Lab 04

SUB: CSA

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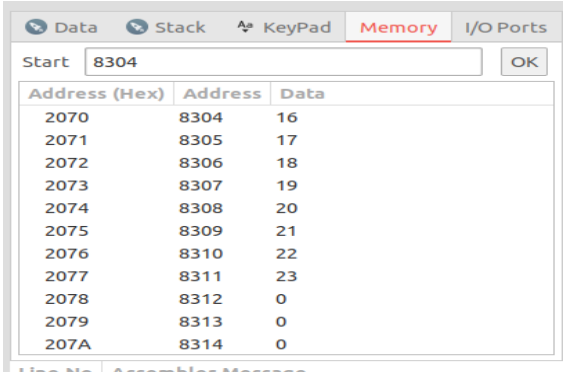
A set of eight data bytes are stored in memory location starting from 2070H. Write a program to insert an additional five bytes of data, it is necessary to shift the data string y five memory locations.

PROGRAM:

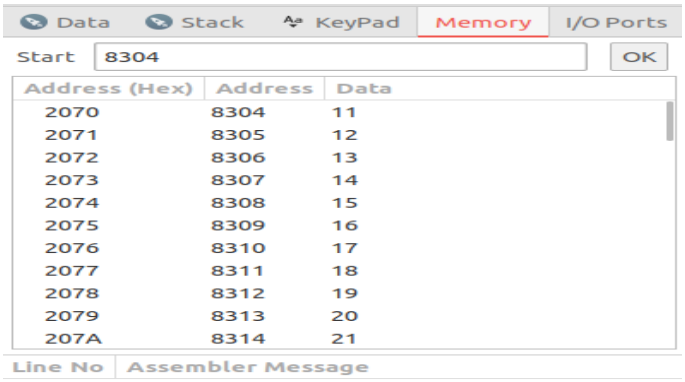
```
MVI D, 05H
MVI E, 0FH
LXI H, 2070H
LXI B, 2070H
MOV A, L
ADI 07H
MOV L, A
ADD D
MOV C, A
MVI D, 8H
L1: MOV A, M
STAX B
DCX H
DCX B
DCR D
JNZ L1
MVI D, 05H
L2: MOV A, E
STAX B
DCX B
DCR E
DCR D
JNZ L2
HLT
```

OUTPUT:

