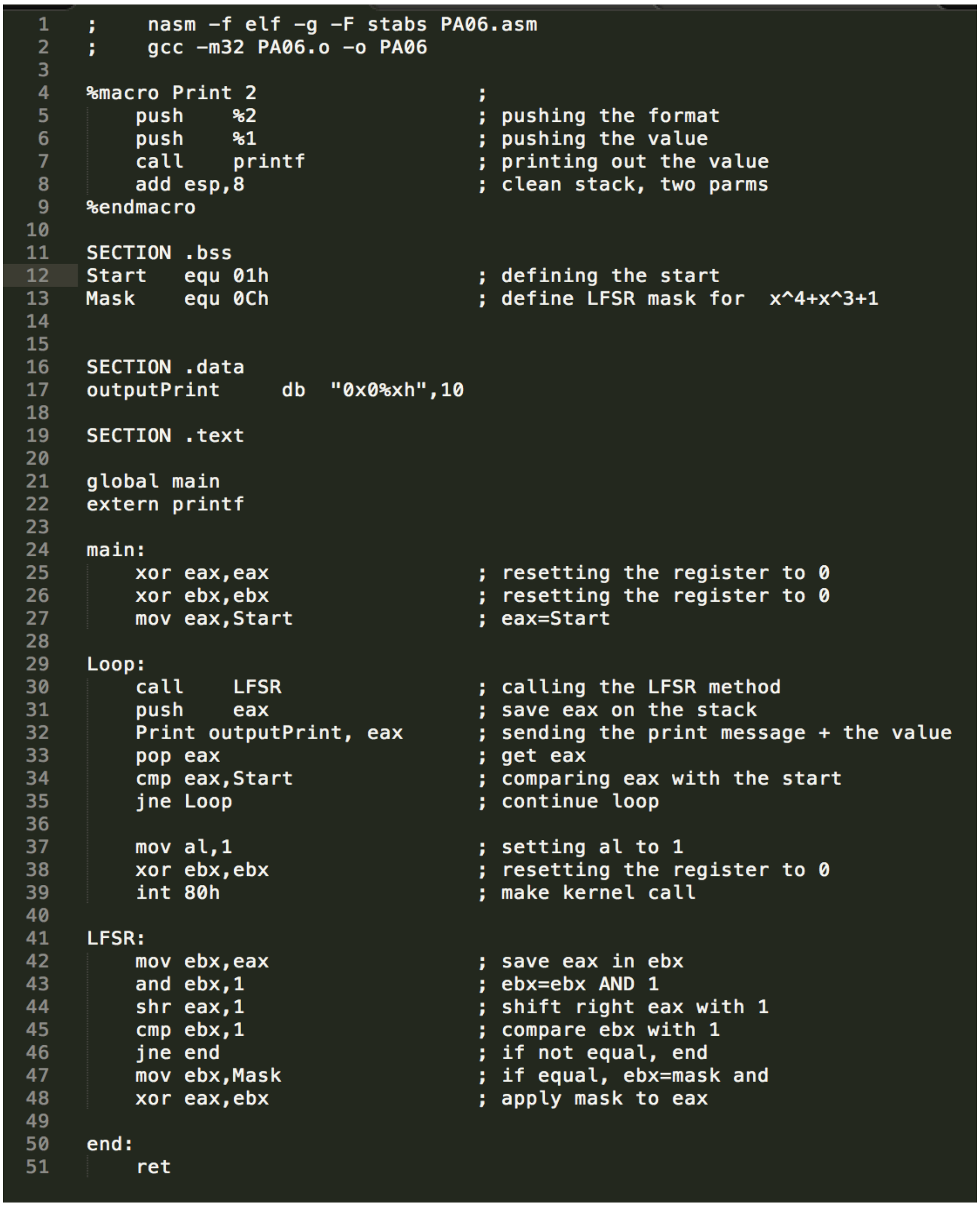
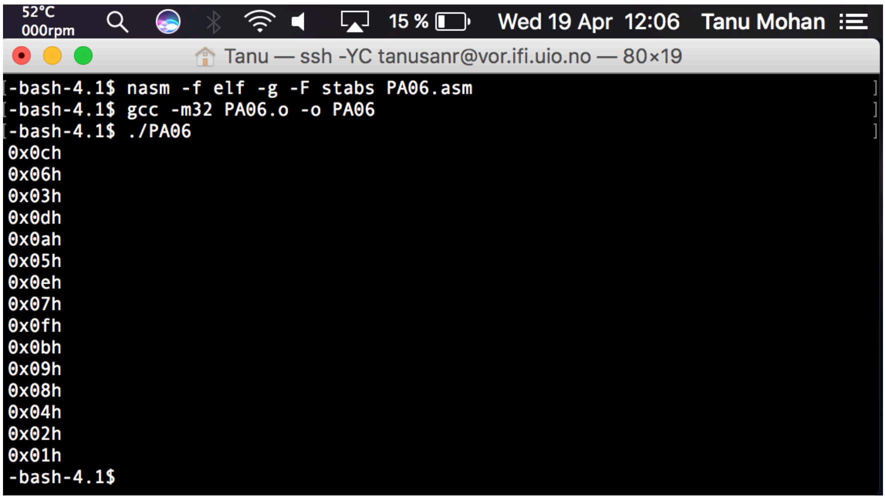
CMPE102 PA06 Tanusan Rajmohan
Professor Robinson



```
;    nasm -f elf -g -F stabs PA06.asm
;    gcc -m32 PA06.o -o PA06

%macro Print 2                  ;
    push    %2                  ; pushing the format
    push    %1                  ; pushing the value
    call    printf              ; printing out the value
    add esp,8                   ; clean stack, two parms
%endmacro

SECTION .bss
Start   equ 01h                 ; defining the start
Mask    equ 0Ch                 ; define LFSR mask for  x^4+x^3+1


SECTION .data
outputPrint     db  "0x0%xh",10

SECTION .text

global main
extern printf

main:
    xor eax,eax                 ; resetting the register to 0
    xor ebx,ebx                 ; resetting the register to 0
    mov eax,Start               ; eax=Start

Loop:
    call    LFSR                ; calling the LFSR method
    push    eax                 ; save eax on the stack
    Print outputPrint, eax      ; sending the print message + the value
    pop eax                     ; get eax
    cmp eax,Start               ; comparing eax with the start
    jne Loop                    ; continue loop

    mov al,1                    ; setting al to 1
    xor ebx,ebx                 ; resetting the register to 0
    int 80h                     ; make kernel call

LFSR:
    mov ebx,eax                 ; save eax in ebx
    and ebx,1                   ; ebx=ebx AND 1
    shr eax,1                   ; shift right eax with 1
    cmp ebx,1                   ; compare ebx with 1
    jne end                     ; if not equal, end
    mov ebx,Mask                ; if equal, ebx=mask and
    xor eax,ebx                 ; apply mask to eax

end:
    ret
```



```
-bash-4.1$ nasm -f elf -g -F stabs PA06.asm
-bash-4.1$ gcc -m32 PA06.o -o PA06
-bash-4.1$ ./PA06
0x0ch
0x06h
0x03h
0x0dh
0x0ah
0x05h
0x0eh
0x07h
0x0fh
0x0bh
0x09h
0x08h
0x04h
0x02h
0x01h
-bash-4.1$
```

Tried to implement the print in bit, but it gave seg. fault or printed wrong so I left that part out. I think I did what the assignment asked, wasn't to sure how to do it so I tried and now it prints in hex at least.