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REGISTRATION NO. :-2021CA063
CLASS:- MCA FIRST YEAR
SUBJECT:- DCO PRACTICALS
ASSIGNMENT :- QUESTIONS FROM01 TO
6
MOBILE NO:- 9821446257

PROGRAM 1

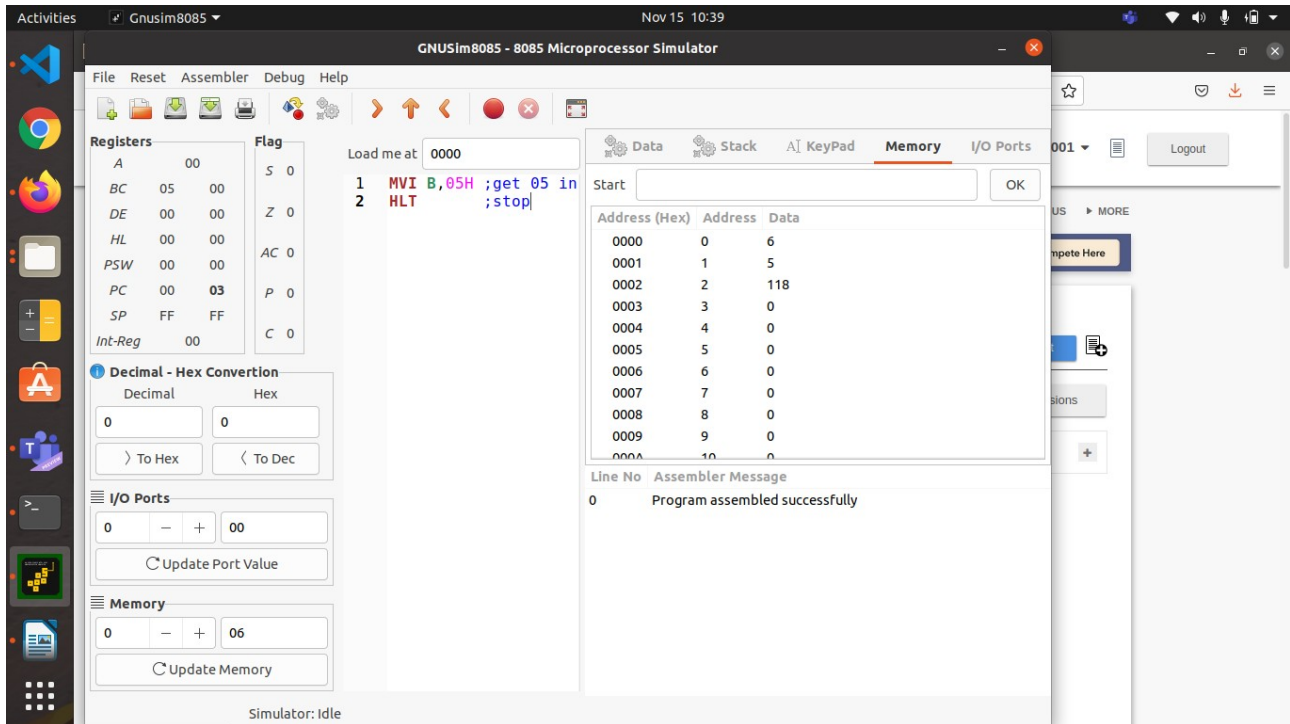
; Assembler generated listing; Not editable.

; Generated by GNUSim8085: <http://www.gnusim8085.org/>

0 06 05 MVI B,05H ;get 05 in register B

2 76 HLT ;stop

OUTPUT



PROGRAM 2

; Assembler generated listing; Not editable.