Before execution



After Execution



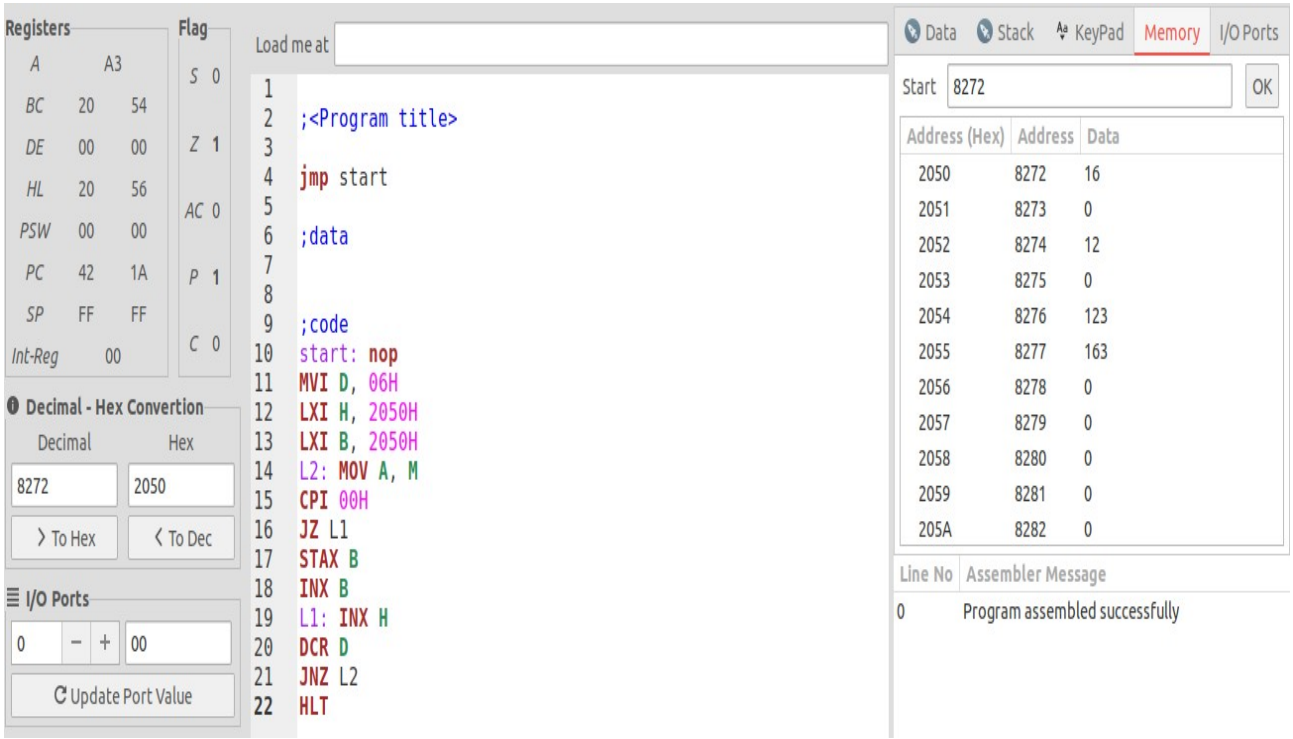
A string of six data bytes is stored starting from 2050H. The string includes some blanks. Write a program to eliminate the blanks from the string.

PROGRAM:

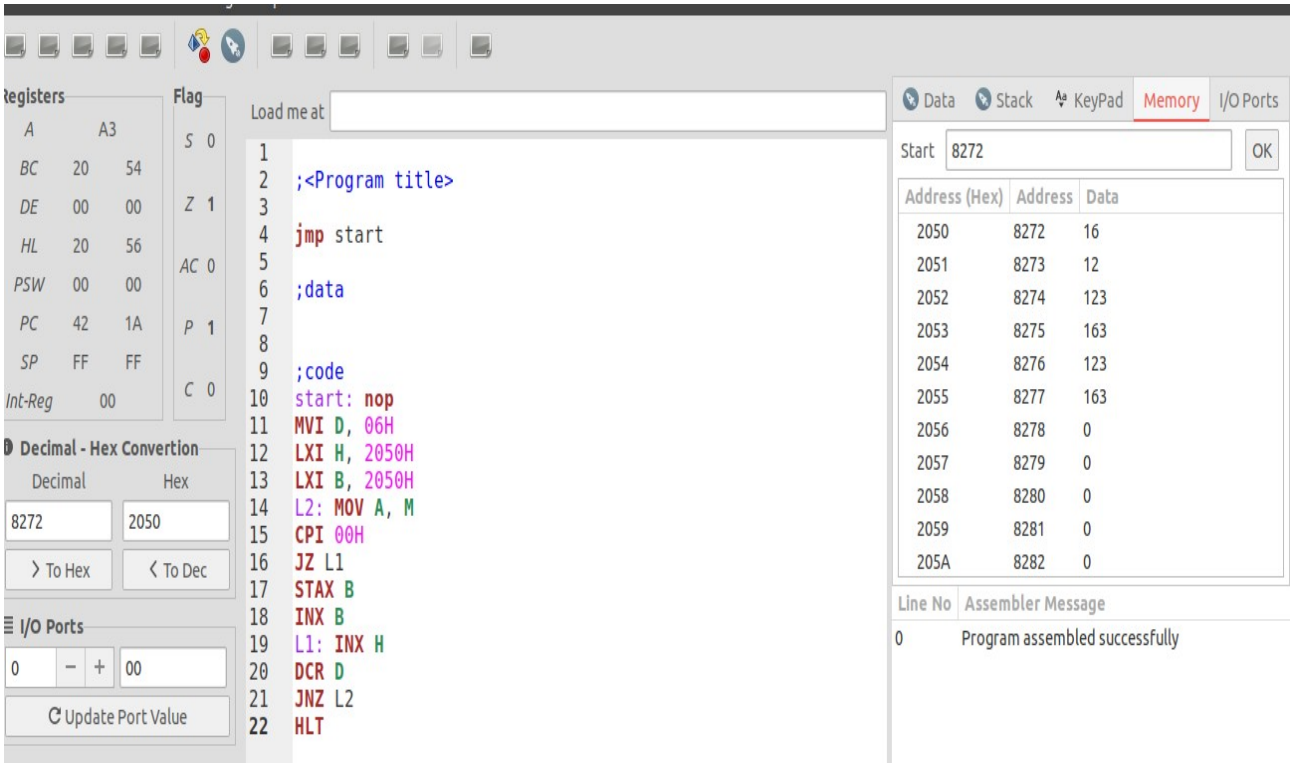
```
MVI D, 06H
LXI H, 2050H
LXI B, 2050H
L2: MOV A, M
CPI 00H
JZ L1
STAX B
INX B
L1: INX H
DCR D
JNZ L2
HLT
```

