

Walkthrough to add two numbers using x85 kit

```
cpu "8085.tbl"
```

```
hof "int8"
```

```
org 9000h
```

```
mvi a,50h
```

```
mvi b,40h
```

```
add b
```

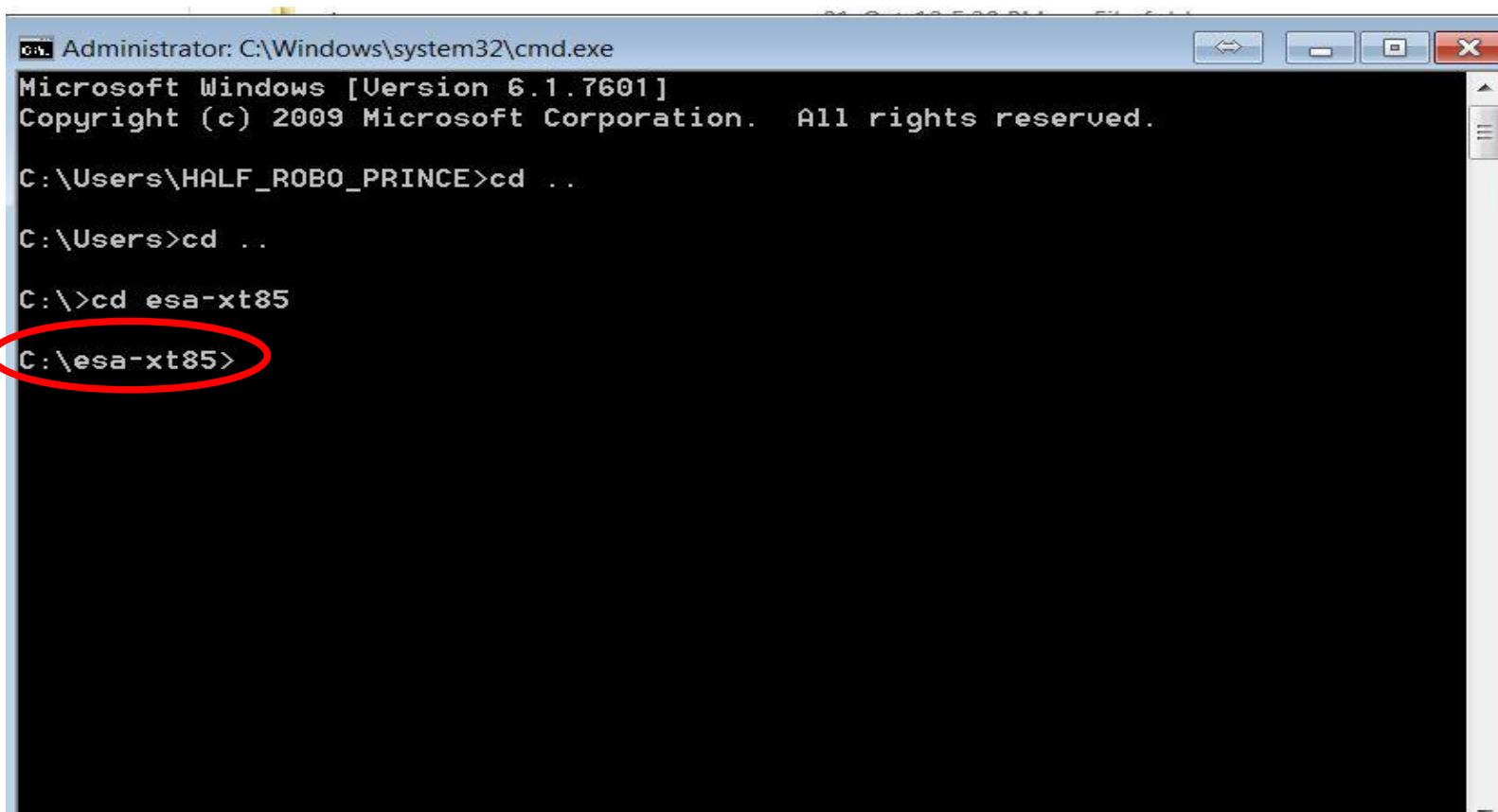
```
RST 5
```

Initial steps to follow

1. Go to IITG CSE repository.
2. Go to Hardware and VLSI LAB> HW LAB
3. Download esa-xt85.zip
4. Extract the files to a folder.

Contd..

5. Open command prompt and go to that folder.



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\HALF_ROBO_PRINCE>cd ..

C:\Users>cd ..

C:\>cd esa-xt85
C:\esa-xt85>
```

Contd..

6. Open your favourite text editor and create an assembly(.asm) file. For e.g., test.asm is created with the code as:

```
cpu "8085.tbl"
```

```
hof "int8"
```

```
org 9000h
```

```
mvi a,50h
```

```
mvi b,40h
```

```
add b
```

```
RST 5
```

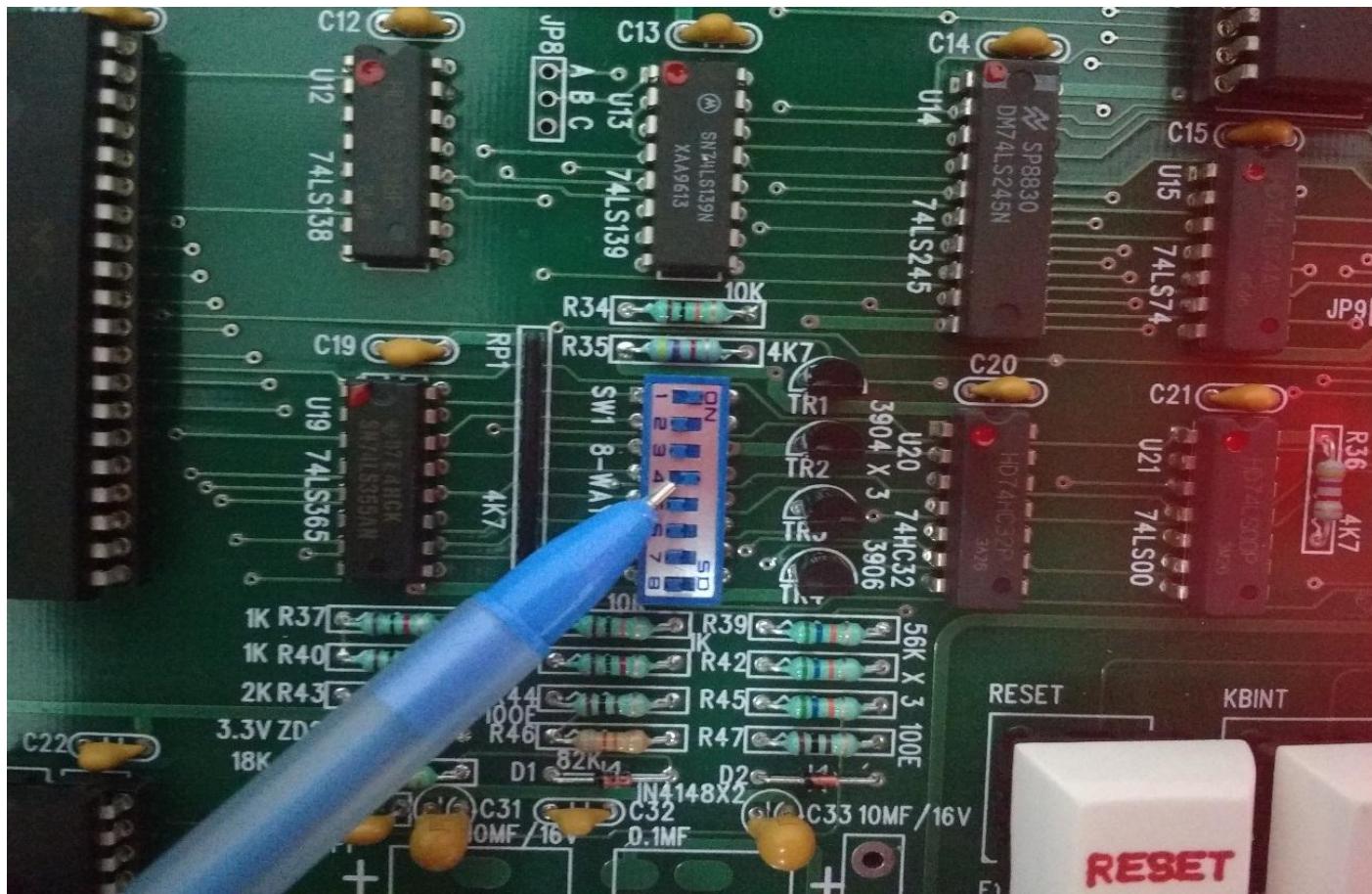
7. convert that .asm file to a .hex file via this command:

