.MODEL SMALL

.STACK 100H

.DATA

a db 100 ;multiplier

b db 10 ;multiplier

c dw ? ;additional variables

d dw ?

e dw ?

f dw ?

.CODE

MAIN PROC

;iniitialize DS

MOV AX,@DATA

MOV DS,AX

; enter your code here

;-------------------------------------------------------Start of Input-------------------------------------------------------------

mov ah,1

int 21h

mov bh, al

mov ah,1 ;Taking 3 digits as input. Example: A number is 956. Take input 9, 5 and 6 saparately as we did not discuss loops in class

int 21h

mov bl, al

mov ah,1

int 21h

mov ch, al ;9 is in bh, 5 is in bl and 6 is in ch

sub bh, 30h

sub bl, 30h ; Subtract 30h to get the numerical value from ascii

sub ch, 30h

mov al, bh ; Multiply 9 with 100. We get 900

mov cl, a

mul cl

mov c,ax ; After the multiplication, ax contains 900. Move 900 to additional variables

mov al,bl ; Multiply 5 with 10. We get 50

mov cl,b

mul cl

mov d,ax ;After the multiplication, ax contains 50. Move 50 to additional variables

mov dh,0

mov dl,ch ; Move 6(Stored in ch) to dx

mov e,dx ;dx contains 6. Move 6 to additional variables

mov ax,c ; ax contains 900

mov bx,d ; bx contains 50

add ax,bx ; 900+50=950, ax contains 950

mov bx,e ; bx contains 6

add ax,bx ; 950+6=956, ax contains 956

mov f,ax ; move 956 to an additional variable to use for further use

;----------------------------------------------------End of Input--------------------------------------------------------------

;Show the 3 digit input as output

mov ah,2

mov dl,13

int 21h ;"Carriage return" and "Line feed" in order to see the outpt in the next line.

mov dl,10

int 21h

;-------------------------------------------------------Start of Output-------------------------------------------------------------

mov ax,f ; Move 956 from the variable f to ax

mov bl,a ; Move 100 to bl

div bl ; Divide 956 by 100. you get 9 as quotient(stored in al) and remainder 56(stored in ah)

mov ch,al ;Move 9 to ch

mov al,ah ; Move remainder 56 from ah to al

mov ah,0 ; Move 0 t ah. now ax nly contains 56

mov bl,b ;Move 10 to bl

div bl ; Divide 56 by 10. you get 5 as quotient(stored in al) and remainder 6(stored in ah)

mov bh, al ; Move quotient 5 from al to bh

mov bl, ah ; Move remainer 6 ffrom ah to bl

; Now ch contains 9, bh contains 5 and bl contains 6

add ch,30h

add bh,30h ; Adding 30h to convert these numeric values into their corrosponding ascii value

add bl,30h

mov ah,2

mov dl,ch ;Single character output 9

int 21h

mov ah,2

mov dl,bh ;Single character output 5

int 21h

mov ah,2

mov dl,bl ;Single character output 6

int 21h

;-------------------------------------------------------End of Output-------------------------------------------------------------

;exit to DOS

MOV AX,4C00H

INT 21H

MAIN ENDP

END MAIN