

Loop

Program A	Program B	Program C	Program D	Program E	Program F	
.model small .code Mov DL,65 Mov AH,2 Mov CX,5 Lk: Int 33 Loop Lk Mov AH,76 Int 21h End	.model small .code Mov DL,64 Mov AH,2 Mov CL,5 Mov CH,0 Y:Inc DL Int 33 Loop Y Mov AH,76 Int 21h	Mov DL,65 Mov AH,2 Mov CH,90 Mov CX,5 hari: Add DL,CL Int 33 Loop hari Mov DL,CH Int 21h stop	Mov AH,1 Int 33 L:Sub AL,7 Cmp AL,7 JGE L Add AL,48 Mov DL,AL Mov AH,2 Int 33 Stop	Mov DL,0 Mov AH,1 Mov CX,10 Lk:Int 33 Sub AL,48 Add DL,AL Loop Lk Mov AH,2 Int 33 Stop End	Mov DL,65 Mov AH,2 M: Mov CX,3 L:Int 21h Loop L Add DL,1 Cmp DL,70 JLE M Mov AH,76 Int 21h	

Program A: Output AAAAAA. Program B: ABCDE Program C: FJMOP (no Z, loop disturbs CH,CL)

Program D: mod 7 of ascii code. H → 2 7 → 6 1 → 0 Add AL,48 may be replaced by OR AL,48

Remove Cmp and use add al,55.

Program E: Read 10 digits. Output is letter with sum. 4728399999 → E

Program F: AAABBBCCCDDEEEFFF

In following Program No jump (JG etc) of any type should be used (unless permitted).

- Read a letter and print it 10 times.
- Read 5 letters and print their next letters. e.g. input a7psa output b8qtb. On monitor it will look as **ab78pqstab**. Output is shown in **bold** letters.
- Read a digit. Output the letter, whose ASCII code is 10 times the digit. Input 5 output 2 (since 5*10=50='2'). Input 9 output Z (since 9*10=90). [Method: read a letter. Subtract 48 from it. Then multiply it by 10 (add it 10 times)]. [Sub AL,48 may be replaced by And AL,0Fh]
- Read two digits. Output the letter, whose ascii is that number. Input 72 output H. Input 89 output Y. [Hint: multiply the first digit by 10. Now add the second digit]
- Read a digit(n ≠ 0). Assume Print those many K's. i/p 3 → KKK. [Hint: read a letter, subtract 48, put in CL, CH=0] (A) n may be zero.
- Read a digit n. Read n letters. Output next letters. i/p3g**hpqde**
- Read two letters and print all intermediate letters. px → pqrstuvw. Assume second letter bigger.
- Read 9 letters. How many of these are equal to 'a'. e.g. input catbaqada output 4. [JNE permitted (A) not]
- Read a letter and print its next letter. It is done in a loop till a letter 'a' (ascii 97) is typed. e.g. input pe5a output qf6 (**pqef56a**). Forward (JNE) permitted. Assume less than 10 letters. [Hint: initially CL=10 CH=0]
- In above case output the number of letters inputted. (Do not use add) [Hint: 10-remaining CL]

Mov AH,1 Mov CL,1 Mov DL,0 L2:Int 33 Cmp AL,DL JLE L1 Mov DL,AL L1:Inc CL Cmp CL,10 JLE L2 Mov AH,2 Int 33 Stop	This program reads 10 letters and outputs the maximum letter. Jmp's permitted in following 11. Read a letter. Let its ascii be x. Output the value of (x mod 7). Z → 6. d → 2. [Hint: subtract 7 till a number less than 7 comes.] 12. Read a letter. Output x/2 (ascii). d → 2. e → 2. Z → -. [subtract 2 till lesser than 2. Count the number of times the subtraction is done.] [Notation 100/2=50 101/2=50] 13. Read a letter. Output its ascii code (assume<100). A → 65. c → 99. F → 70. [div-mod 10] 14. Modify example program to output the minimum letter. 15. Modify the example program to output the second maximum letter also. 16. Read a 5 digit number. Output mod 7. 32156 → 5 (A) (div 13) mod7 00123 → 2 17. Read 8 letters. Each letter is 0 or 1. Assume that input is a binary number. Print the letter whose ascii code is that. Assume that input is given in opposite order. e.g. input 11010010 output K. (B) correct order. Input 01001011 output K
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- Read 9 letters and print the length of sequence displayed. Let the letters typed be lpwBrtret, the sequence displayed will be lprtret (length 7). wBBBasdfg → 5 Notation: B is a short form of backspace.

- Read two letters.

If input is PS output is
PQRSQSRSS10
PPQRRQRRRR12

If input is AE output is as follows

PPPQQQQQQ09
PPPP04
ABCDEBCDECEDEE15

AABBCCDDBBCCDDCCDDDD20
AAABBBCCCBBCCCCCC18
AAAABBBBBBBB12
AAAAA05