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Title:	Program to display character in uppercase and lowercase.
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Aim: Assembly Language Program to display character A to z in both uppercase and lowercase

Theory:

DOS provide various interrupt services that are used by the system programmer. The most commonly used interrupt is INT 21H. It invokes inbuilt DOS functions which can be used to perform various tasks. The most common tasks are reading a user input character from the screen, displaying result on the exiding program etc.

In this program, we display the characters A to Z on the DOS prompt. DOS interrupt function 02 displays the contents of DL (ASCII code) on the screen. By loading the ASCII code of 'A' in the DL register, loading AH register with 02h and calling INT 21h it is possible to display character from A to Z on the screen.

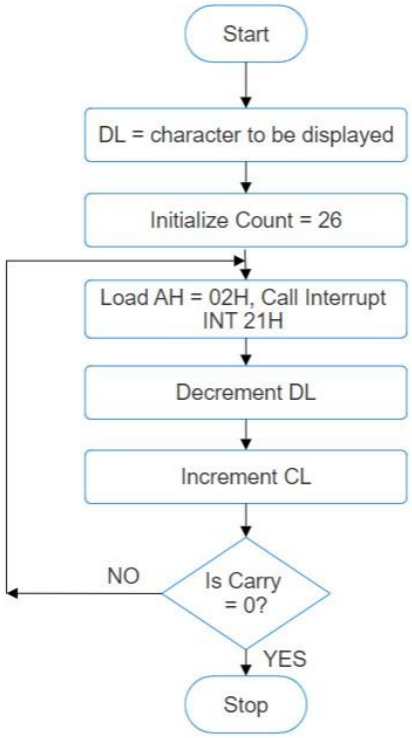
INT 21h/AH = 2 - write character to standard output.

Entry: DL = character to write, after execution AL = DL.

Example :-

```
mov ah , 2

mov dl , 'a'

int 21h
```

Flowchart:



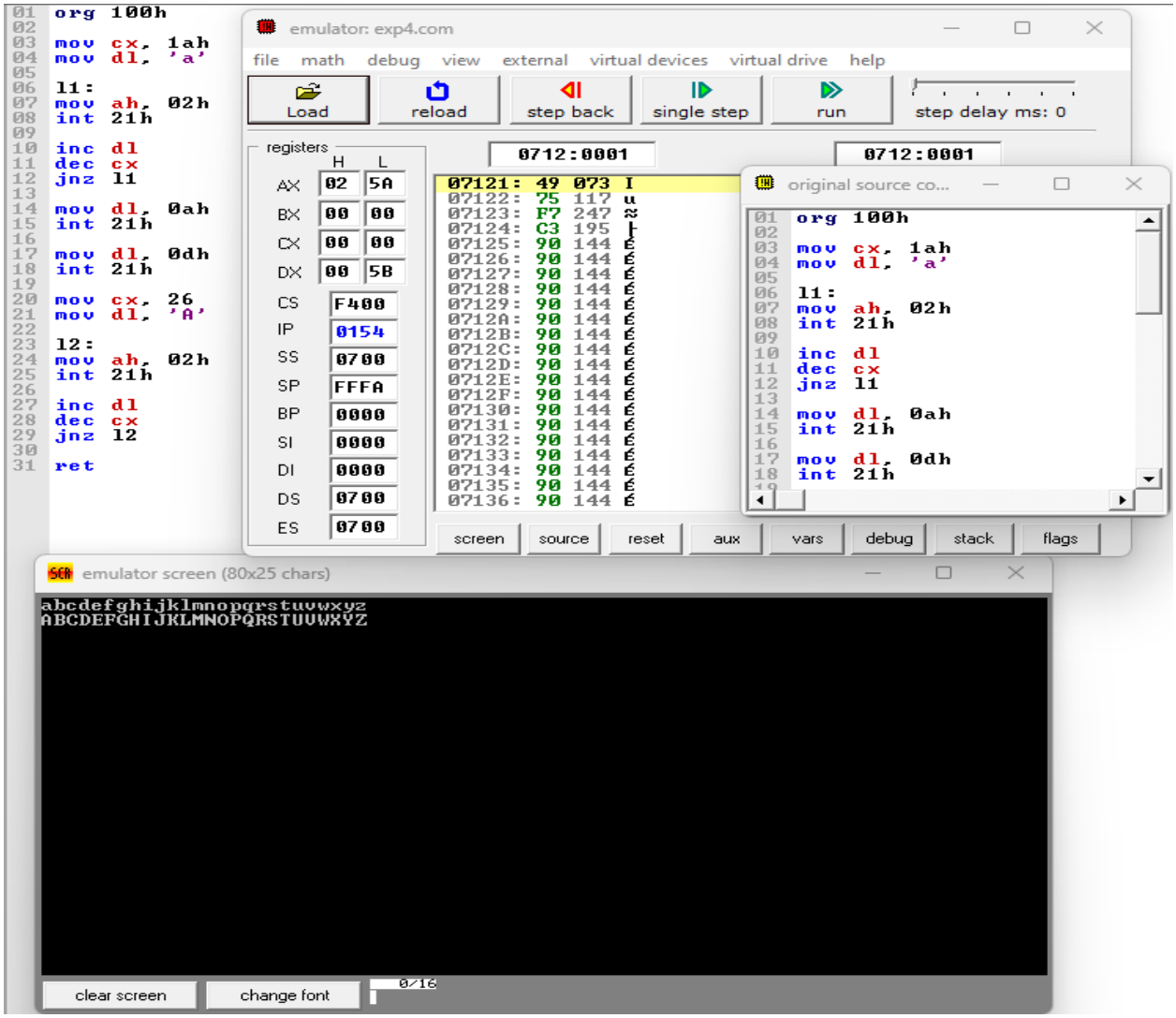
Algorithm:

1. Start.
2. Initialize DL with 'A'.
3. Load CL with count = 26.
4. Load AH = 02H and call INT 21H.
5. Increment DL, to next character.
6. Decrement the count.
7. Repeat steps 4,5,6 till CL is not zero.
8. To end the program use DOS interrupt:
   1) Load AH = 41H.
   2) Call INT 21 H.
9. Stop.

Code :

```
org 100h

mov cx, 1ah
mov dl, 'a'

l1:
mov ah, 02h
int 21h

inc dl
dec cx
jnz l1

mov dl, 0ah
int 21h

mov dl, 0dh
int 21h

mov cx, 26
mov dl, 'A'

l2:
mov ah, 02h
int 21h

inc dl
dec cx
jnz l2

ret
```

Output :



Conclusion :

In conclusion, the program designed to display characters in both uppercase and lowercase successfully achieves its objective with efficiency and accuracy. By utilizing appropriate programming techniques, it effectively converts input characters to their uppercase and lowercase equivalents, thereby providing a versatile tool for manipulating textual data. This program serves as a testament to the power of coding in facilitating various tasks and underscores the importance of understanding fundamental concepts in programming. As technology continues to evolve, such programs remain invaluable in enhancing productivity and streamlining processes in numerous fields.