

# Assignment #3



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Section: V3

Course title: COAL

**University of Management and Technology, Lahore**

## Q1)

Code:

```
org 100h
.model small
.data
    msg: name db "Name: Amaan Majeed$"
    id db "ID: F2020266286$"
    str1 db "Enter 3 initials: ", '$'
    nl db 10, 13, '$'

    char1 db ?
    char2 db ?
    char3 db ?

.code

main proc
    mov ah, 9                int 21h                mov ah, 9
    lea dx, name             mov bh, al                lea dx, nl
    int 21h                  int 21h                int 21h

    lea dx, nl               mov ch, al                mov ah, 2
    int 21h                  mov ch, al                mov dl, ch
    int 21h                  int 21h                int 21h

    lea dx, id               mov ah, 9                mov ah, 9
    int 21h                  lea dx, nl                lea dx, nl
    lea dx, nl               int 21h                int 21h
    int 21h                  mov ah, 2                mov ah, 2
    lea dx, nl               mov dl, bl                mov dl, bl
    int 21h                  int 21h                int 21h

    mov ah, 9                mov ah, 9                mov ah, 4ch
    lea dx, str1             lea dx, nl                int 21h
    int 21h                  int 21h

    mov ah, 1                mov ah, 9                main endp
    int 21h                  lea dx, nl                end main
    mov bl, al               int 21h

    mov ah, 2                mov dl, bh
    mov dl, bh               int 21h
    int 21h
```

emulator screen (46x14 chars)

Name: Amaan Majeed  
ID: F2020266286

Enter 3 initials: JKL

J  
K  
L

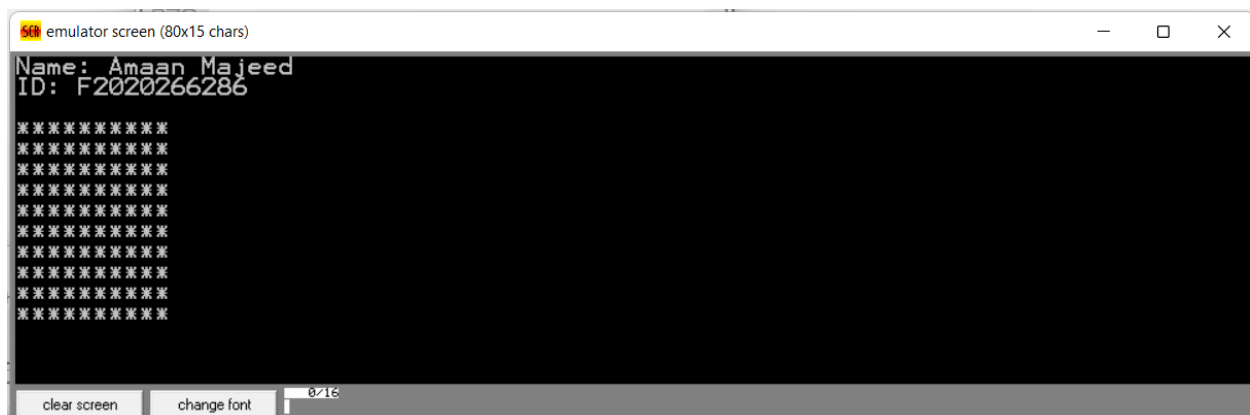
clear screen

change font

0/16

Q2)

org 100h	mov ah, 9
.model small	lea dx, str1
.data	int 21h
str1 db "*****", 10, 13, '\$'	
msg: name db "Name: Amaan Majeed\$"	mov ah, 9
id db "ID: F2020266286\$"	lea dx, str1
	int 21h
.code	
main proc	mov ah, 9
mov ah, 9	lea dx, str1
lea dx, name	int 21h
int 21h	
	mov ah, 9
lea dx, nl	lea dx, str1
int 21h	int 21h
lea dx, id	mov ah, 9
int 21h	lea dx, str1
lea dx, nl	int 21h
int 21h	
lea dx, nl	mov ah, 9
int 21h	lea dx, str1
	int 21h
mov ah, 9	
lea dx, str1	mov ah, 9
int 21h	lea dx, str1
	int 21h
mov ah, 9	
lea dx, str1	mov ah, 4ch
int 21h	int 21h
mov ah, 9	main endp
lea dx, str1	end main
int 21h	



Q3)

```
org 100h                                lea dx, str1
.model small                            int 21h

.data
    msg: name db "Name: Amaan Majeed$"
    id db "ID: F2020266286$"
    str1 db "Enter a lower case letter: $"
    str2 db "Upper case letter: $"

    nl db 10,13,'$'

.code
main proc
    mov ah, 9
    lea dx, name
    int 21h

    lea dx, nl
    int 21h
    lea dx, id
    int 21h

    lea dx, nl
    int 21h
    int 21h

    lea dx, nl
    int 21h
    int 21h

    main endp
end main
```



emulator screen (80x25 chars)

```
Name: Amaan Majeed
ID: F2020266286
Enter a lower case letter: b
Upper case letter: B
```

clear screen change font 0/16

## Q4)

org 100h

.model small

.data

str1 db "Enter two numbers from 0-4 only: ", 10, 13, '\$'

d1 db "Enter First Digit: \$"

d2 db "Enter Second Digit: \$"

space db " \$"

spac db " \$"

equalline db "=====", 10, 13, '\$'

msg: name db "Name: Amaan Majeed\$"

id db "ID: F2020266286\$"

nl db 10, 13, '\$'

