

SYSTEM PROGRAMMING LAB

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BT19CS031

CSE, IV SEM

Question 1 : Write an assembly language program to print your name, enrolment id, and branch using macros.

; A macro with two parameters

; Implements the write system call

```
%macro write_string 2
```

```
    mov     eax, 4
```

```
    mov     ebx, 1
```

```
    mov     ecx, %1
```

```
    mov     edx, %2
```

```
    int     80h
```

```
%endmacro
```

```
section .text
```

```
    global _start           ;must be declared for using  
gcc
```

```
_start:           ;tell linker entry point
```

```
    write_string msg1, len1
```

```
    write_string msg2, len2
```

```
    write_string msg3, len3
```

```
mov eax,1           ;system call number  
(sys_exit)
```

```
int 0x80           ;call kernel
```

```
section .data
```

```
msg1 db 'NIRAJ KUMAR',0xA,0xD
```

```
len1 equ $ - msg1
```

```
msg2 db 'ENROLLMENT NO. - BT19CS031',  
0xA,0xD
```

```
len2 equ $- msg2
```

```
msg3 db 'BRANCH - COMPUTER SCIENCE AND  
ENGINEERING'
```

```
len3 equ $- msg3
```

OUTPUT –



niraj@niraj-VirtualBox: ~/Documents



```
niraj@niraj-VirtualBox:~/Documents$ nasm -f elf Q1.asm
```

```
niraj@niraj-VirtualBox:~/Documents$ ld -m elf_i386 -s -o Q1 Q1.o
```

```
niraj@niraj-VirtualBox:~/Documents$ ./Q1
```

```
NIRAJ KUMAR
```

```
ENROLLMENT NO. - BT19CS031,
```

```
BRANCH - COMPUTER SCIENCE AND ENGINEERINGniraj@niraj-VirtualBox:~/Documents$
```