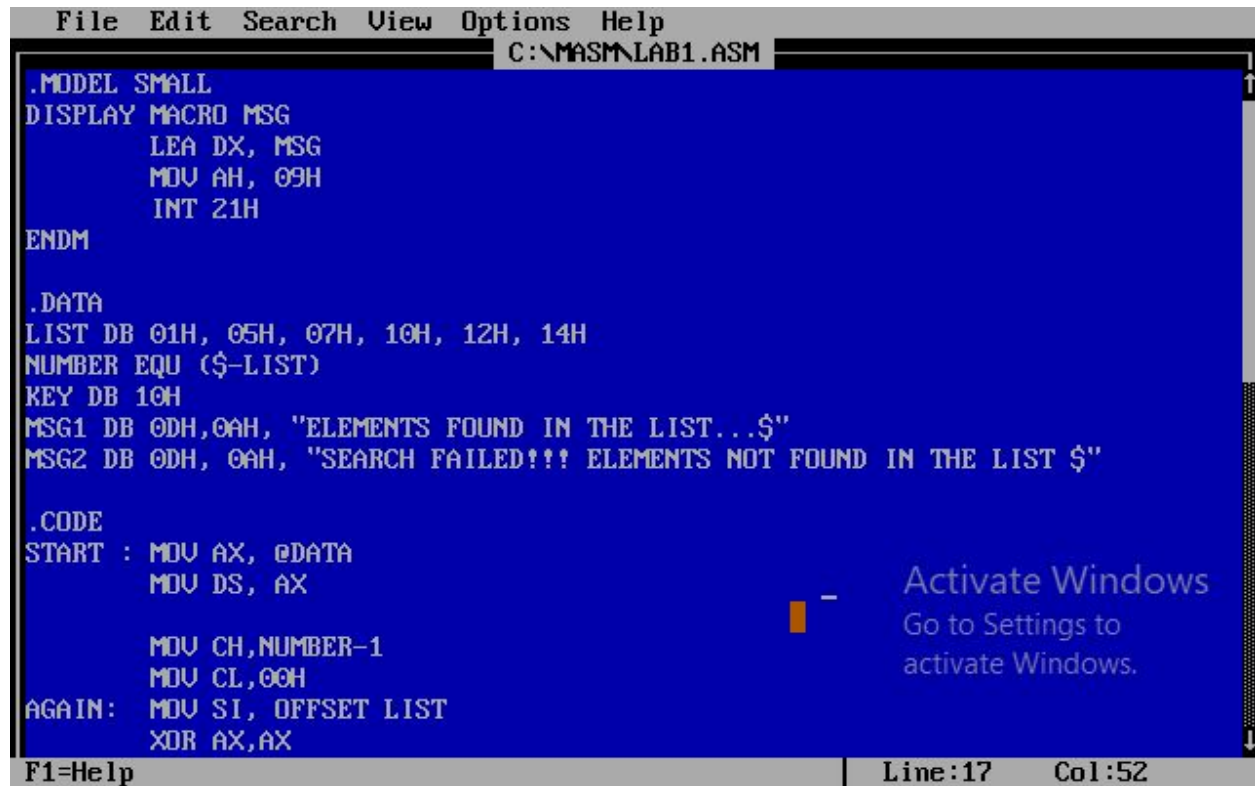


LAB1: BINARY SEARCH



```
File Edit Search View Options Help
C:\MASM\LAB1.ASM

.MODEL SMALL
DISPLAY MACRO MSG
    LEA DX, MSG
    MOV AH, 09H
    INT 21H
ENDM

.DATA
LIST DB 01H, 05H, 07H, 10H, 12H, 14H
NUMBER EQU ($-LIST)
KEY DB 10H
MSG1 DB 0DH, 0AH, "ELEMENTS FOUND IN THE LIST...$"
MSG2 DB 0DH, 0AH, "SEARCH FAILED!!! ELEMENTS NOT FOUND IN THE LIST $"

.CODE
START : MOV AX, @DATA
        MOV DS, AX

        MOV CH, NUMBER-1
        MOV CL, 00H
AGAIN:  MOV SI, OFFSET LIST
        XOR AX, AX
```

Activate Windows
Go to Settings to
activate Windows.

F1=Help | Line:17 Col:52

```
File Edit Search View Options Help
C:\MASM\LAB1.ASM

XOR AX,AX
CMP CL,CH
JE NEXT
JNC FAILED
NEXT: MOV AL,CL
      ADD AL,CH
      SHR AL,01H
      MOV BL,AL
      XOR AH,AH
      MOV BP,AX
      MOV AL, DS:[BP][SI]
      CMP AL, KEY
      JE SUCCESS
      JC INLOW
      MOV CH,BL
      DEC CH
      JMP AGAIN

INLOW: MOV CL,BL
      INC CL
      JMP AGAIN

Commands for manipulating files

File Edit Search View Options Help
C:\MASM\LAB1.ASM

MOV BP,AX
MOV AL, DS:[BP][SI]
CMP AL, KEY
JE SUCCESS
JC INLOW
MOV CH,BL
DEC CH
JMP AGAIN

INLOW: MOV CL,BL
      INC CL
      JMP AGAIN

SUCCESS: DISPLAY MSG1
        JMP FINAL

FAILED: DISPLAY MSG2

FINAL: MOV AH, 4CH
      INT 21H
END START

F1=Help Line:52 Col:52
```

OUTPUT:

File Edit View Search Run Watch Options Calls Help									
local									
source1 CS:IP (ACTIVE)									
052A:0037	8D161500	LEA	DX,Word Ptr [0015]	AX = 0910					
052A:003B	B409	MOV	AH,09	BX = 0003					
052A:003D	CD21	INT	21	CX = 0303					
052A:003F	EB09	JMP	004A	DX = 0015					
052A:0041	90	NOP		SP = 0000					
052A:0042	8D163500	LEA	DX,Word Ptr [0035]	BP = 0003					
052A:0046	B409	MOV	AH,09	SI = 000E					
052A:0048	CD21	INT	21	DI = 0000					
052A:004A	B44C	MOV	AH,4C	DS = 052E					
052A:004C	CD21	INT	21	ES = 051A					
052A:004E	0105	ADD	Word Ptr [DI],AX	SS = 0529					
052A:0050	07	POP	ES	CS = 052A					
052A:0051	1012	ADC	Byte Ptr [BP+SI],DL	IP = 003F					
052A:0053	1410	ADC	AL,10	FL = 0246					
052A:0055	0D0A45	OR	AX,450A	NU UP EI PL					
052A:0058	4C	DEC	SP	ZF NA OFS NC					
command									
052E:0000	09 90 8D 16 35 00 B4 09-CD 21 B4 4C CD 21 01 05	Go to Settings to activate Windows.							
052E:0010	07 10 12 14 10 0D 0A 45-4C 45 4D 45 4E 54 53 20								
>									
<F8=Trace> <F10=Step> <F5=Go> <F6=Window> <F3=Display>									

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