M&I PROJECT

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AIM:

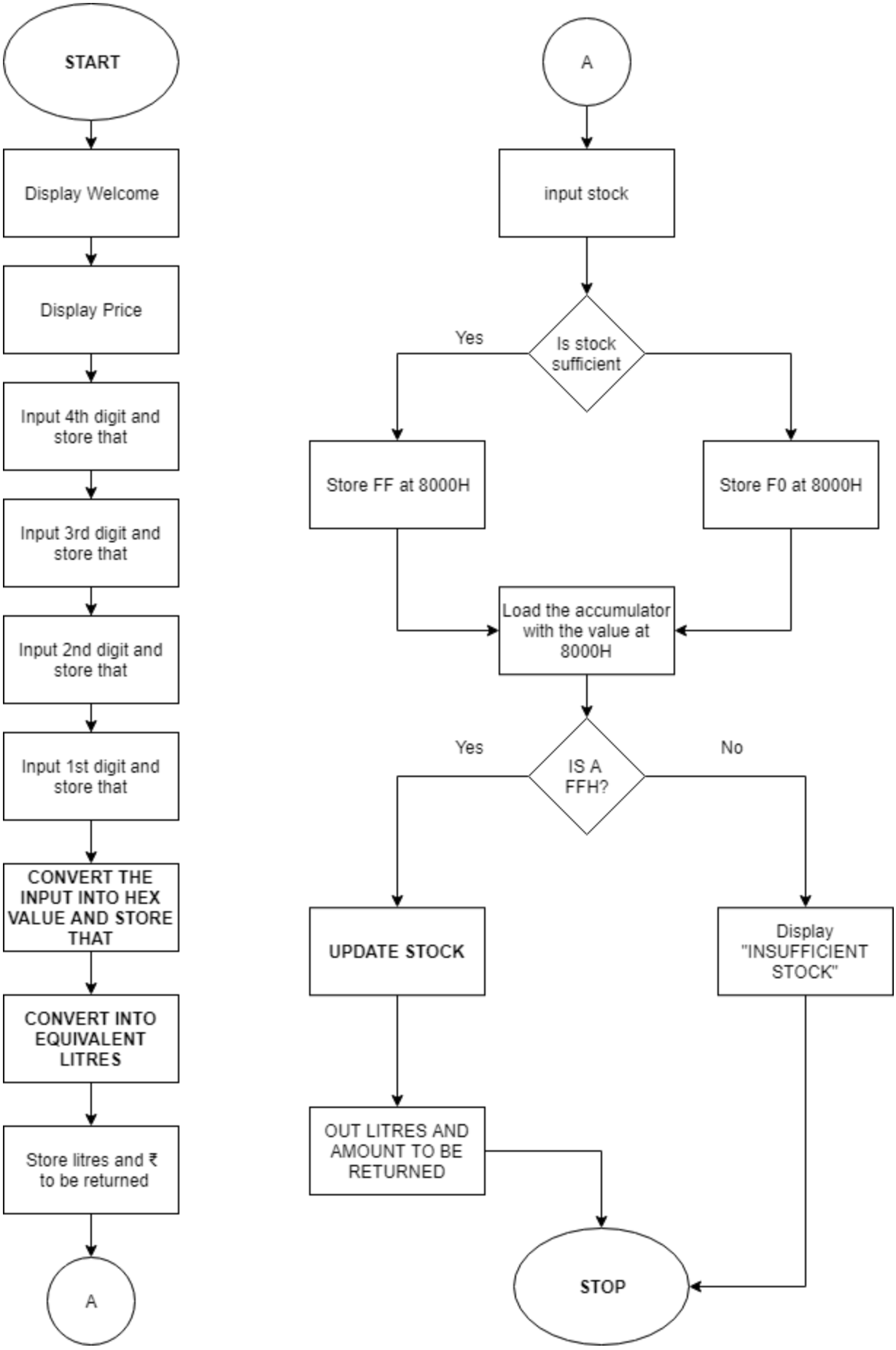
Fuel Station

APPARATUS:

1-8085 microprocessor kit

ALGORITHM:

1. Display “WELCOME”
2. Display”ENTER THE PRICE”
3. Take the input from user as decimal amount.
4. Conversion of input amount to hexadecimal value.
5. Calculation of equivalent litres(integer).
6. Checking whether stock is sufficient.
7. If stock is sufficient then display the amount to be returned and number of litres.
8. Else end the program displaying “INSUFFICIENT STOCK”


START
Display Welcome
Display Price
Input 4th digit and store that
Input 3rd digit and store that
Input 2nd digit and store that
Input 1st digit and store that
CONVERT THE INPUT INTO HEX VALUE AND STORE THAT
CONVERT INTO EQUIVALENT LITRES
Store litres and ₹ to be returned
A
A
input stock
Is stock sufficient
Yes
Store FF at 8000H
Store F0 at 8000H
Load the accumulator with the value at 8000H
IS A FFH?
Yes
No
UPDATE STOCK
Display "INSUFFICIENT STOCK"
OUT LITRES AND AMOUNT TO BE RETURNED
STOP

CODE:

```
MVI D,04H
LDA 5000H
MOV L,A
MVI H,0H
CALL MULT
CALL MULT
CALL MULT
XCHG
LDA 5001H
MOV L,A
MVI H,0H
CALL MULT
CALL MULT
DAD D
XCHG
LDA 5002H
MOV L,A
MVI H,0H
CALL MULT
DAD D
XCHG
LDA 5003H
MOV L,A
MVI H,0H
DAD D
SHLD 5050H
LXI B, 0000H
LHLD 5052H
LOOP: MOV A, E
SUB L
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```
 MOV E, A
 MOV A, D
 SBB H
 MOV D, A
 JC LOOP1
 INX B
 JMP LOOP
 LOOP1: DAD D
 SHLD 5059H
 MOV L, C
 MOV H, B
 SHLD 5055H
 CALL CHECK
 LDA 8000H
 CPI 0FFH
 JNZ CONT
 LDA 8500H
 LXI H,5055H
 SUB M
 STA 8500H
 CONT:  HLT
 CHECK:  LDA 8500H
 LXI H,5055H
 SUB M
 JP end
 MVI A,0F0H
HERE: STA 8000H
 LDA 5055H
 OUT 00H
 LDA 5059H
 OUT 01H
 RET
end:  MVI A,0FFH
```

```
JMP HERE

MULT:  MVI B,0AH
MVI A,00H
LOOP2:  ADD L
JNC L1
INR H
L1: DCR B
JNZ LOOP2
MOV L,A
RET
```