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  1   ;EXP NO.1(D): ALP FOR LCD INTERFACING USING MOVC INSTRUCTION IN 8
      BIT MODE FOR DISPLAYING "WELCOME TO ENTC"
  2   ;USING TIME DELAY ON LINE 1
  3   ;NAME - AADESH PISE
  4   ;ROLL NO.312041
  5   ;BATCH -B2
  6   ;DATE OF PERFORMANCE - 25/7/18
  7
  8   ORG 0000H
  9   RS EQU P2.0
 10   EN EQU P2.1
 11   RW EQU P2.2
 12   LCD EQU P0
 13
 14   MOV A,#38H    ;TO INITIALIZE LCD AS 8 BIT,5*7 RESOLUTION, 2LINE
 15   ACALL COMMAND ;CALL THE COMMAND SUBROUTINE
 16
 17   MOV A,#0EH    ;TURN ON THE DISPLAY AND CURSOR
 18   ACALL COMMAND ;CALL THE COMMAND SUBROUTINE
 19
 20   MOV A,#01H    ;CLEAR LCD DISPLAY,MEMORY AND CURSOR AT HOME POSITION
 21   ACALL COMMAND ;CALL THE COMMAND SUBROUTINE
 22
 23   MOV A,#06H    ;TO SHIFT CURSOR TO LEFT FOR NEXT HARACTER AND ENABLE
      DISABLE
 24   ACALL COMMAND ;CALL THE COMMAND SUBROUTINE
 25
 26   MOV A,#80H    ;SELECT 1ST LINE AND POSITION TO DISPLAY MESSAGE
 27   ACALL COMMAND ;CALL THE COMMAND SUBROUTINE
 28
 29   MOV DPTR,#WORD
 30   MOV R2,#00H   ;INITIALIZE REGISTER R2 TO 00H
 31
 32   L1:
 33   CLR A            ; CLR THE ACCUMALATOR
 34   MOVC A,@A+DPTR  ; MOVE CONTENTS OF DPTR INTO ACC
 35   ACALL DISPLAY   ; CALL DISPLAY SUBROUTINE
 36   INC DPTR        ; INC THE DPTR
 37   INC R2           ;INC VALUR IN R2
 38   CJNE R2,#0FH,L1 ; COMPARE JUMP IF NOT EQUAL
 39
 40   COMMAND:       ;SUBROUTINE TO COMMND INSTRUCTION TO LCD
 41   ACALL DELAY    ;DELAY CALL
 42   MOV P0,A       ;MOVE COMMAND TO LCD THROUGH PORT
 43   CLR RS         ;SELECTING COMMAND REGISTER FOR COMMAND
 44   CLR RW         ;SELECTING WRITING MODE
 45   SETB EN        ;FOR WRITE GIVE HIGH TO LOW PULSE
 46   NOP
 47   NOP
 48   CLR EN         ;CLR EN PIN
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49      RET
50
51      DISPLAY:          ;SUBROUTINE TO DISPLAY INSTRUCTION TO LCD
52      ACALL DELAY       ;DELAY CALL
53      MOV P0,A          ;MOVE DATA TO LCD THROUGH PORT
54      SETB RS           ;SELECTING DATA REGISTER FOR COMMAND
55      CLR RW            ;SELECTING WRITING MODE
56      SETB EN           ;FOR WRITE GIVE HIGH TO LOW PULDE
57      NOP
58      NOP
59      CLR EN            ;CLR EN PIN
60      RET
61
62      DELAY:
63          MOV TMOD,#01H  ;TIMER 0,MODE 1
64          MOV TH0,#0F8H  ;LOAD HIGH BYTE
65          MOV TL0,#0CCH  ;LOAD LOW BYTE
66          SETB TR0       ;START TIMER
67      L3:JNB TF0,L3      ;MONITOR FLAG UNTILL IT ROLL OVER
68          CLR TR0        ;STOP TIMER
69          CLR TF0        ;CLEAR FLAG
70          RET
71          END
72
73          ORG 3000H
74          WORD: DB "WELCOME TO ENTC"
75
76          END
```