; Generated by GNUSim8085: <http://www.gnusim8085.org/>

0 3E 05 MVI A,05 ;get 05 in register A

2 47 MOV B,A;transfer 05 from register A to B

3 76 HLT;stop

OUTPUT 1

The screenshot shows the GNUSim8085 - 8085 Microprocessor Simulator interface. The top menu bar includes File, Reset, Assembler, Debug, and Help. The main window is divided into several sections:

- Registers:** A table showing the initial values of the 8085 registers. The Accumulator (A) is 00, and the Program Counter (PC) is 00. The Status (S) flag is 0.
- Flag:** A table showing the initial values of the flags. The Zero (Z) flag is 0, and the Carry (C) flag is 0.
- Load me at:** A text box containing the address 0000.
- Assembler:** A list of assembly instructions: 1. MVI A,05;get, 2. MOV B,A;transfer 05, and 3. HLT;stop.
- Memory:** A table showing the initial values of memory locations. The address 0000 contains the value 62, and the address 0003 contains the value 118.
- I/O Ports:** A section for controlling the I/O ports, with a text box for the port value (00) and buttons for updating the port value.
- Decimal - Hex Conversion:** A section for converting between decimal and hexadecimal values.
- Assembler Message:** A log showing the message "Program assembled successfully".

The status bar at the bottom indicates "Simulator: Program running".

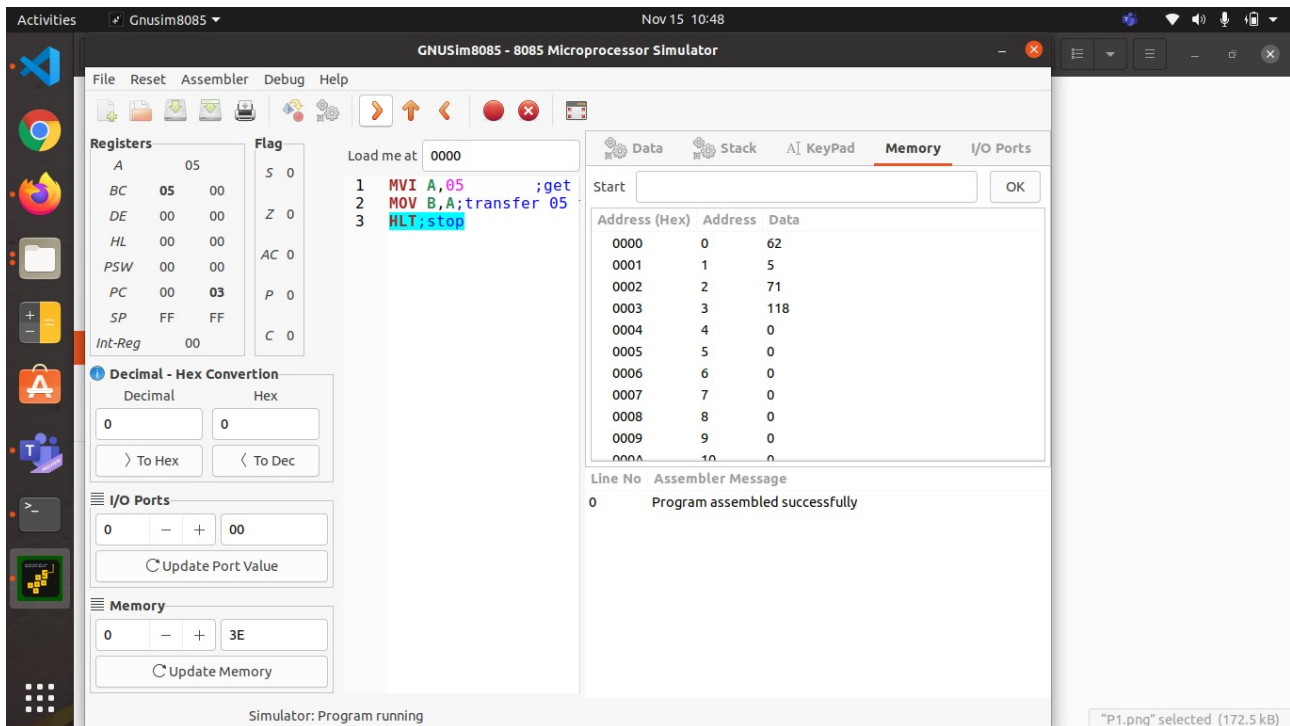
OUTPUT 2

The screenshot shows the GNUSim8085 - 8085 Microprocessor Simulator interface after the execution of the assembly program. The top menu bar and the main window layout are the same as in the previous screenshot. The state of the registers and memory has changed:

- Registers:** The Accumulator (A) now contains the value 05, and the Program Counter (PC) is 02. The Status (S) flag is 0.
- Flag:** The Zero (Z) flag is 0, and the Carry (C) flag is 0.
- Load me at:** The address 0000 is still displayed.
- Assembler:** The list of assembly instructions remains the same: 1. MVI A,05;get, 2. MOV B,A;transfer 05, and 3. HLT;stop.
- Memory:** The memory values remain the same as in the previous screenshot: 0000 contains 62, and 0003 contains 118.
- I/O Ports:** The port value is still 00.
- Decimal - Hex Conversion:** The conversion section is still empty.
- Assembler Message:** The log still shows "Program assembled successfully".

The status bar at the bottom indicates "Simulator: Program running".

OUTPUT 3



PROGRAM 3

; Assembler generated listing; Not editable.

; Generated by GNUSim8085: <http://www.gnusim8085.org/>

<Load to the content of memory location 2000H directly to the accumulator then transfer to it register B the content of memory location 2000H is 05>

LXI H,

4200 3A D0 7 LDA 2000 ;get the content of the memory location FC50 H into accumulator

4203 47 MOV B,A ;Move the content of register A to B

4204 76 HLT ;stop

OUTPUT 1

The screenshot shows the GNUSim8085 - 8085 Microprocessor Simulator interface. The main window displays the following components:

- Registers:** A, BC, DE, HL, PSW, PC, SP, Int-Reg. All registers are initialized to 00.
- Flags:** S, Z, AC, P, C. All flags are initialized to 0.
- Assembly Code:** A list of instructions: 1 LDA 2000 ;get the content of memory location 2000, 2 MOV B,A ;Move the content of register A to register B, 3 HLT ;halt.
- Memory:** A table showing memory addresses (07D0 to 07DA) and their corresponding data (00 to 05).
- I/O Ports:** A section for updating port values.
- Assembler Message:** A message box indicating "Program assembled successfully".

The status bar at the bottom indicates "Simulator: Idle".

