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Experiment : 7

Aim : Divide the contents of memory locations 1000H and 1001H and
place the quotient in memory location 1002H and remainder on 1003H.

Software Use : GNUSim8085

Program :

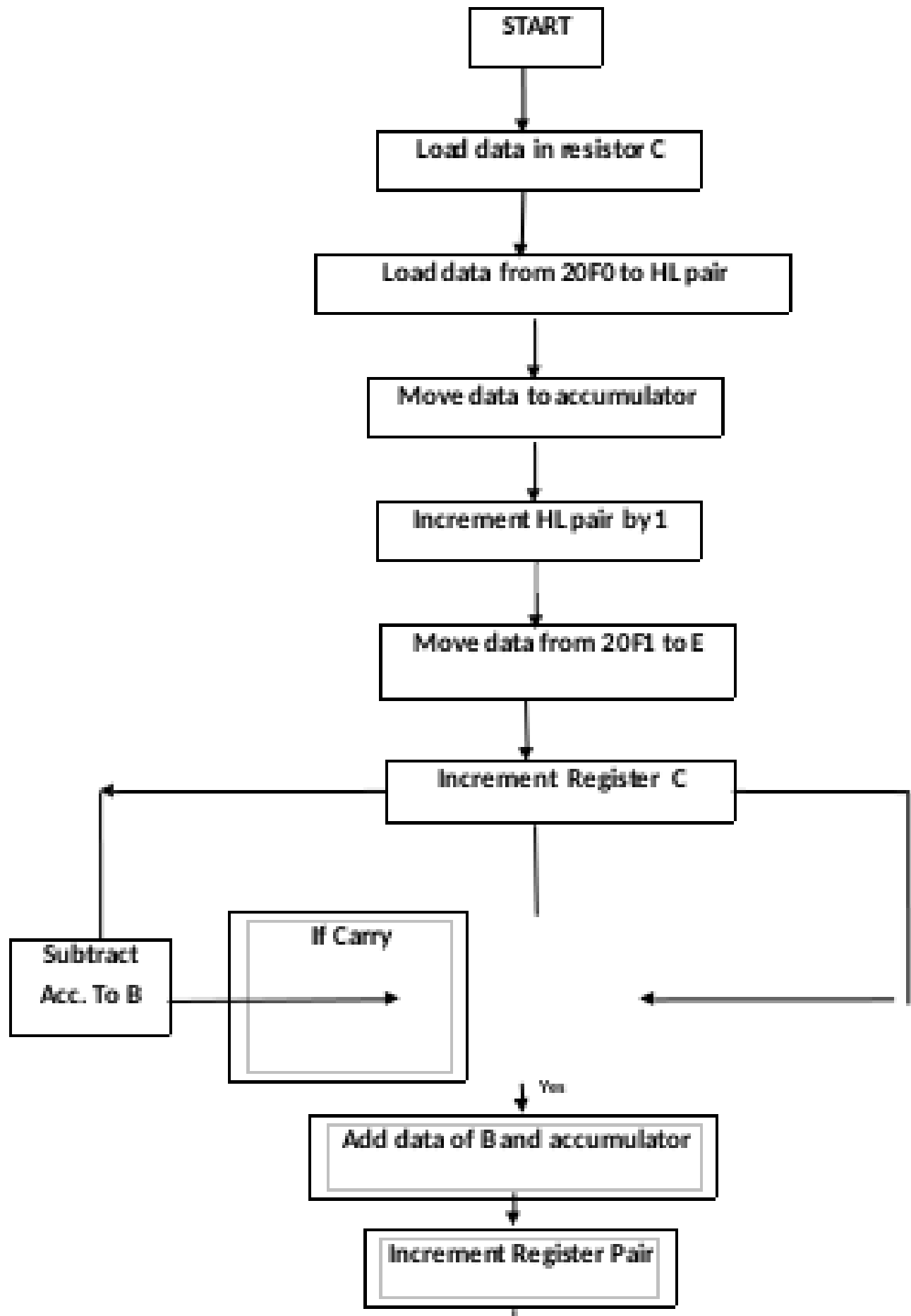
----- Program Table -----

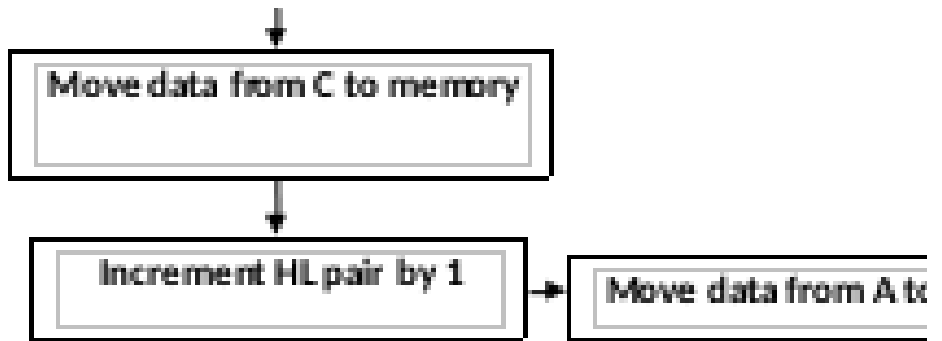
| Location | Hex code | Labels + Mnemonics | Explanation |
|----------|------------|--------------------|-------------------------------|
| F000 | 06, 00 | MVI C , 00H | Imm. More data to C |
| F004 | 21, 00, 10 | LXI H , 1000H | Load data in resister pair |
| F005 | 7E | MOV A , M | More data from memory to A |
| F006 | 23 | INX H | Increment HL pair |
| F007 | 46 | MOV B , M | Move data from memory to B |
| F008 | 0C | Loop : INR C | Increment C |
| F009 | 90 | SUB B | Sub. B data from A |
| F00A | D2, 08, F0 | JNC Loop | Jump if no carry |
| F00D | 80 | ADD B | Add data of B and accumulator |
| F00E | 23 | LXI H , 1002H | Increment HL pointer by 1 |
| F011 | 71 | MOV M,C | Move data from C to memory |
| F012 | 23 | INX H | Increment HL pair resister |
| F013 | 77 | MOV M,A | Move data from Accumulator |
| F014 | 76 | HLT | End Program |

----- program in asm -----

```
MVI C , 00H           ;Imm. More data to C
LXI H , 1000H         ;Load data in resister pair
MOV A,M              ;More data from memory to A
INX H                ;Increment HL pair
MOV B,M              ;Move data from memory to B
Loop: INR C           ;Increment C
SUB B                ;Sub. B data from A
JNC Loop             ;Jump if no carry
ADD B                ;Add data of B and accumulator
