Lab session 3

1- Read a key from Keyboard

   ↳ Code:

```
Mov AH, 1H
INT 21H
```

و الحرف اللي اتكتب بيتخزن في أوتوماتك في **AL**

2- Write/print a key from keyboard

   ↳

Code to print a character,

الداتا الدنم تتخزنه الذول في **DL**

```
Mov DL, 'A'

Mov AH, 2H
INT 21H
```

EX: Write a program to receive character
from the user and print it again on screen.

```
- CODE
MAIN PROC
        Mov AH, 1H  ; receive input
        INT 21H

        Mov BL, AL  ; input data (character)
        Mov DL, BL
```
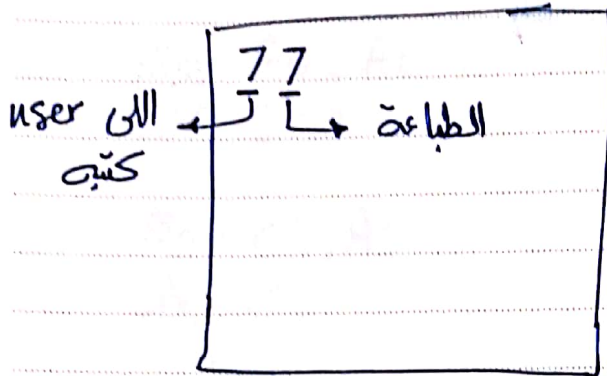
Mov AH, 2H   ; Print what in DL
INT 21H

الخرج هيكونه هكذا!

<div style="border:1px solid">
77
</div>

اللي user → ل ل ← الطباعة
كتبه

لوعاوزن الخرج يكونه مكتوب بعدها على السطر new line
نشوف في ASCII بتاع new line في emu8086

- CODE
    MAIN PROC
        Mov AH, 1H
        INT 21H

        Mov BL, AL

        Mov DL, 10H ; new line
        Mov AH, 2H
        INT 21H

        Mov BL, DL
        Mov AH, 2H
        INT 21H

→ Multiple input - output

        Mov AH, 1H
        INT 21H

```
Mov BL, AL
INT 21H

Mov BH, AL
INT 21H

Mov CL, AL
INT 21H
```
} and so on

; to print each input

```
Mov AH, 2H

Mov DL, BL
INT 21H

Mov DL, CL
INT 21H
```

→ | We should do it using loop to optimize
     code.

~~Input~~
~~Mov DL, AL~~   ~~Mov AH, 2H~~
                 ~~INT 21H~~

~~Mov DL, AL~~
~~H~~

EX. Write a program to add numbers received from user.

```
.CODE
MAIN PROC
        Mov AH, 1H
        INT 21H

        Mov BL, AL
        INT 21H
        Mov CL, AL

        ADD BL, CL
        Mov DL, BL

        Mov AH, 2H
        INT 21H
MAIN    ENDP
END MAIN
```

EX. Write a program to receive a number from user and check if it is negative or not (positive) and display a message

```
INClude Emu8086.INC

.DATA
    No DB ?

.CODE
MAIN PROC
```

```
Mov Ax, @DATA
Mov Dx, Ax

Mov AH, 1H
INT 21H

Mov No, AL

CMP No, 0

JE      Equal

JL      Negative

JG      Positive

Equal,
        Print " Equal"

Negative,
            Print " Negative"

Positive,
            Print " positive"
    MAIN ENDp
END MAIN
```

To CLEAR SCREen :

```
Mov AH, 00H
INT 21H
```

To print a message

.DATA

MSG   "Hello world"

.CODE
____

```
| LEA DX, MSG

   Mov AH, 9H
   INT 21H
```