```
c16 -h outfile.hex -l listfile.lst inputfile.asm
```

For e.g., c16 -h test.hex -l test.lst test.asm

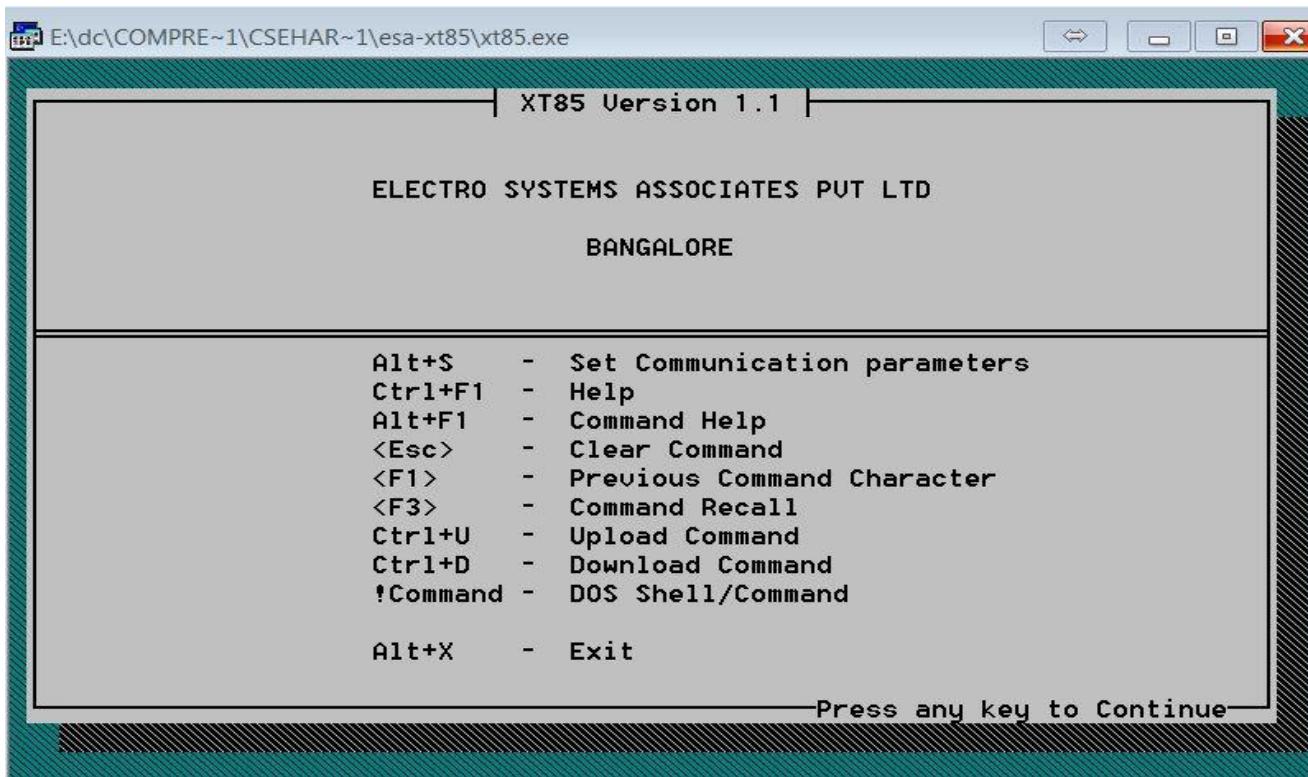
Contd..

8. Now connect the serial cable from the esa-x85 Kit to the COM port of your PC.