OUTPUT:

Before execution



After Execution



A system is designed to monitor the temperature of a furnace. Temperature readings are recorded in 16 bits and stored in memory locations starting at 2060H. The higher order byte is stored first and the lower order byte is stored the next consecutive memory location. The high order byte of all the temperature reading is constant. Write a program to transfer low order readings to consecutive memory locations starting at address 2080H and discard the high order bytes.

PROGRAM:

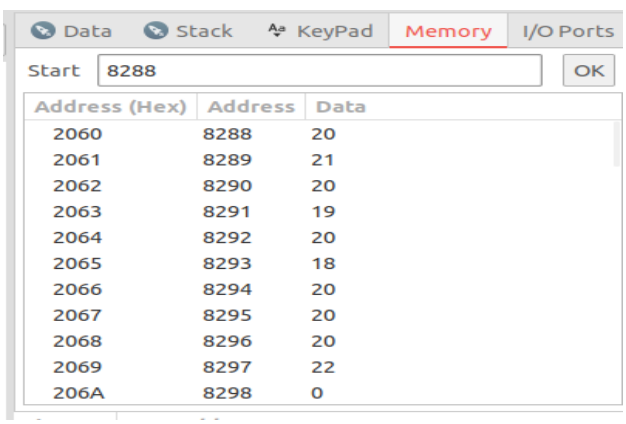
```
MVI D, 05H
LXI H, 2060H
LXI B, 2080H
INX H
L2: MOV A, M
STAX B
INX B
INX H
INX H
DCR D
```

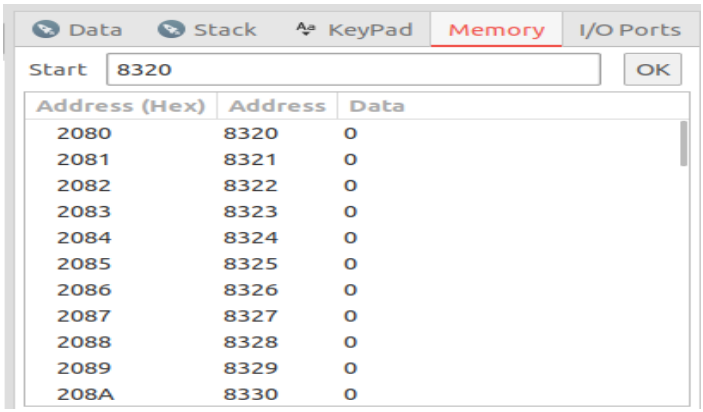
JNZ L2
HLT

OUTPUT:

ASSUMING THAT WE HAVE FIVE TEMP READINGS.

Before execution





After Execution