**CS401P**

Assignment No. 01

**Program:**

.model small

.data

; Step a: Store digits in array

array1 DB 2, 4, 0, 2, 0, 5, 5, 1, 7

length DB 9

smallestOdd DB ?

array2 DB 9 DUP(0)

.code

main:

mov ax, @data

mov ds, ax

; Step b: Find the smallest odd number

mov cx, 9 ; number of elements

mov si, 0 ; index for array1

mov al, 255 ; assume a large number as min

find\_odd:

mov bl, array1[si]

mov ah, bl

and bl, 1 ; check if odd (bl AND 1)

cmp bl, 1

jne not\_odd

cmp ah, al ; compare with current smallest odd

jge not\_odd

mov al, ah ; update smallest odd

not\_odd:

inc si

loop find\_odd

mov smallestOdd, al ; store the smallest odd number

; Step c: Add each digit to smallest odd and store in array2

mov cx, 9

mov si, 0

mov di, 0

mov bl, smallestOdd

add\_loop:

mov al, array1[si]

add al, bl

mov array2[di], al

inc si

inc di

loop add\_loop

; End program

mov ah, 4ch

int 21h

end main