9. Switch the 4th DIP switch to right side.



Contd..

9. Double click the utility xt85.exe from that folder.
10. A screen will appear as shown below:

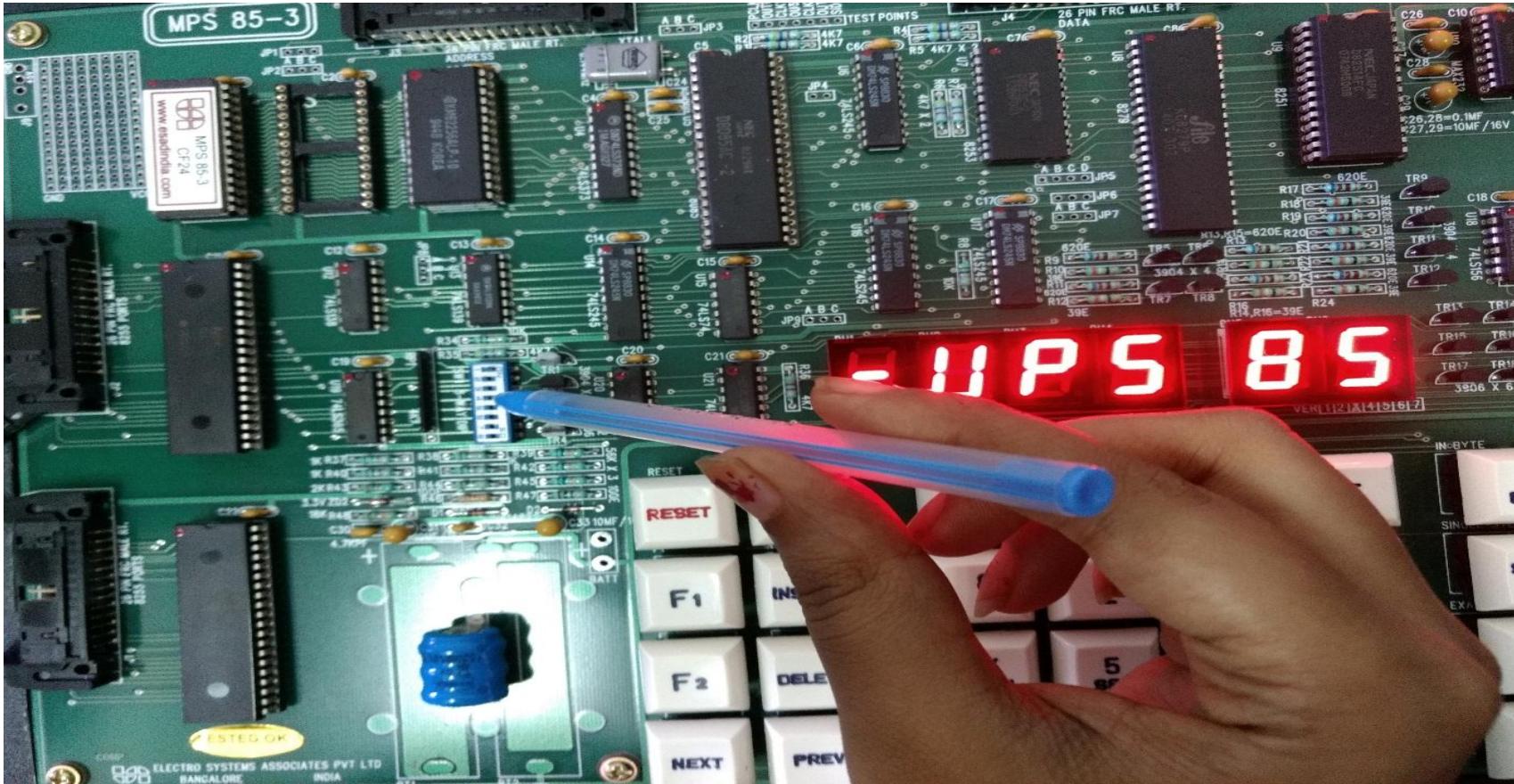


Contd..

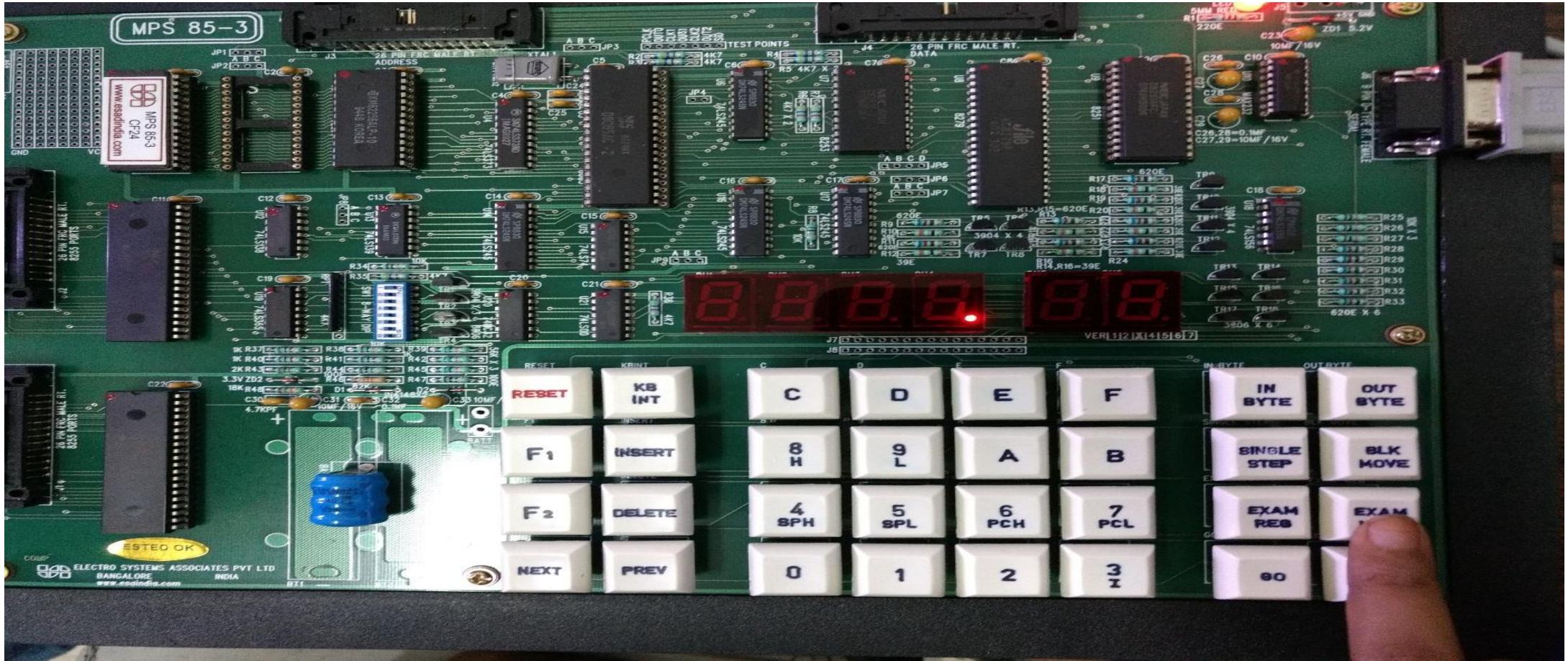
