**Assignment NO. 1**

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**Course No.: CS401P**

**Question**

You are required to write the assembly language program that:

1. Finds the largest digit of your VUID
2. Finds the smallest digit of your VUID
3. Calculates the multiplication of largest digit and smallest digit of your VUID and stores the result in memory

**Solution:**

* Assembly language program :

[org 0x0100]

jmp start

stdid: db 2, 2, 0, 4, 2, 4, 7, 8, 3

result\_digit: db 0

small\_digit: db 0

mul\_output: db 0

start:

mov si, stdid

mov cx, 9

mov al, [si]

mov bl, al

inc si

dec cx

find\_result\_digit:

cmp bl, [si]

jae not\_result\_digit

mov bl, [si]

not\_result\_digit:

inc si

loop find\_result\_digit

mov [result\_digit], bl

mov si, stdid

mov cx, 9

mov al, [si]

mov bl, al

inc si

dec cx

find\_small\_digit:

cmp bl, [si]

jbe not\_small\_digit

mov bl, [si]

not\_small\_digit:

inc si

loop find\_small\_digit

mov [small\_digit], bl

mov al, [result\_digit]

mov bl, [small\_digit]

imul ax, bx

mov [mul\_output], al

mov ax, 0x4c00

int 0x21

* Screenshot showing the results (largest, smallest, multiplication) in memory window of AFD (Sample attached below):

