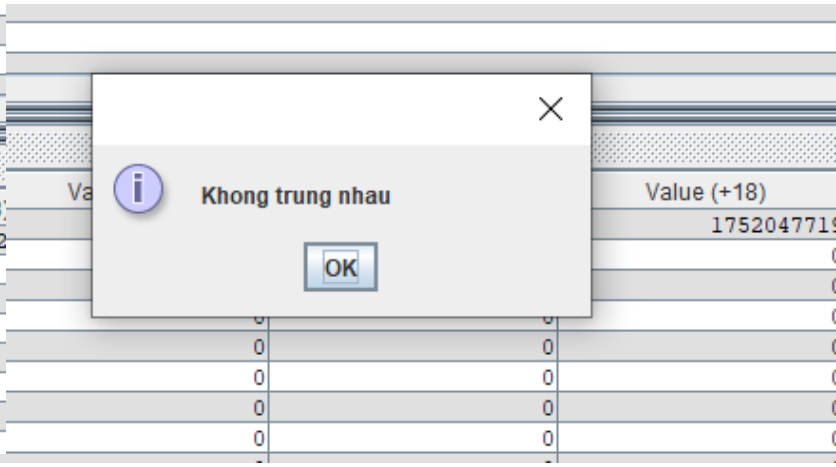
```
        li      $v0, 59
        la      $a0, Khong
        la      $a1, Khongdung
        syscall
        j       exit
main:
        #Nhap N
        li      $v0, 51
        la      $a0, N
        syscall
        slti    $a3, $a0, 10    #kiem tra du lieu vao
        bne     $a3, $0, Khonghople
        move    $s1, $a0        #s1 = N
        li      $t1, 0          #khoi chay so chu so la 0
        li      $t2, 10         #hang so 10
        li      $t4, 0          #bien chay vong lap
#Vong lap tim so chu so cua N
loop:
        div     $s1, $t2
        addi    $t1, $t1, 1
        mfhi    $t0             #lay phan du phep chia cho vao stack
        addi    $sp, $sp, -4
        sw      $t0, 0($sp)
        mflo    $s1
        beq     $s1, $0, kiemtra        #Khi phan nguyen = 0 thi ket thuc vong lap
        j       loop
```

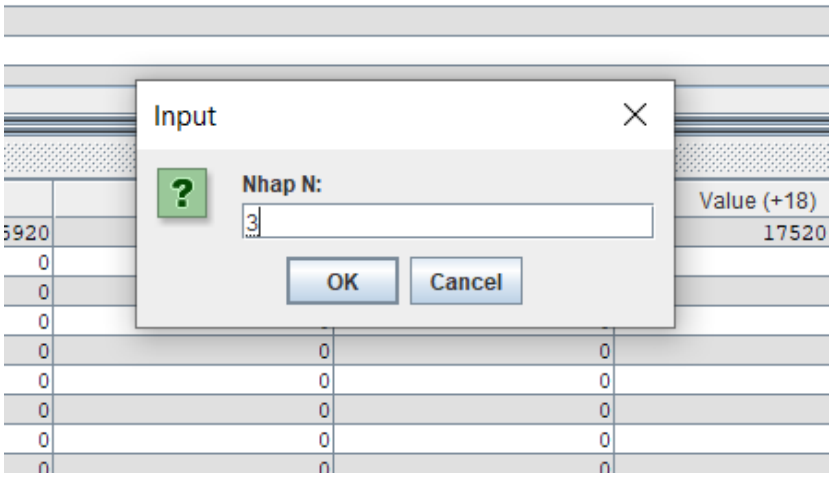
```
kiemtra:
        addi    $t4, $t4, 1
        beq     $t4, $t1, Khongtrung  #bien dem
        lw      $s2, 0($sp)           #lay du lieu tu stack ra
        move    $t9, $sp              #luu dia chi con tro hien tai vao cho moi
        sub     $t5, $t1, $t4         #t5 so lan chay vong lap con
        li      $t6, 0                #bien dem vong lap con
        vonglap:
        addi    $t6, $t6, 1
        addi    $t9, $t9, 4
        lw      $s3, 0($t9)
        beq     $s3, $s2, Cotrung
        beq     $t6, $t5, a           #khi t6 = t5 thi dung vong lap con
        j       vonglap
a:
        addi    $sp, $sp, 4
        j       kiemtra
exit:
```

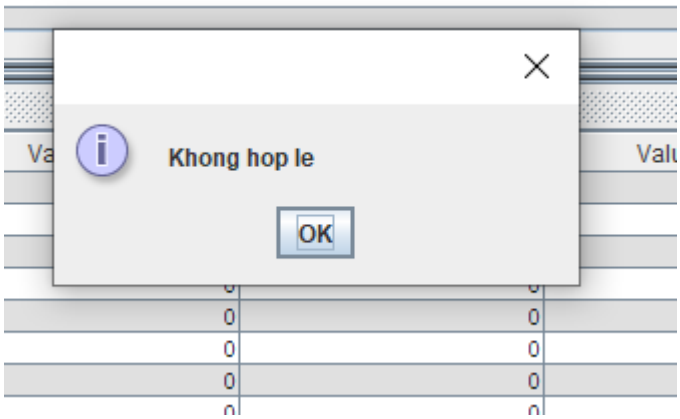












Cách thực hiện:

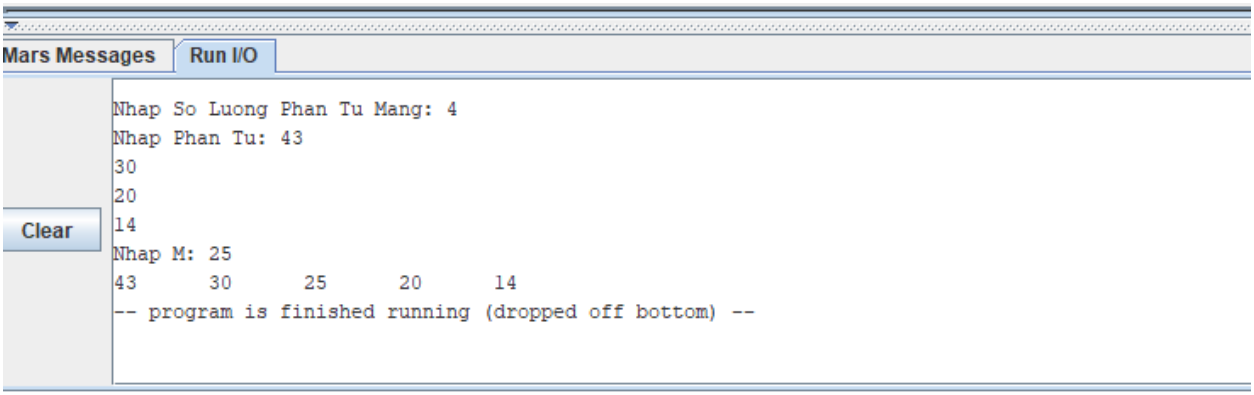
1. Nhap N, kiểm tra điều kiện N 2 chữ số
2. Chạy vòng lặp để tìm số chữ số của N
3. Chia N cho 10, lấy phần dư lưu vào stack
4. Lấy từng số của stack so sánh với các số còn lại

Bài 2 câu 5

```
.data
msg_input: .asciiz "Nhap So Luong Phan Tu Mang: "
msg_input2: .asciiz "Nhap Phan Tu: "
msg_input3: .asciiz "Nhap M: "
space: .asciiz "\t"
msg_output: .asciiz "Ket Qua: "
arr: .word 0:100

.text
main:

# Nhap So Luong Phan Tu
        la $a0,msg_input
        li $v0,4
        syscall

# Chuyen qua thanh ghi $t0
        li $v0,5
        syscall
        move $t0,$v0            # t0: so phan tu cua mang
# Nhap cac phan tu cua mang
        li $v0,4
        la $a0,msg_input2
        syscall

li $t1,0
la $t2,arr
move   $t6, $t2

lap:
        li $v0,5
        syscall
        sw $v0,($t2)
        addi $t1,$t1,1
```

```
        addi $t2,$t2,4
        blt $t1,$t0,lap
li $t1,0
la $t2,arr
la $t5, arr
addi    $t0, $t0, 1
# Nhap M
        li $v0,4
        la $a0,msg_input3
        syscall
        li $v0,5
        syscall
        move $t3,$v0            #t3: M
#xu li
        mul     $t5, $t0, 4
        add     $t2, $t2, $t5
        addi    $t2, $t2, -4
        sw      $t3, ($t2)
loop:

        lw      $s1, ($t2)
        addi    $t9, $t2, -4
        lw      $s2, ($t9)
        slt     $s3, $s2, $s1
        bne     $s3, $0, a
        j       inmang
        a:
        sw      $s1, ($t9)
        sw      $s2, ($t2)
        b:
        addi    $t2, $t2, -4
        beq      $t2, $t6, inmang
        j       loop
li $t1,0
la $t2,arr
#in mang
inmang:
        lw      $t4, ($t6)
        li      $v0, 1
        move    $a0, $t4
        syscall
```

```
        # KHoang Trang
        li $v0,4
        la $a0,space
        syscall
        addi    $t1, $t1, 1
        addi    $t6,$t6, 4
        beq     $t0, $t1, exit
        j        inmang
exit:
```



Câu 6 Phần C

```
.data
 nhap: .asciiz "Nhap xau : "
 str: .asciiz " Ch"
 space: .ascii " "
 xau: .space 100
 sotu:   .asciiz "so tu bat dau bang Ch la: "
 .text
 main:

        li      $v0,4
        la      $a0, nhap
        syscall
        #Nhap xau tu ban phim
        la      $a0, xau
        li      $a1, 100
        li      $v0, 8
        syscall

la $t6, xau
```

```
la $t7, str
        li      $a1, 0      # So tu Ch can tinh
        addi    $t6, $t6, -1 #Them space cho tu dau tien
        lb      $s0, 0($t7)  # s0 = " "
        lb      $s1, 1($t7)  # s1 = "C"
        lb      $s2, 2($t7)  # s2 = "h"

loop:
#Doc lan luot 3 chu cai lien nhau trong xau
        lb      $t1, 0($t6)
        lb      $t2, 1($t6)
        lb      $t3, 2($t6)
        beq     $t2, $0, exit     #Chu cai thu 2 = 0 thi exit
        addi    $t6, $t6, 1       #Nhay sang chu cai tiep
        #Kiem tra 3 chu cai co trung " Ch" khong
        bne     $s0, $t1, loop
        bne     $s1, $t2, loop
        bne     $s2, $t3, loop
        add     $a1, $a1, 1       #Trung thi bien dem a1 + 1
        j       loop
exit:
        li      $v0, 56
        la      $a0, sotu
        syscall
```