11. Press Ctrl+D and enter the input file name.
12. Press enter till it says the download is complete.
13. If everything is correct, the code has been downloaded to the Hardware kit.

At the esa-x85 Kit side

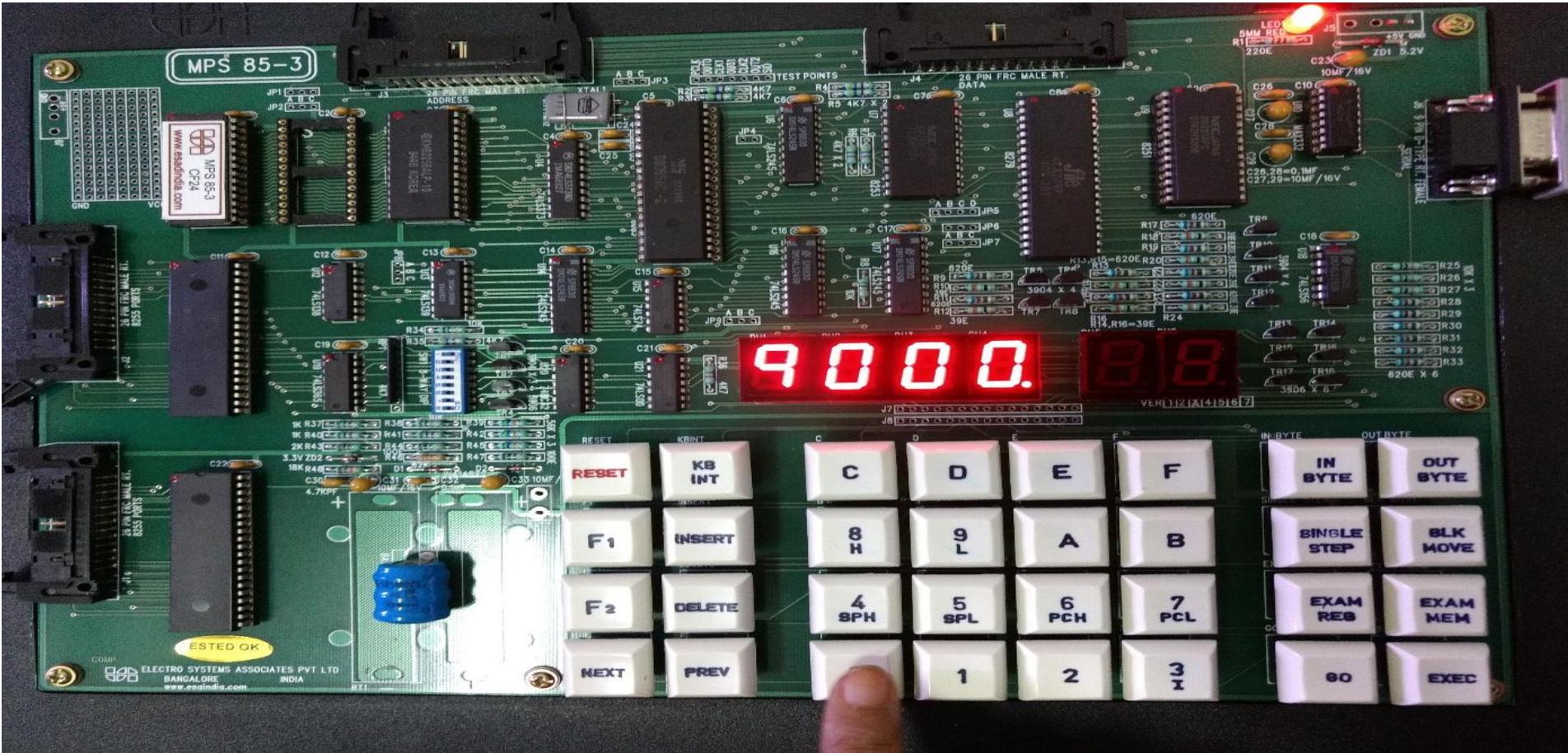