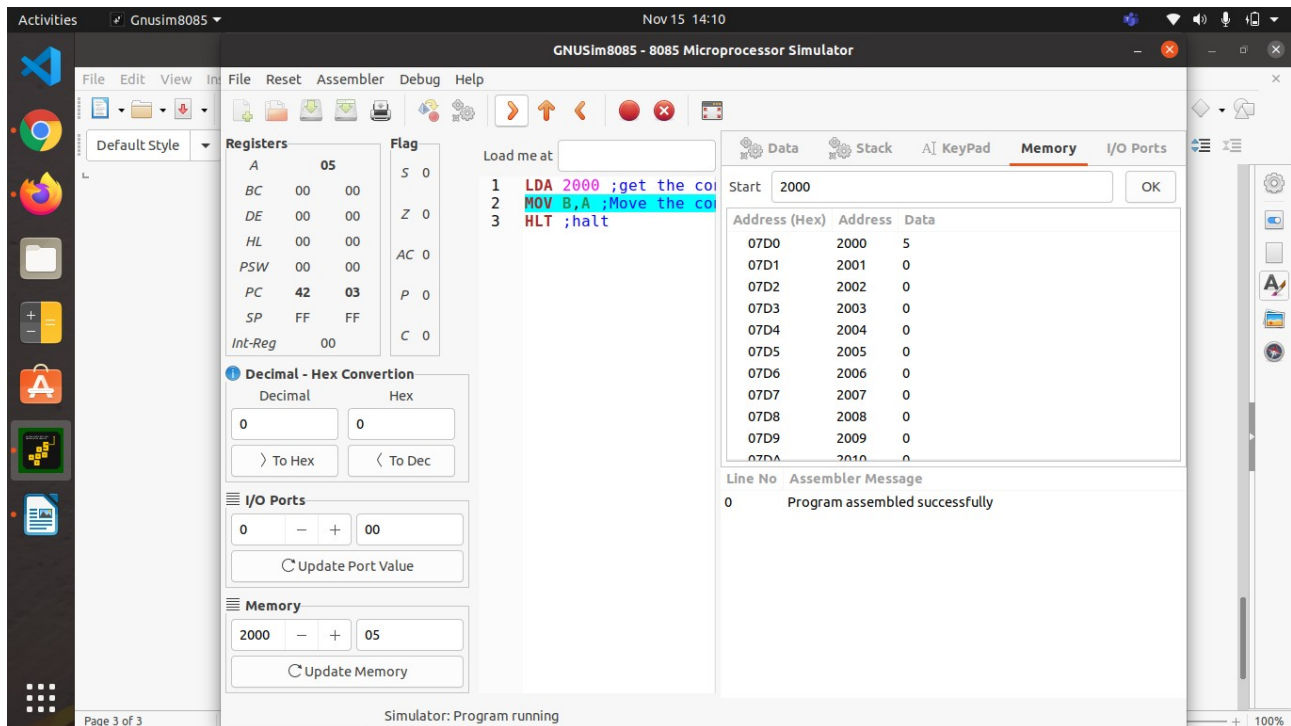
OUTPUT 2

The screenshot shows the GNUSim8085 - 8085 Microprocessor Simulator interface after execution. The main window displays the following components:

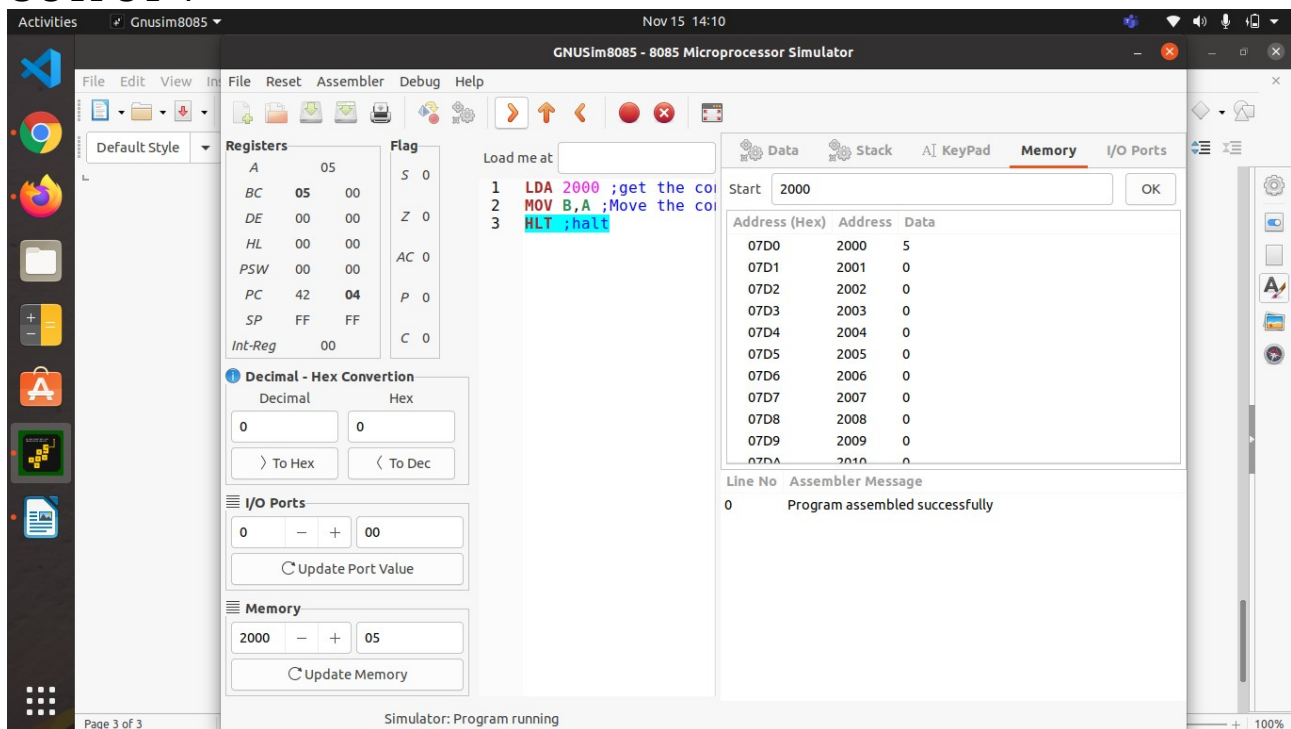
- Registers:** A, BC, DE, HL, PSW, PC, SP, Int-Reg. All registers are initialized to 00.
- Flags:** S, Z, AC, P, C. All flags are initialized to 0.
- Assembly Code:** A list of instructions: 1 LDA 2000 ;get the content of memory location 2000, 2 MOV B,A ;Move the content of register A to register B, 3 HLT ;halt.
- Memory:** A table showing memory addresses (07D0 to 07DA) and their corresponding data (00 to 05).
- I/O Ports:** A section for updating port values.
- Assembler Message:** A message box indicating "Program assembled successfully".

