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1  ;EXP NO.1(A):LCD INTERFACING IN 8 BIT MODE FOR DISPLAYING "WELCOME
   TO VIIT" SUCH THAT 'WELCOME'
2  ;ON FIRST LINE 4th POSITION AND 'TO VIIT' ON SECOND LINE 4th POSITION
3  ;NAME - AAADESH PISE
4  ;ROLL NO.312041
5  ;BATCH -B2
6  ;DATE OF PERFORMANCE - 25/7/18
7
8  ORG 000H
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,#83H      ;SELECT 1ST LINE AND POSITION 4th TO DISPLAY MESSAGE
27 ACALL COMMAND  ;CALL THE COMMAND SUBROUTINE
28
29 MOV A,#'W'      ; MOVE 'W' TO ACC
30 ACALL DISPLAY  ;DISPLAY SUBROUTINE
31 MOV A,#'E'      ; MOVE 'E' TO ACC
32 ACALL DISPLAY  ;DISPLAY SUBROUTINE
33 MOV A,#'L'      ; MOVE 'L' TO ACC
34 ACALL DISPLAY  ;DISPLAY SUBROUTINE
35 MOV A,#'C'      ; MOVE 'C' TO ACC
36 ACALL DISPLAY  ;DISPLAY SUBROUTINE
37 MOV A,#'O'      ; MOVE 'O' TO ACC
38 ACALL DISPLAY  ;DISPLAY SUBROUTINE
39 MOV A,#'M'      ; MOVE 'M' TO ACC
40 ACALL DISPLAY  ;DISPLAY SUBROUTINE
41 MOV A,#'E'      ; MOVE 'E' TO ACC
42 ACALL DISPLAY  ;DISPLAY SUBROUTINE
43
44 MOV A,#0C3H      ;SELECT 2ND LINE AND POSITION 4th TO DISPLAY MESSAGE
45 ACALL COMMAND  ;DISPLAY SUBROUTINE
46
47 MOV A,#'T'      ; MOVE 'T' TO ACC
48 ACALL DISPLAY  ;DISPLAY SUBROUTINE
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49  MOV A,#'O'      ; MOVE 'O' TO ACC
50  ACALL DISPLAY  ;DISPLAY SUBROUTINE
51  MOV A,#' '      ; MOVE ' ' TO ACC
52  ACALL DISPLAY  ;DISPLAY SUBROUTINE
53  MOV A,#'V'      ; MOVE 'V' TO ACC
54  ACALL DISPLAY  ;DISPLAY SUBROUTINE
55  MOV A,#'I'      ; MOVE 'I' TO ACC
56  ACALL DISPLAY  ;DISPLAY SUBROUTINE
57  MOV A,#'I'      ; MOVE 'I' TO ACC
58  ACALL DISPLAY  ;DISPLAY SUBROUTINE
59  MOV A,#'T'      ; MOVE 'T' TO ACC
60  ACALL DISPLAY  ;DISPLAY SUBROUTINE
61
62  HERE: SJMP HERE; TO HOLD CHARACTERS
63
64  COMMAND:        ;SUBROUTINE TO COMMND INSTRUCTION TO LCD
65  ACALL DELAY     ;DELAY CALL
66  MOV P0,A        ;MOVE COMMAND TO LCD THROUGH PORT
67  CLR RS          ;SELECTING COMMAND REGISTER FOR COMMAND
68  CLR RW          ;SELECTING WRITING MODE
69  SETB EN         ;FOR WRITE GIVE HIGH TO LOW PULSE
70  NOP
71  NOP
72  CLR EN          ;CLEAR EN PIN
73  RET
74
75  DISPLAY:        ;SUBROUTINE TO DISPLAY INSTRUCTION TO LCD
76  ACALL DELAY     ;DELAY CALL
77  MOV P0,A        ;MOVE DATA TO LCD THROUGH PORT
78  SETB RS         ;SELECTING DATA REGISTER FOR COMMAND
79  CLR RW          ;SELECTING WRITING MODE
80  SETB EN         ;FOR WRITE GIVE HIGH TO LOW PULDE
81  NOP
82  NOP
83  CLR EN          ;CLEAR EN PIN
84  RET
85
86  DELAY:
87      MOV TMOD,#01H ;TIMER 0,MODE 1
88      MOV TH0,#0F8H ;LOAD HIGH BYTE
89      MOV TL0,#0CCH ;LOAD LOW BYTE
90      SETB TR0      ;START TIMER
91  L3: JNB TF0,L3    ;MONITOR FLAG UNTILL IT ROLL OVER
92      CLR TR0       ;STOP TIMER
93      CLR TF0       ;CLEAR FLAG
94      RET
95      END
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