Task-1

```
.MODEL SMALL

.STACK 100H

.DATA
a1 dw 90
a2 dw 90
a3 dw 90
a4 dw 90
s1 dw 5
s2 dw 6
s3 dw 5
s4 dw 6

msg1 db 'valid rectangle$'
msg2 db 'invalid rectangle$'



.CODE
MAIN PROC

;iniitialize DS

MOV AX,@DATA
MOV DS,AX

; enter your code here

mov ax, a1
cmp ax, a2
jne not_r
cmp ax, a3
jne not_r
cmp ax, a4
jne not_r


mov ax, s1
cmp ax, s3
```

```
jne not_r

mov ax, s2
cmp ax, s4
jne not_r


mov ah, 9
lea dx, msg1
int 21h

jmp exit


not_r:
mov ah, 9
lea dx, msg2
int 21h
jne exit

exit:


;exit to DOS

MOV AX,4C00H
INT 21H

MAIN ENDP
   END MAIN
```

Task-2

```
.MODEL SMALL
```

```
.STACK 100H
.DATA

NUM db "input last digit of your id $"

sum db ?

FIRST DB ?


count db 3

.CODE
MAIN PROC

    MOV AX, @DATA
    MOV DS, AX

    LEA DX,NUM
    MOV AH,9
    INT 21H

    MOV AH,1
    INT 21H
    MOV FIRST, AL


    ;=========================

    MOV DL , 0AH
    MOV AH,2
    INT 21H
                ; NEW LINE PRINT
    MOV DL , 0DH
    MOV AH,2
    INT 21H

    ;=========================================

    sub first,30h
```

```
    looping:

    cmp count, 8h
    je exit

    mov ah,0
    mov al,count

    mov bl, 2

    div bl

    cmp ah,1h

    je odd

    add first,4h

    mov bl,first
    sub sum,bl

    jmp ending

    odd:

    add first,4h

    mov bl,first
    add sum,bl

    ending:
    add count,1h

    jmp looping

    exit:

    mov dl,sum
    mov ah,2     ;print
    int 21h


MAIN ENDP
END MAIN
```