Shift the 4th switch on DIP switch (pointed by a pen) back to the left side.



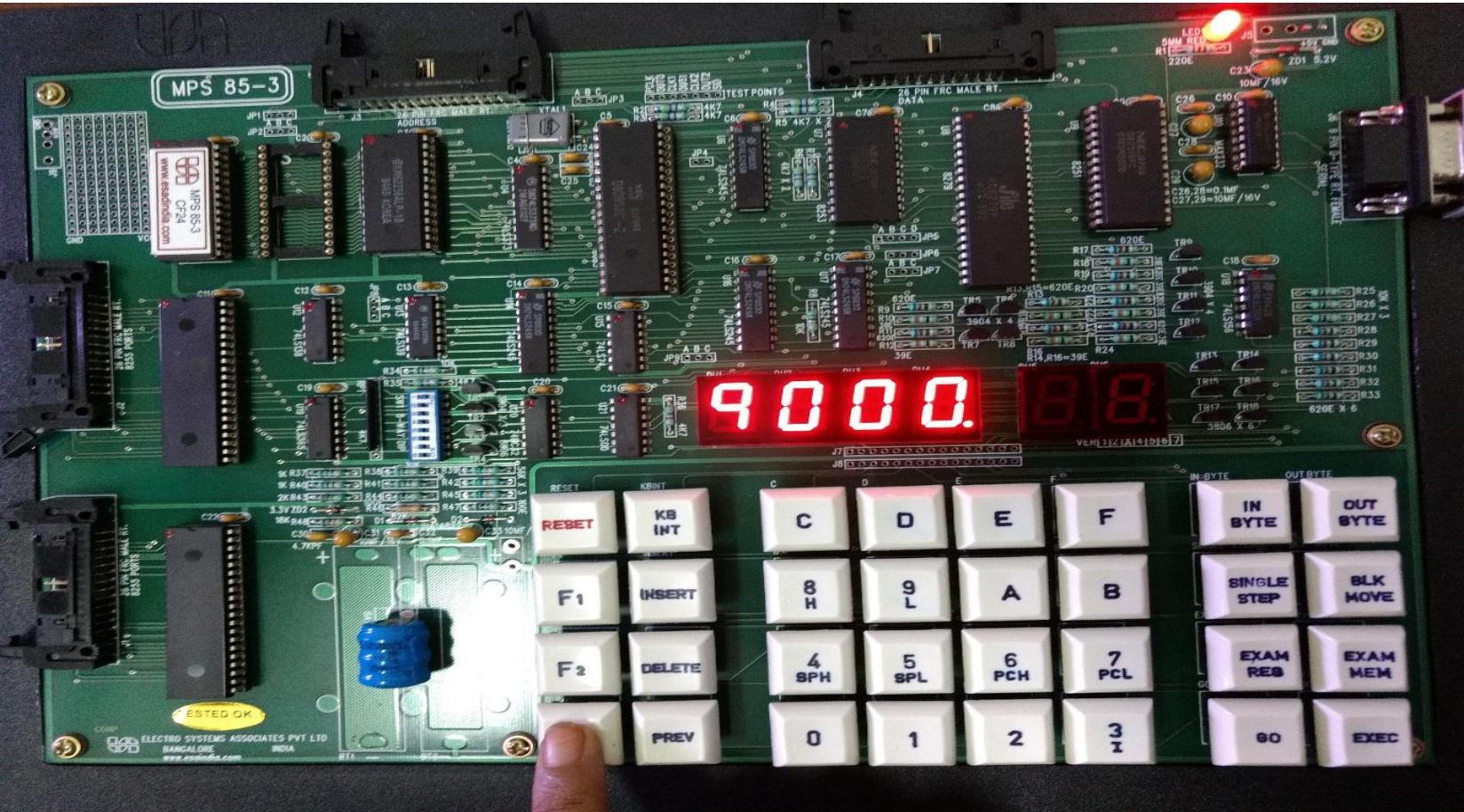
2. Press EXAM MEM key to examine memory content



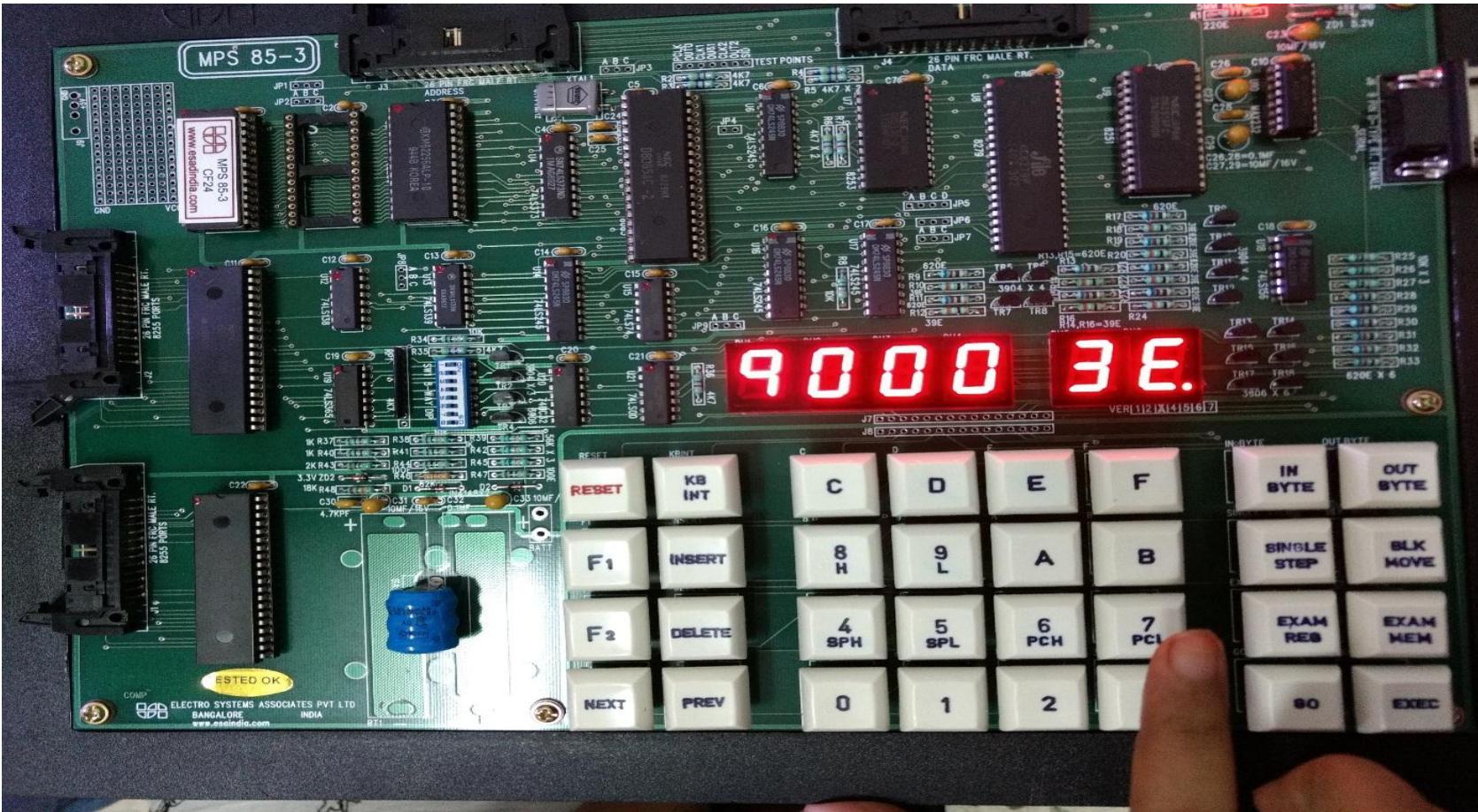
3. Enter the starting Address of your code



