# Practical Exam - (ii)

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## 1 Aim:

Write a program using 8085 to find the square of given number.

## 2 Code

- Input at $D000H = 06H$
- Output at $D001H = 24H$
- Program written from $C000H$

```
// input
# ORG D000H
# DB 06H

// program
# ORG C000H
            LXI H, D000H            // set the HL pair to point to the input location
            MOV B, M                // set the B register to the input value, to be used as the adder
            MOV C, M                // set the B register to the input value, to be used as the loop index
            XRA A                   // make accumulator zero

LOOP:       ADD B                   // add B to the accumulator
            DCR C                   // reduce the loop index
            JNZ LOOP                // jump if loop index not zero

            STA D001H               // store the result at D001H
            HLT                     // halt
```

## 3 Output/Observations:

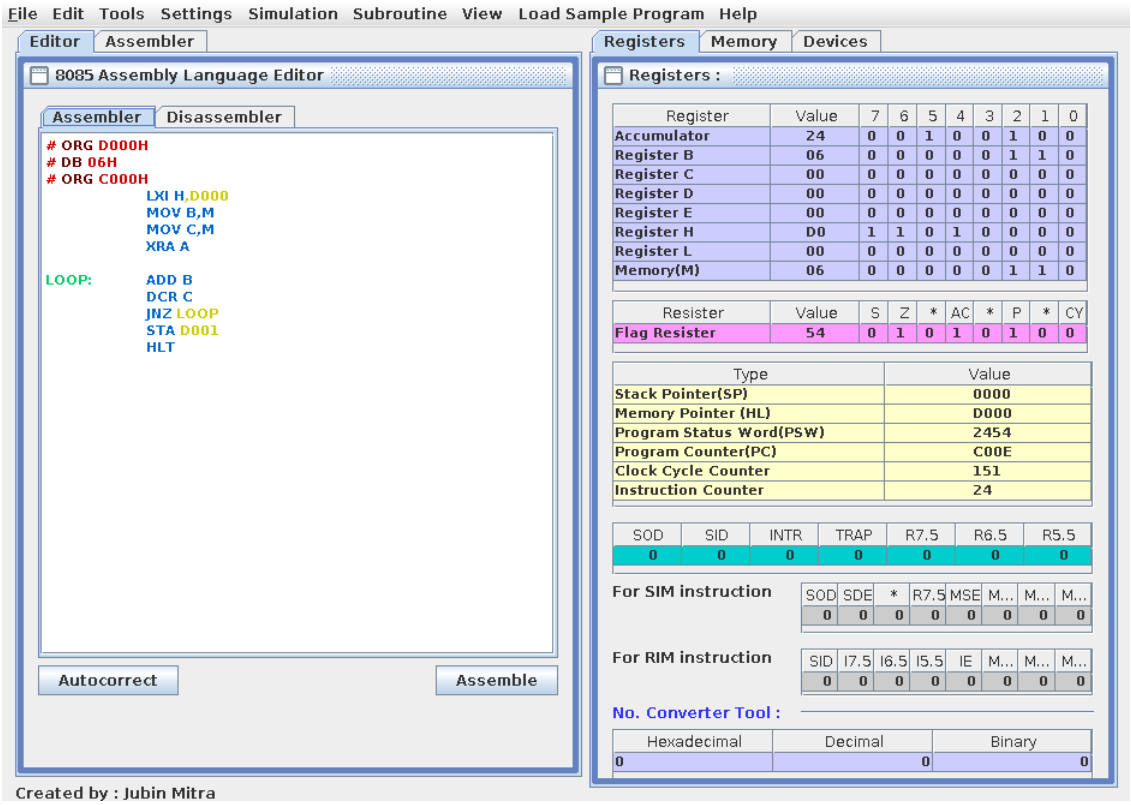


Figure 1: (a) jubin output

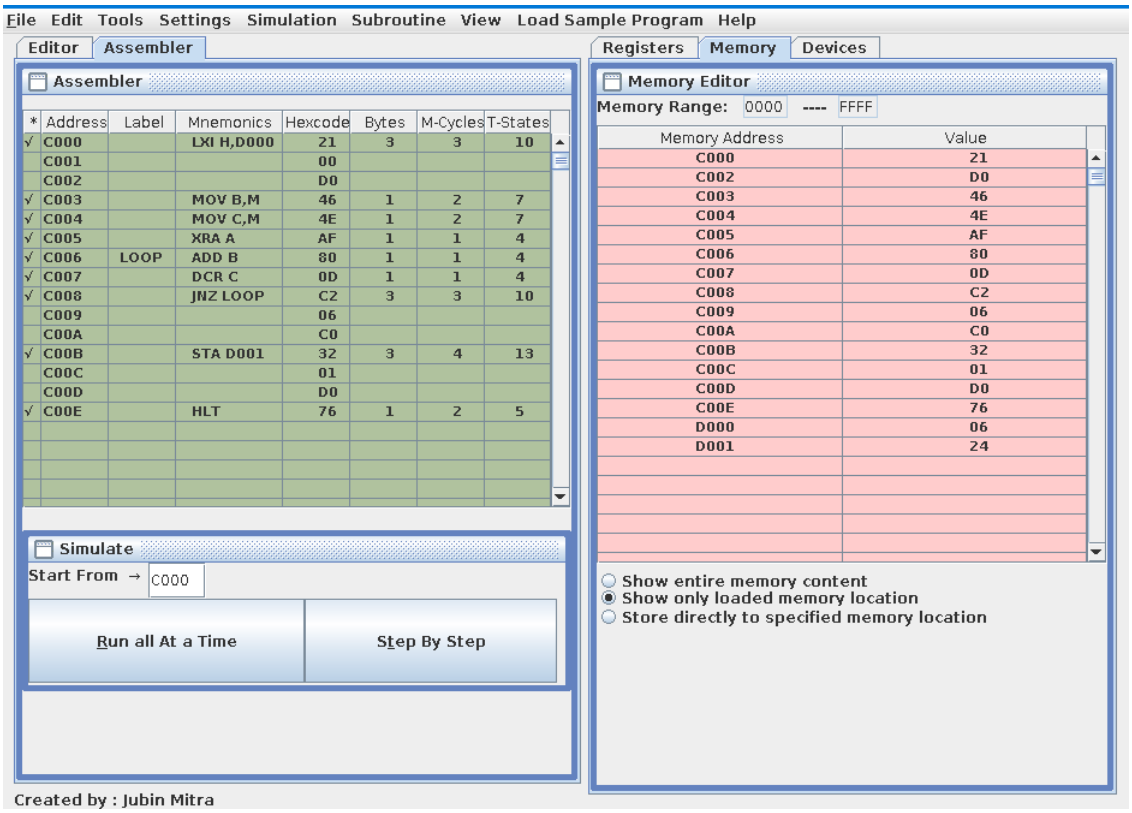


Figure 2: (b) jubin output

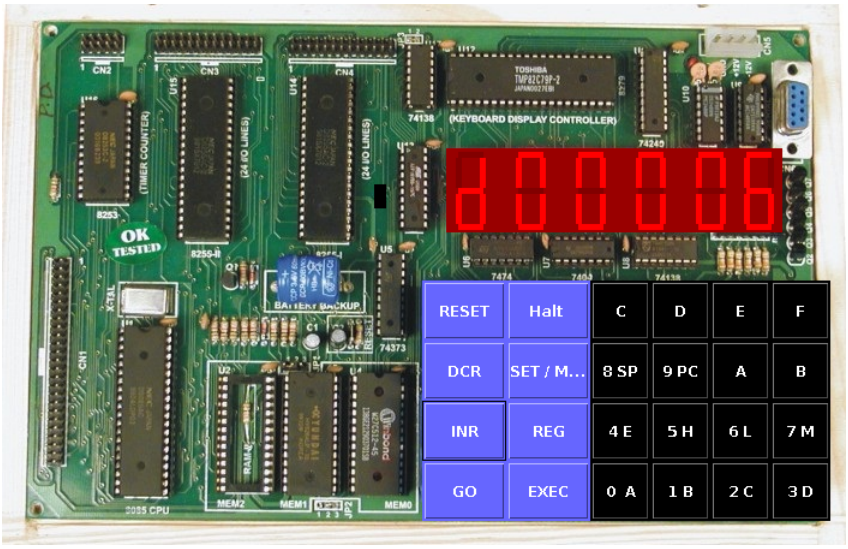


Figure 3: (c) input

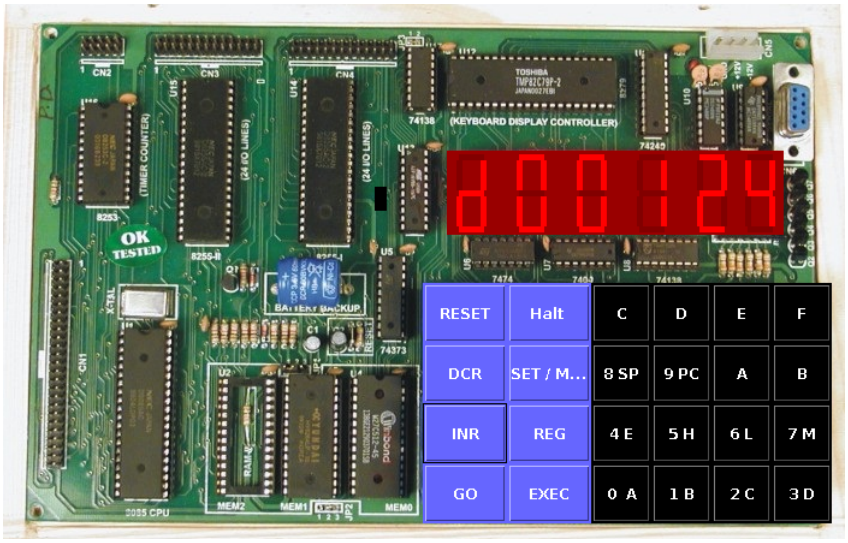


Figure 4: (d) output

## 4 Conclusion:

| | |
|---|---|
| **Input:** | $D000H = 06H$ |
| **Output:** | $D001H = 24H$ |

Since, $6H * 6H = 24H$, the program for computing square of a 8-bit numbers given in section 2 works as expected for 8085 microprocessor.