

## PROGRAMS

### 1. Write an ALP to find the compare two strings

<pre> ASSUME CS:CODE, DS:DATA DATA SEGMENT STR1 DB 'CSE' L1 DB 03H STR2 DB 'ECE' L2 DB 03H RES DB 0H DATA ENDS  CODE SEGMENT <b>START:</b> MOV AX,DATA MOV DS,AX MOV ES,AX LEA DI,STR1 LEA SI,STR2 MOV CL,L2 MOV DL,0H CMP CL,L1 JNZ EXIT REP CMPSB JNZ EXIT MOV DL,01H <b>EXIT:</b> MOV RES,DL  INT 03H CODE ENDS END START </pre>	<pre> -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 </pre> <p style="text-align: center;"><b>Result</b></p> <p><b>Registers</b>  AX=0744 BX=0000 CX=0002 DX=0000</p> <p><b>Data Segment</b>  -D DS:0  0744:0000 43 53 45 03 45 43 45 03-00 00 00 00 00 00 00 CSE.ECE...</p> <p><b>Extra Segment</b>  -D ES:0  0744:0000 43 53 45 03 45 43 45 03-00 00 00 00 00 00 00 CSE.ECE...</p>
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## 2. Write an ALP to find the Length of a given string

<b>ASSUME CS:CODE, DS:DATA</b> <b>DATA SEGMENT</b> <b>STR1 DB 'CSEBATCH',0</b> <b>LEN DW 0H</b> <b>DATA ENDS</b>  <b>CODE SEGMENT</b> <b>START:</b> <b>MOV AX,DATA</b> <b>MOV DS,AX</b> <b>MOV ES,AX,</b> <b>MOV AX,0H</b> <b>LEA DI,STR1</b> <b>REPNE SCASB</b> <b>DEC DI</b> <b>MOV LEN,DI</b>  <b>INT 03H</b> <b>CODE ENDS</b> <b>END START</b>	<pre> -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 </pre> <p style="text-align: center;"><b>Result</b></p> <p><b>Data Segment</b></p> <pre> -D DS:0 0744:0000 43 53 45 42 41 54 43 48-00 08 00 00 00 00 00 00 CSEBATCH.. </pre> <p><b>Extra Segment</b></p> <pre> -D ES:0 0744:0000 43 53 45 42 41 54 43 48-00 08 00 00 00 00 00 00 CSEBATCH.. </pre>
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### 3. Write an ALP to find whether the given byte is in the string or not

<b>ASSUME CS:CODE, DS:DATA</b>  <b>DATA SEGMENT</b> <b>STR1 DB 'CSE'</b> <b>L1 DB 03H</b> <b>STR2 DB 'E'</b> <b>RES DB 0H</b> <b>DATA ENDS</b>  <b>CODE SEGMENT</b> <b>START:</b>  <b>MOV AX, DATA</b> <b>MOV DS, AX</b> <b>MOV ES, AX</b> <b>MOV DL, 0H</b>  <b>LEA DI, STR1</b> <b>MOV AL, STR2</b> <b>MOV CL, L1</b> <b>CLD</b> <b>REPNE SCASB</b> <b>JNZ EXIT</b> <b>MOV DL, 01H</b> <b>EXIT:</b> <b>MOV RES, DL</b>  <b>INT 03H</b> <b>CODE ENDS</b> <b>END START</b>	<pre> -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 8B160500      MOV     [0005],DL 0745:001E CC          INT     3 </pre> <p><b>Result</b></p> <p><b>Registers</b>  AX=0745 BX=0000 CX=0000 DX=0001</p> <p><b>Data Segment</b>  -D DS:0  0744:0000 43 53 45 03 45 01 00 00-00 00 00 00 00 00 00 00 CSE.E..</p> <p><b>Extra Segment</b>  -D ES:0  0744:0000 43 53 45 03 45 01 00 00-00 00 00 00 00 00 00 00 CSE.E..</p>
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