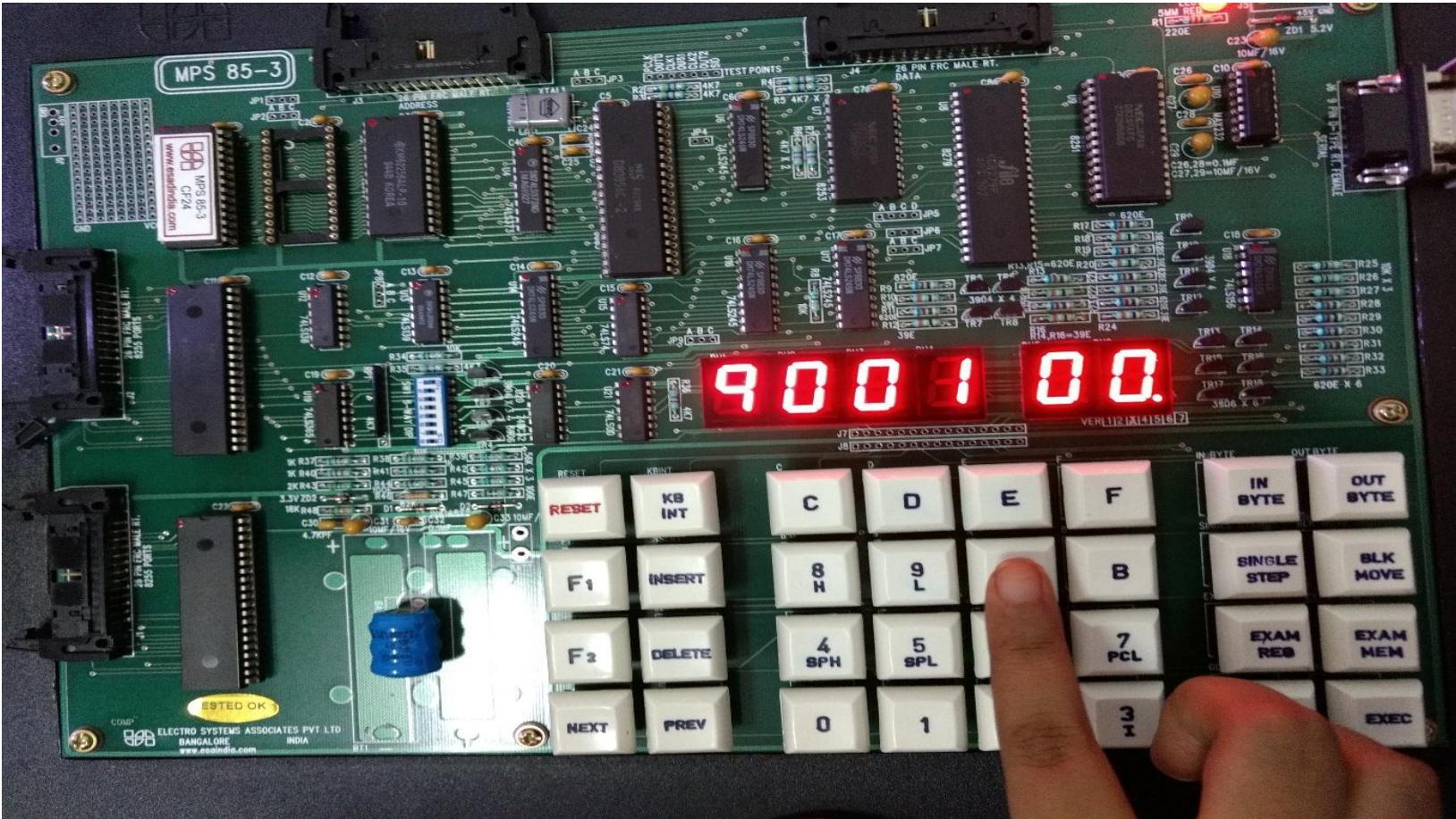
4.Press NEXT key to check if the code downloaded is the same.



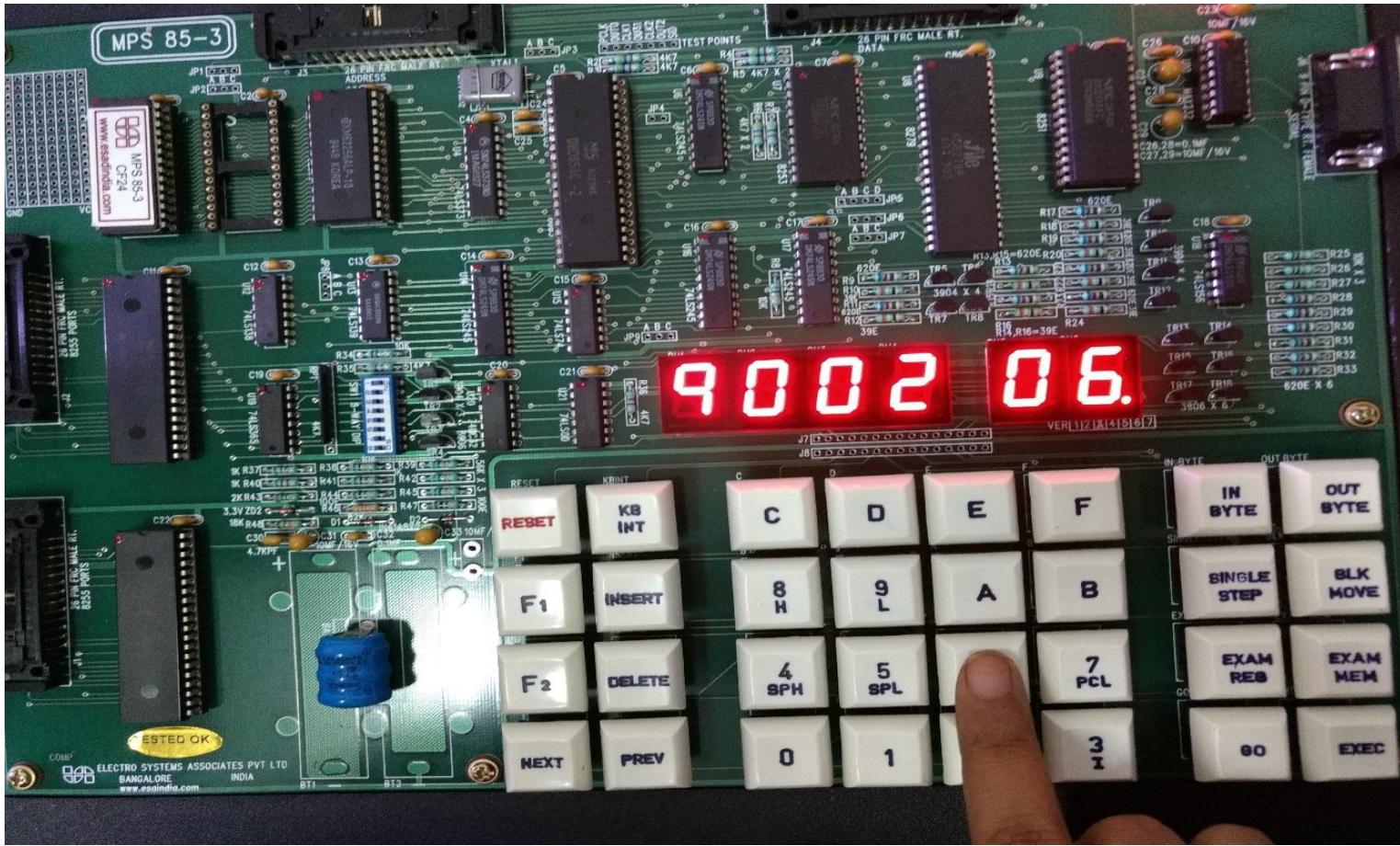
(for example- 3E is entered at address 9000 [refer the code and the opcode])