.code

main proc	lea dx, d2	mov dl, bh
mov ah, 9	int 21h	int 21h
lea dx, name		
int 21h	mov ah, 1	mov ah, 9
	int 21h	lea dx, nl
lea dx, nl	mov bh, al	int 21h
int 21h		
	mov ah, 9	lea dx, equalline
lea dx, id	lea dx, nl	int 21h
int 21h	int 21h	
lea dx, nl		lea dx, space
int 21h	lea dx, space	int 21h
lea dx, nl	int 21h	
int 21h		mov al, bl
	mov ah, 2	add al, bh
mov ah, 9	mov dl, bl	sub al, 30h
lea dx, str1	int 21h	mov bl, al
int 21h		
	mov ah, 9	mov ah, 2
lea dx, d1	lea dx, nl	mov dl, bl
int 21h	int 21h	int 21h
mov ah, 1		
int 21h	lea dx, spac	
mov bl, al	int 21h	mov ah, 4ch
		int 21h
mov ah, 9	mov ah, 2	
lea dx, nl	mov dl, '+'	main endp
int 21h	int 21h	end main

```
emulator screen (80x25 chars)
Name: Amaan Majeed
ID: F2020266286

Enter two numbers from 0-4 only:
Enter First Digit: 4
Enter Second Digit: 4
  4
+4
=====
  8
```

clear screen   change font   0/16

## Q5)

org 100h

.model small

.data

str1 db "ENTER A HEX DIGIT(capital): \$"

str2 db "IN DECIMAL IT IS: \$"

msg: name db "Name: Amaan Majeed\$"

id db "ID: F2020266286\$"

nl db 10, 13, '\$'

.code

main proc

mov ah, 9

lea dx, name

int 21h

lea dx, nl

int 21h

lea dx, id

int 21h

lea dx, nl

int 21h

lea dx, nl

int 21h

mov ah, 9

lea dx, str1

int 21h

mov ah, 1

int 21h

mov bl, al

sub bl, 17

mov ah, 9

lea dx, nl

int 21h

lea dx, str2

int 21h

mov ah, 2

mov dl, '1'

int 21h

mov dl, bl

int 21h

mov ah, 4ch

int 21h

main endp

end main





Q6)

org 100h

.model small

.data

x db 0

y db 3

num db 65

msg: name db "Name: Amaan Majeed\$"

id db "ID: F2020266286\$"

nl db 10, 13, '\$'

.code

main proc

mov ah, 9

lea dx, name

int 21h

lea dx, nl

int 21h

lea dx, id

int 21h

lea dx, nl

int 21h

lea dx, nl

int 21h

mov cx, 7

loop-body:

mov ah, 2

mov dl, x

mov dh, y

int 10h

mov ah, 2

mov dl, num

int 21h

inc x

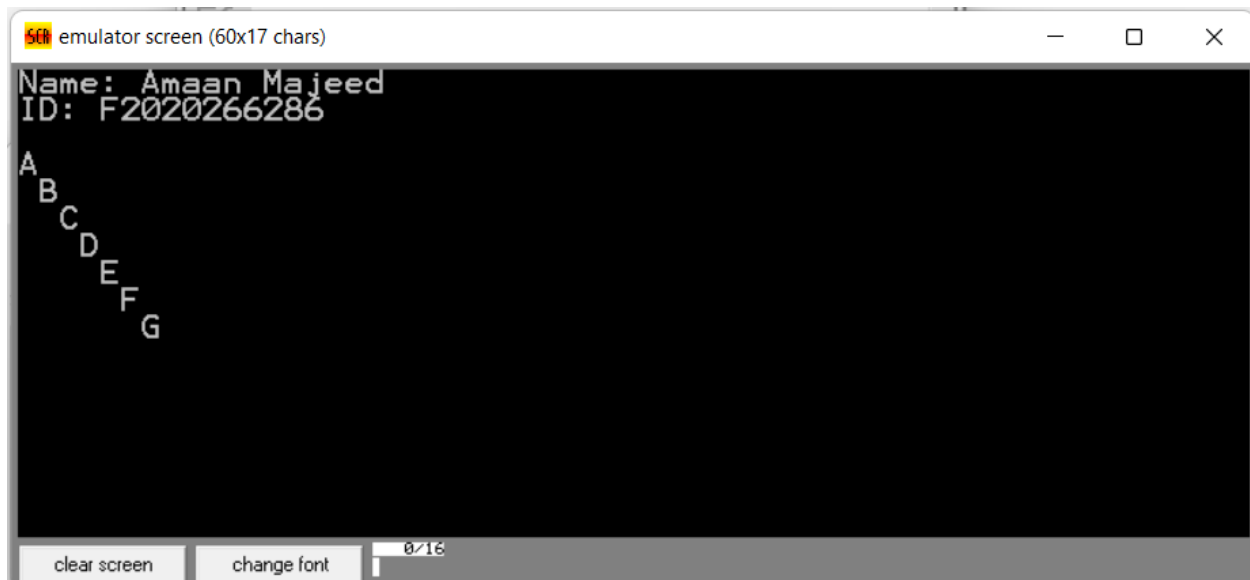
inc y

inc num

loop loop-body

main endp

end main



```
emulator screen (60x17 chars)
Name: Amaan Majeed
ID: F2020266286
A
B
C
D
E
F
G
clear screen change font 0/16
```