```
;This program find the sum of two digits.The prompts are
;displayed on the screen and answer  is also displayed.
;It adds the ASCII code of the digits and then adjusts
;this sum using AAA command.


thestack segment stack
     db 256 dup(?)
thestack ends


thedata segment 'data'
segv db 0       ;Initialize the variable segv to 0.
;This define prompts to be used later in the program.
stg1 byte 0DH,0AH,0AH,"Enter first digit(0-9): ","$"
stg2 byte 0DH,0AH,0AH,"Enter second digit: ","$"
stg3 byte 0DH,0AH,0AH,"The sum of above digits is = ","$"
thedata ends


thecode segment 'code'
    ASSUME CS:thecode,DS:thedata

    start PROC FAR              ;Procedure starts.
        MOV AX,seg segv         ;Segment address of data is stored
        MOV DS,AX               ;in AX and DS.

        MOV AH,09H              ;This diplays the prompt i.e.stg1
        MOV DX,OFFSET stg1      ;on the screen using DOS interupt
        INT 21H                 ;function number 9.

        MOV AH,01H              ;This reads and displays the first
        INT 21H                 ;number. It stores its ASCII code in
        MOV BL,AL               ;AL which is moved into BL.

        MOV AH,09H              ;This display the prompt for the second
        MOV DX,OFFSET stg2      ;number on the screen.
        INT 21H

        MOV AH,01H              ;The ASCII code of second number is
        INT 21H                 ;added into BL which already has the
        ADD BL,AL               ;ASCII code of first number.

        MOV AH,09H              ;This display the message for the sum
        MOV DX,OFFSET stg3      ;of the above two digits.
        INT 21H

        MOV AL,BL               ;Sum of ASCII codes is moved into AL.
        XOR AH,AH               ;Makes AH 0.
        AAA                     ;ASCII adjust after addition.
        OR AX,3030H             ;Converts the sum into ASCII code.

        CMP AH,30H
        JNE start1
```

```
    MOV AH,20H

start1:
    PUSH AX
    MOV DL,AH
    MOV AH,6
    INT 21H
    POP AX
    MOV DL,AL
    MOV AH,6
    INT 21H
    MOV AH,4CH
    INT 21H
    RET
start endp

thecode ends
end start
```