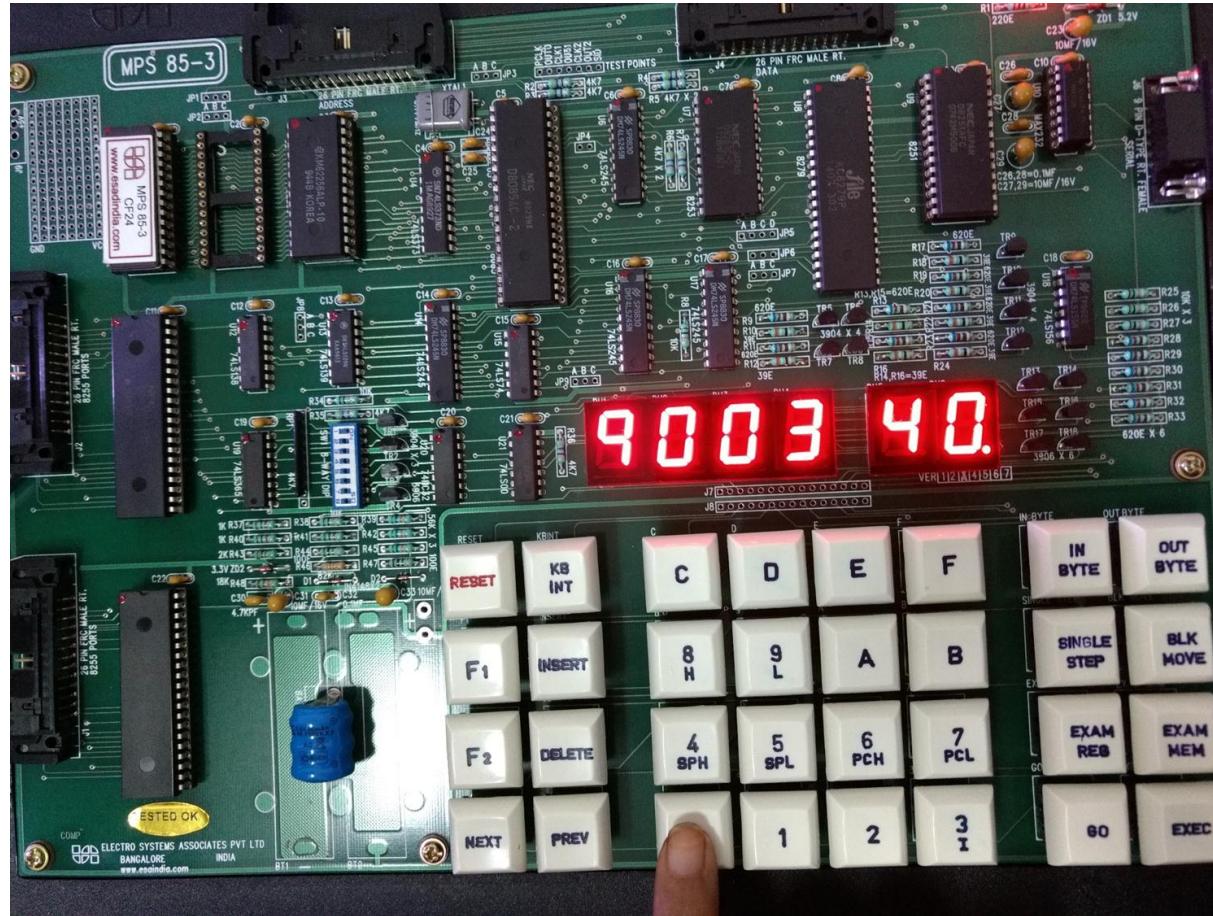


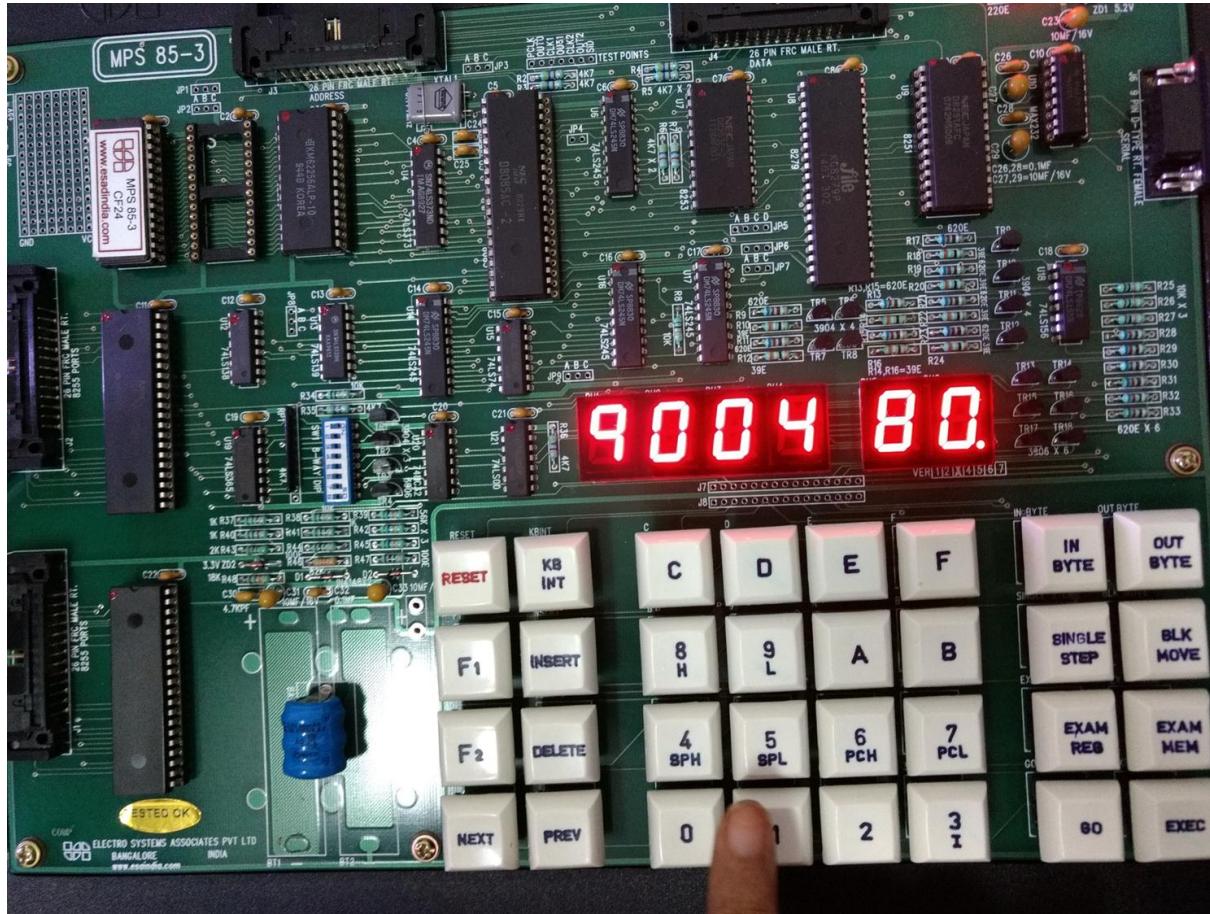
Continue entering the NEXT key to ensure
correct code

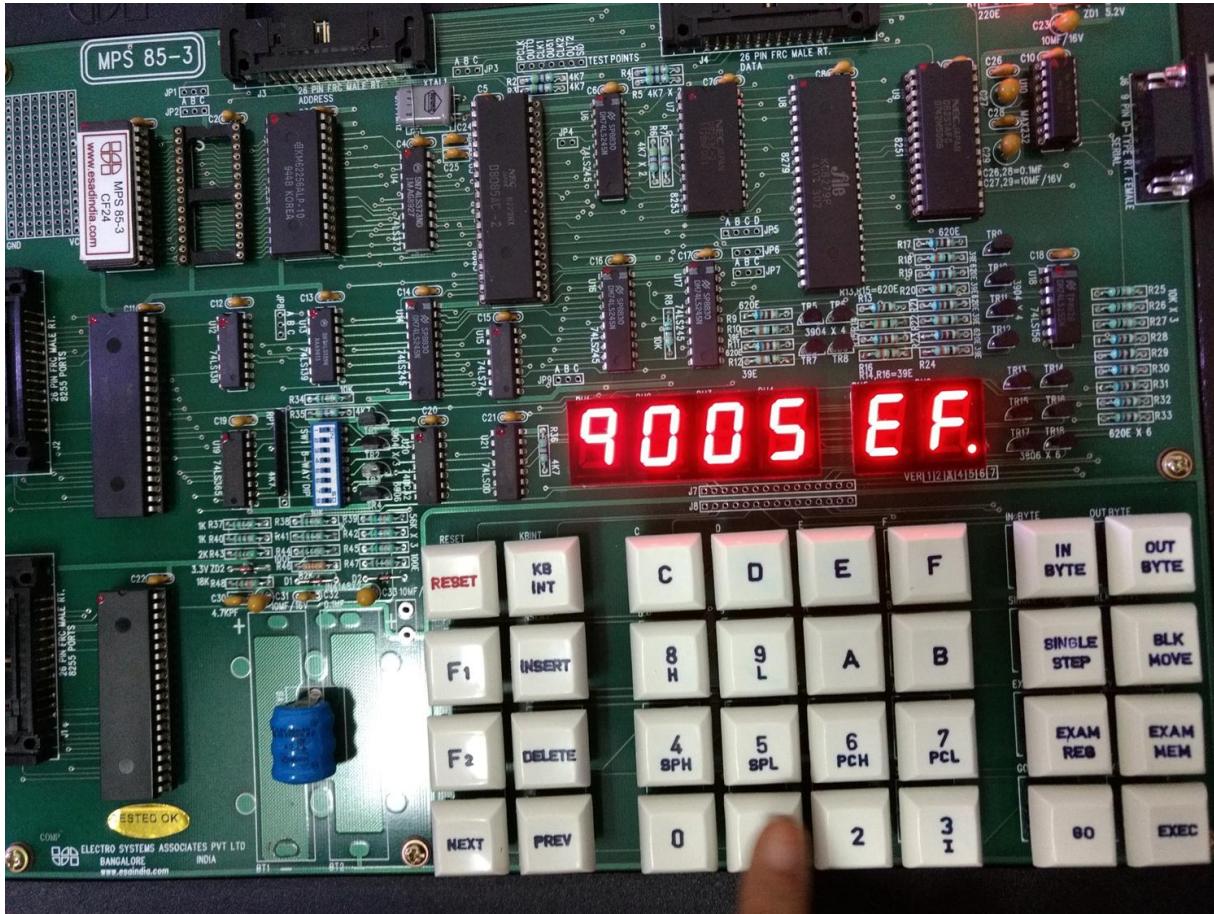




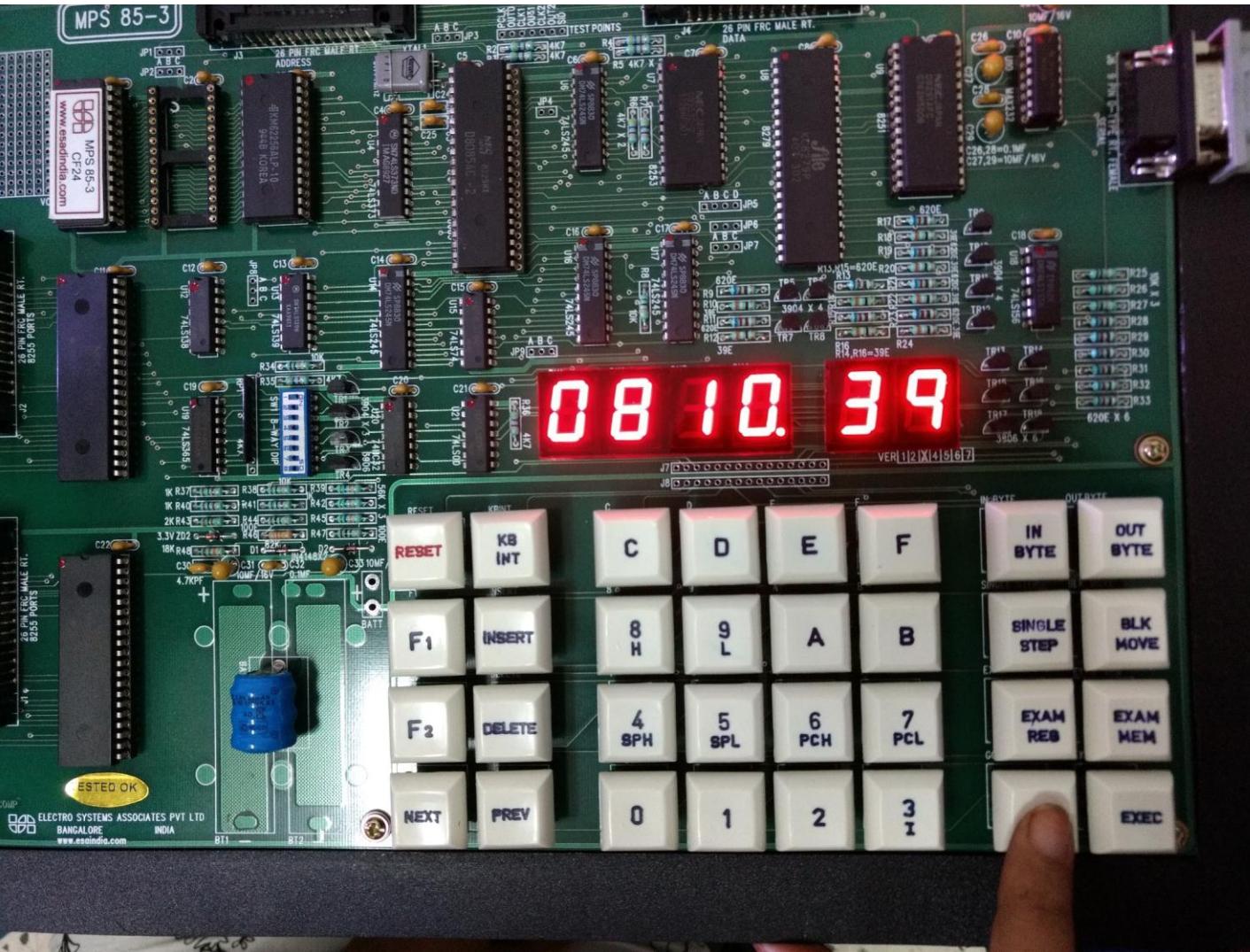




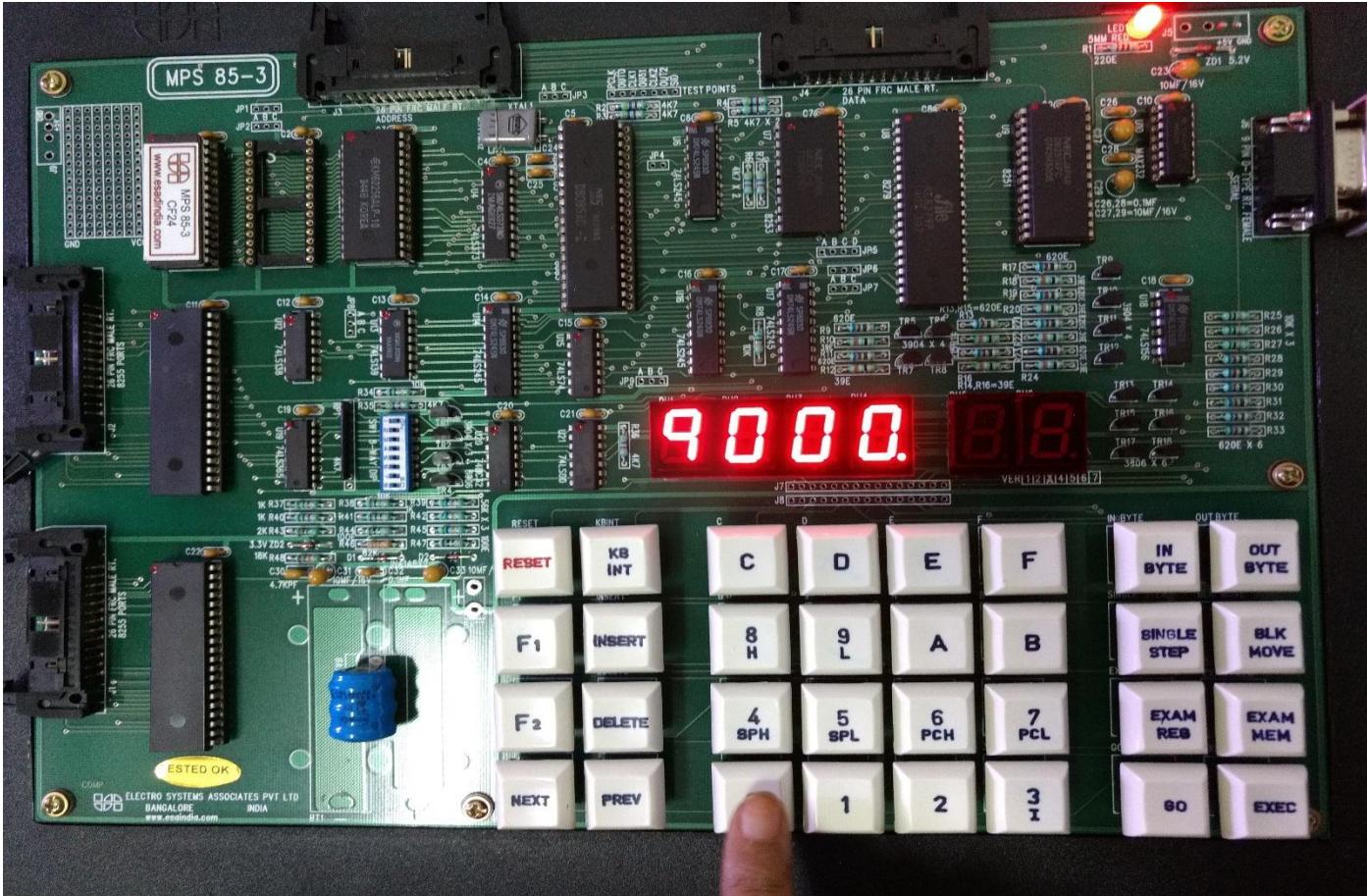




