```asm
1    ORG 0
2
3    //TIMER FOR BAUD RATE 9600
4    MOV TMOD, #20H
5    MOV TH1, #0FDH
6    MOV SCON, #50H
7    SETB TR1  //START TIMER
8
9    //SET TO USE 2 LINES
10   MOV A,#38H
11   ACALL COMMAND
12   ACALL DELAY
13
14   //INITIALIZE LCD
15   MOV A,#0EH
16   ACALL COMMAND
17   ACALL DELAY
18
19   //CLEAR SCREEN
20   MOV A,#01H
21   ACALL COMMAND
22   ACALL DELAY
23
24       START:
25
26       //WAIT FOR INPUT FROM KEYBOARD
27       HERE: JNB RI,HERE
28            MOV A,SBUF
29
30       //HANDLE BACKSPACE
31       CJNE A,#08H,NEWLINE
32       MOV A,#10H //DECREMENT CURSOR
33       ACALL COMMAND
34       MOV A,#' ' //CLEAR CURSOR
35       ACALL SENT
36       MOV A,#10H //DECREMENT CURSOR
37       ACALL COMMAND
38       CLR RI  //CLEAR RECEIVE INTERRUPT FLAG
39       SJMP START
40
41       //HANDLE ENTER KEY
42       NEWLINE:
43       CJNE A,#0DH,HELLO
44       MOV A,#0C0H //JUMP TO NEXT LINE POSITION 1 ON ENTER
45       ACALL COMMAND
46       CLR RI  //CLEAR RECEIVE INTERRUPT FLAG
47       SJMP START
48
49       //HANDLE NORMAL CHARACTERS
50       HELLO:
51       ACALL SENT
52       CLR RI
53       SJMP START
54
55       //COMMAND FUNCTION
56       COMMAND:
57           MOV P2,A
58           CLR P3.2    //CLEAR RS FOR COMMANDS
59           SETB P3.3   //SET ENABLE
60           ACALL DELAY
61           CLR P3.3    //CLEAR ENABLE
62           RET
63
64       //DATA FUNCTION
65       SENT:
66           MOV P2,A
67           SETB P3.2   //SET RS FOR DATA
68           SETB P3.3   //SET ENABLE
69           ACALL DELAY
70           CLR P3.3    //CLEAR ENABLE
71           RET
72
73       //NESTED DELAY OF APPROX 10MS
```

```
74        DELAY:
75        MOV R0,#255
76        HOLD:
77            MOV R1,#20
78            HOLD1:DJNZ R1,HOLD1
79            DJNZ R0,HOLD
80            RET
81    END
```