PROGRAMS

1. Write an ALP to find the compare two strings

| **ASSUME CS:CODE, DS:DATA**<br>**DATA SEGMENT**<br>**STR1 DB 'CSE'**<br>**L1 DB 03H**<br>**STR2 DB 'ECE'**<br>**L2 DB 03H**<br>**RES DB 0H**<br>**DATA ENDS**<br><br>**CODE SEGMENT**<br>**START:**<br>**MOV AX,DATA**<br>**MOV DS,AX**<br>**MOV ES,AX**<br>**LEA DI,STR1**<br>**LEA SI,STR2**<br>**MOV CL,L2**<br>**MOV DL, 0H**<br>**CMP CL,L1**<br>**JNZ EXIT**<br>**REP CMPSB**<br>**JNZ EXIT**<br>**MOV DL,01H**<br>**EXIT:**<br>**MOV RES,DL**<br><br>**INT 03H**<br>**CODE ENDS**<br>**END START** | ```
-U
0745:0000 B84407        MOV    AX,0744
0745:0003 8ED8          MOV    DS,AX
0745:0005 8EC0          MOV    ES,AX
0745:0007 BF0000        MOV    DI,0000
0745:000A BE0400        MOV    SI,0004
0745:000D 8A0E0700      MOV    CL,[0007]
0745:0011 B200          MOV    DL,00
0745:0013 3A0E0300      CMP    CL,[0003]
0745:0017 7506          JNZ    001F
0745:0019 F3A6          REPE   CMPSB
0745:001B 7502          JNZ    001F
0745:001D B201          MOV    DL,01
0745:001F 88160800      MOV    [0008],DL

-U
0745:0023 CC            INT    3
```<br>**Result**<br><br>**Registers**<br>`AX=0744 BX=0000 CX=0002 DX=0000`<br><br>**Data Segment**<br>`-D DS:0`<br>`0744:0000  43 53 45 03 45 43 45 03-00 00 00 00 00 00 00 00 CSE.ECE....`<br>**Extra Segment**<br>`-D ES:0`<br>`0744:0000  43 53 45 03 45 43 45 03-00 00 00 00 00 00 00 00 CSE.ECE..` |

2. Write an ALP to find the Length of a given string

| **ASSUME CS:CODE, DS:DATA**<br>**DATA SEGMENT**<br>**STR1 DB 'CSEBATCH',0**<br>**LEN DW 0H**<br>**DATA ENDS**<br><br>**CODE SEGMENT**<br>**START:**<br>**MOV AX,DATA**<br>**MOV DS,AX**<br>**MOV ES,AX,**<br>**MOV AX,0H**<br>**LEA DI,STR1**<br>**REPNE SCASB**<br>**DEC DI**<br>**MOV LEN,DI**<br><br><br>**INT 03H**<br>**CODE ENDS**<br>**END START** | ```
-U
0745:0000 B84407        MOV   AX,0744
0745:0003 8ED8          MOV   DS,AX
0745:0005 8EC0          MOV   ES,AX
0745:0007 B80000        MOV   AX,0000
0745:000A BF0000        MOV   DI,0000
0745:000D F2AE          REPNE SCASB
0745:000F 4F            DEC   DI
0745:0010 893E0900      MOV   [0009],DI
0745:0014 CC            INT   3
```<br>**Result**<br><br><span style="color:red">**Data Segment**</span><br>```
-D DS:0
0744:0000  43 53 45 42 41 54 43 48-00 08 00 00 00 00 00 00  CSEBATCH..
```<br><span style="color:red">**Extra Segment**</span><br>```
-D ES:0
0744:0000  43 53 45 42 41 54 43 48-00 08 00 00 00 00 00 00  CSEBATCH..
``` |

3. Write an ALP to find whether the given byte is in the string or not

ASSUME CS:CODE, DS:DATA **DATA SEGMENT** **STR1 DB 'CSE'** **L1 DB 03H** **STR2 DB 'E'** **RES DB 0H** **DATA ENDS** **CODE SEGMENT** **START:** **MOV AX, DATA** **MOV DS, AX** **MOV ES,AX** **MOV DL,0H** **LEA DI,STR1** **MOV AL,STR2** **MOV CL,L1** **CLD** **REPNE SCASB** **JNZ EXIT** **MOV DL,01H** **EXIT:** **MOV RES,DL** **INT 03H** **CODE ENDS** **END START**	``` -U 0745:0000 B84407 MOV AX,0744 0745:0003 8ED8 MOV DS,AX 0745:0005 8EC0 MOV ES,AX 0745:0007 B200 MOV DL,00 0745:0009 BF0000 MOV DI,0000 0745:000C A00400 MOV AL,[0004] 0745:000F 8A0E0300 MOV CL,[0003] 0745:0013 FC CLD 0745:0014 F2AE REPNE SCASB 0745:0016 7502 JNZ 001A 0745:0018 B201 MOV DL,01 0745:001A 88160500 MOV [0005],DL 0745:001E CC INT 3 ``` **Result** **Registers** AX=0745 BX=0000 CX=0000 DX=0001 **Data Segment** -D DS:0 0744:0000 43 53 45 03 45 01 00 00-00 00 00 00 00 00 00 00 CSE.E. **Extra Segment** -D ES:0 0744:0000 43 53 45 03 45 01 00 00-00 00 00 00 00 00 00 00 CSE.E..