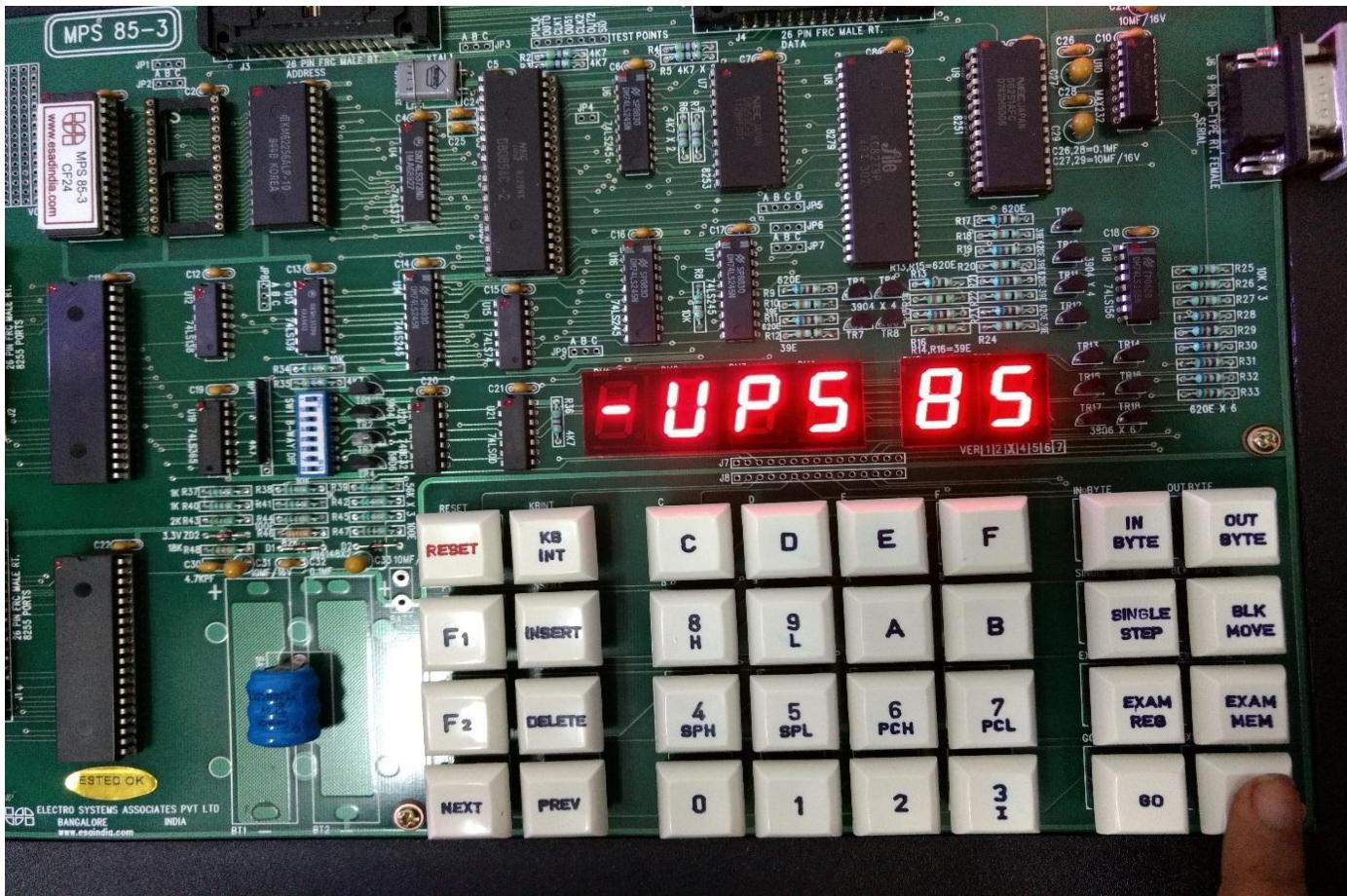
To execute the code: Press GO key



Then enter the starting memory address 9000.



Press EXEC key.



Check your output: Press EXAM REG key and then Press “A” key to check the output at register A.

