

Lab 3

Write a program to find largest digit of your Roll Number by defining array of digits part of your Roll Number. For example: BC123456789 is your roll number and in digits part “9” is largest digit.

Mechanism to Conduct Lab:

Students and teacher communicate through Skype/Adobe Connect. Students will write code using Notepad or Programmer's Notepad and will share code and screen output.

Nasm: <https://vulms.vu.edu.pk/Courses/CS401/Downloads/AssmSoft.zip>

DosBOX: <http://sourceforge.net/projects/dosbox/files/dosbox/0.74-2/DOSBox0.74-2-win32-installer.exe/download>

Programmers Notepad: <https://github.com/simonsteele/pn/releases/download/v2.4.2/portable-pn2421440.zip>

Solution:

Students will use comparison instructions and different addressing modes to implement this functionality

```
[org 0x0100]
```

```
array_nums: db 1, 2, 3, 4, 5, 6, 7, 8, 9
```

```
max: db 0
```

```
    findBiggest:
```

```
        mov ax, [bx]      ; first number to ax
```

```
        mov cx, 0
```

```
maxvalue:    cmp ax, [bx]      ; find the maximum number
```

```
                jge maxloop      ; if greater or equal number
```

```
                mov ax, [bx]      ; maximum number was larger
```

```

maxloop:

            add bx, 2           ; advance bx to next index

            loop maxvalue

            ret

; -----

start:      mov bx,  array_nums    ; use find function on
'array_nums'

            mov ax,0

mov cx, 15

            call findBiggest

mov [max], ax

mov ax, 0x4c00           ; terminate program

int 0x21

```