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.MODEL SMALL
.STACK 100H
.DATA
    MSGA DB 'Number of Inputs(max 5 digits): $'
    MSGB DB 'Enter Number: $'
    MSGC DB 'Result: $'
    TEMP DW ?
    COUNT DW ?
    RESULT DW 0

.CODE
MAIN PROC
    MOV AX, @DATA
    MOV DS, AX

    LEA DX, MSGA                ;Print 'Number of Inputs:'
    MOV AH, 9
    INT 21H

GET_INPUT:
    MOV AH, 1
    MOV BX, 0
    INT 21H

    CMP AL, 0DH
    JE END_INPUT                ;If Enter

    INNER_LOOP_1:
        MOV AH, 0                ;Use full 16 bits of AX
        SUB AX, 48

        MOV TEMP, AX
        MOV AX, 10
        MUL BX                    ;AX = AX*BX
        MOV BX, AX
        ADD BX, TEMP

    MOV AH, 1                    ;Input new digit
    INT 21H
    CMP AL, 0DH
    JNE INNER_LOOP_1            ;If Enter

END_INPUT:
    MOV COUNT, BX

    LEA DX, MSGB                ;Print 'Enter Number'
    MOV AH, 9
    INT 21H

    MOV AH, 2
    MOV DL, 0DH
    INT 21H                    ;New line
    MOV DL, 0AH
    INT 21H

    MOV DX, 0
    MOV TEMP, 0

OUT_LOOP:
    MOV AH, 1
    MOV BX, 0
    INT 21H

    CMP AL, 0DH
    JE LAST_INPUT                ;If Enter

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INNER_LOOP_2:
    MOV AH,0                ;Use full 16 bits of AX
    SUB AX,48

    MOV TEMP,AX
    MOV AX,10
    MUL BX                  ;AX = AX*BX
    MOV BX,AX
    ADD BX,TEMP

    MOV AH,1                ;Input new digit
    INT 21H
    CMP AL,0DH
    JNE INNER_LOOP_2        ;If Enter

LAST_INPUT:
    ADD RESULT,BX
    DEC COUNT
    CMP COUNT,0
    JNE OUT_LOOP

PRINT_START:
    LEA DX,MSGC              ;Print 'Result:'
    MOV AH,9
    INT 21H

    MOV CX,0                 ;Or XOR CX,CX
    MOV AX,RESULT
    MOV BX,10

STOR_STACK:
    MOV DX,0
    DIV BX                   ;AX = AX/BX
    PUSH DX                  ;Reminder(DX) in stack
    INC CX
    CMP AX,0
    JNE STOR_STACK

PRINT:
    MOV AH,2
    POP DX
    ADD DL,48                ;Pop stack by DX and DX = DL
    INT 21H

    DEC CX
    CMP CX,0
    JNZ PRINT

    MOV AH,4CH
    INT 21H

MAIN ENDP
END MAIN

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