**את"מ מעבדה 9:  
  
מגישים:  
 אורי מלכא- 314862996   
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; lab9 ori and alan

;extern void sum\_col(int n, int m, long int \*matrix[], long int new\_col[]);

; mat NxM

.MODEL LARGE

.STACK 100h

.DATA

Nsize DW (0)

Msize DW (0)

.CODE

.386

PUBLIC \_sum\_col

\_sum\_col PROC FAR

;save values

PUSH BP

PUSH DI

PUSH SI

PUSH ES

PUSH GS

PUSH FS

MOV BP,SP

;now we can address the values the were sent.

;BP+16 =n

;BP+18 =m

;BP+20 =Mat offset -DI

;BP+22 =Mat seg -GS

; MAT GS:DI

;BP+24 =New\_col offset ->SI

;BP+26 =New\_col seg -> ES

; New\_COl ES:SI

;Algorithem is: new\_col[i]=E(j=0~n-1)mat[j][i] , 0<=j<=n-1 , 0<=i<=m-1

MOV AX,[BP+18]

MOV Msize,AX

MOV AX,[BP+16]

MOV Nsize,AX

;Initliaze NEW\_COL

MOV CX,Msize ;CX=m

MOV SI,[BP+24] ;Offset

MOV ES,[BP+26] ;Seg

ZeroMe:

MOV Dword PTR ES:[SI],0

ADD SI,4

LOOP ZeroMe

;Start Sum each row

;Exter Loop running on the rows

MOV CX,Nsize

MOV DI,[BP+20] ;offset to matrix

MOV GS,[BP+22] ;segment to the matrix

RunOnMat:

MOV DX,0

MOV BX,[BP+24] ;Offset to new\_col and the segment stays at ES

MOV ES,[BP+26] ;Seg

MOV SI,GS:[DI] ;OFFSET TO n ROW OF METRIX

MOV FS,GS:[DI+2];SEG OF THE ROW

RunOnRow:

CMP DX,Msize

JE NewRow

MOV EAX,FS:[SI]

ADD ES:[BX],EAX

ADD SI,4

ADD BX,4

INC DX

JMP RunOnRow

NewRow:

ADD DI,4

LOOP RunOnMat

POP FS

POP GS

POP ES

POP SI

POP DI

POP BP

RET

\_sum\_col ENDP

END