LXI H , 1002H         ;Increment HL pointer by 1
MOV M,C              ;Move data from C to memory
INX H                ;Increment HL pair resister
MOV M,A              ;Move data from Accumulator
HLT                  ;End Program
```

----- end program -----





Applications: [Index of /WhatsApp/M...], [ex7mi (~/AWN/per/tt) ...], [GNUSim8085 - 8085 M...], [rishu@localhost: ~]

20:18 Rishabh Sarswa

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers: A 07, BC 09 03, DE 00 00, HL 10 03, PSW 00 00, PC 42 15, SP FF FF, Int-Reg 00

Flag: S 0, Z 0, AC 1, P 0, C 1

Load me at: []

```
1
2 MVI C, 00H ;Imm. More data to C
3 LXI H, 1000H ;Load data in register pair
4 MOV A,M ;Move data from memory to A
5 INX H ;Increment HL pair
6 MOV B,M ;Move data from memory to B
7 Loop: INR C ;Increment C
8 SUB B ;Sub. B data from A
9 JNC Loop ;Jump if no carry
10 ADD B ;Add data of B and accumulator
11 LXI H, 1002H ;Increment HL pointer by 1
12 MOV M,C ;Move data from C to memory
13 INX H ;Increment HL pair register
14 MOV M,A ;Move data from Accumulator
15 HLT ;End Program
16
```

Decimal - Hex Conversion

Decimal: 0, Hex: 0

→ To Hex, ← To Dec

I/O Ports

0, 00

Update Port Value

Memory

0, 00

Update Memory

Simulator: Idle

Data Stack Keypad Memory I/O Ports

Start: 1000h OK

| Address (Hex) | Address | Data |
|---------------|---------|------|
| 1000 | 4096 | 25 |
| 1001 | 4097 | 9 |
| 1002 | 4098 | 3 |
| 1003 | 4099 | 7 |
| 1004 | 4100 | 0 |
| 1005 | 4101 | 0 |
| 1006 | 4102 | 0 |
| 1007 | 4103 | 0 |
| 1008 | 4104 | 0 |
| 1009 | 4105 | 0 |
| 100A | 4106 | 0 |

Line No Assembler Message

0 Program assembled successfully