Project

include 'emu8086.inc'

.code

.model small

start:

car1 dw ?

car2 dw ?

mov ax, 0

out 199, ax

#start=led\_display.exe#

#make\_bin#

name "led"

#start=Traffic\_Lights.exe#

name "traffic"

go:

mov ax, all\_red

out 4, ax

printn 'Enter number of cars for vertical lane ?'

call scan\_num

printn ''

mov car1,cx

printn 'Enter number of cars for horizontal lane ?'

call scan\_num

printn

mov car2,cx

mov si, offset situation

next:

cmp si,offset situation

je vertical\_cut

cmp si,offset s2

je horizontal\_cut

jmp skp

vertical\_cut:

mov ax,car1

sub ax,2

cmp ax,65535

jb mid1

mov ax,0

mid1:

mov car1,ax

out 199,ax ; vertical led

jmp skp

horizontal\_cut:

mov ax,car2

sub ax,2

cmp ax,65535

jb mid2

mov ax,0

mid2:

mov car2,ax

out 199, ax ; horizontal led

jmp skp

skp:

mov ax, [si]

out 4, ax

; wait 2 seconds (2 million microseconds)

mov cx, 01Eh ; 001E8480h = 2,000,000

mov dx, 8480h

mov ah, 86h

int 15h

add si, 2 ; next situation

mov ax,car1

cmp ax,0 ; checknig car 1 is zero

je fix\_hori

jmp m1

fix\_hori:

cmp car2,0

jbe jmp go

mov si,offset s2

jmp next

m1:

cmp car2,0

jbe fix\_ver

jmp m2

fix\_ver:

cmp car1,0

jbe jmp go

mov si,offset situation

jmp next

m2:

cmp si, sit\_end

jb next

mov si, offset situation

jmp next

; FEDC\_BA98\_7654\_3210

situation dw 0000\_0011\_0000\_1100b

s1 dw 0000\_0110\_1001\_1010b

s2 dw 0000\_1000\_0110\_0001b

s3 dw 0000\_0100\_1101\_0011b

sit\_end = $

all\_red equ 0000\_0010\_0100\_1001b