The status bar at the bottom indicates "Simulator: Idle".

OUTPUT 3



OUTPUT 4



PROGRAM 4

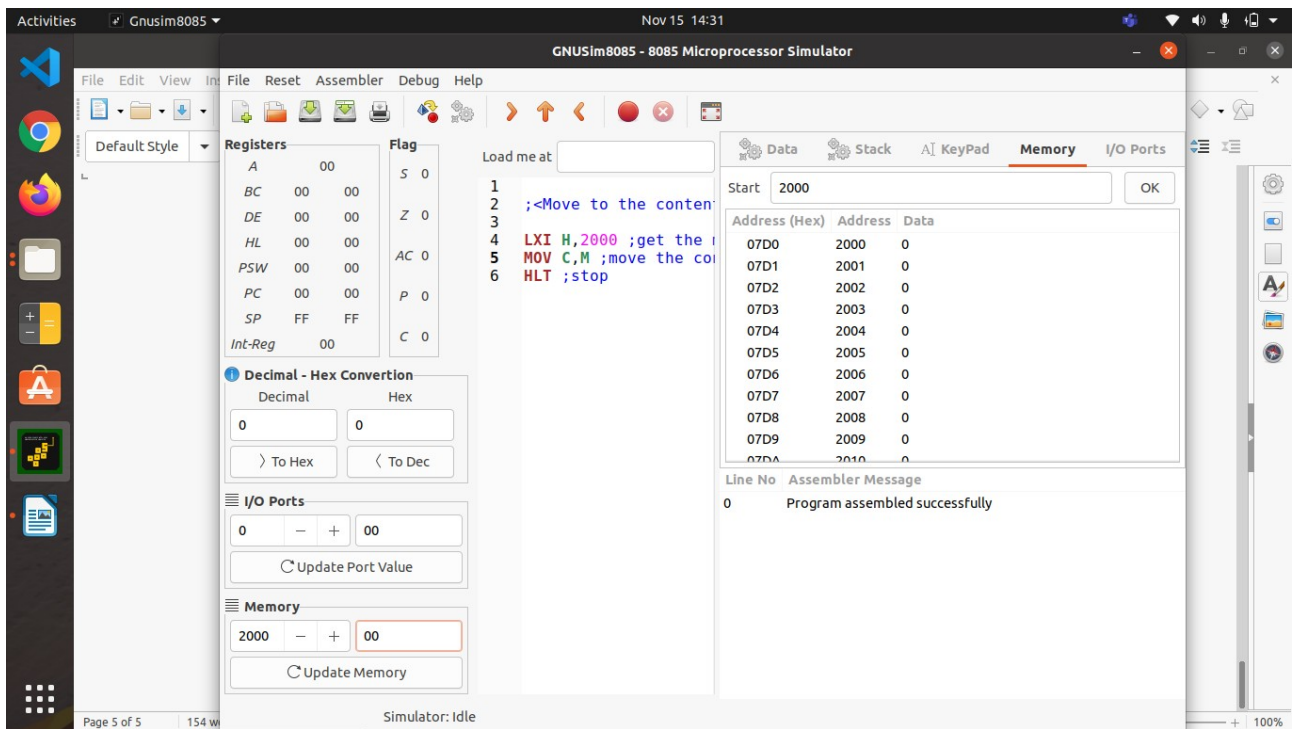
<Move to the content of memory location 2000H to the register C the content of memory location 2000H is 08>

LXI H,2000 ;get the memory address 2000H in HL pair

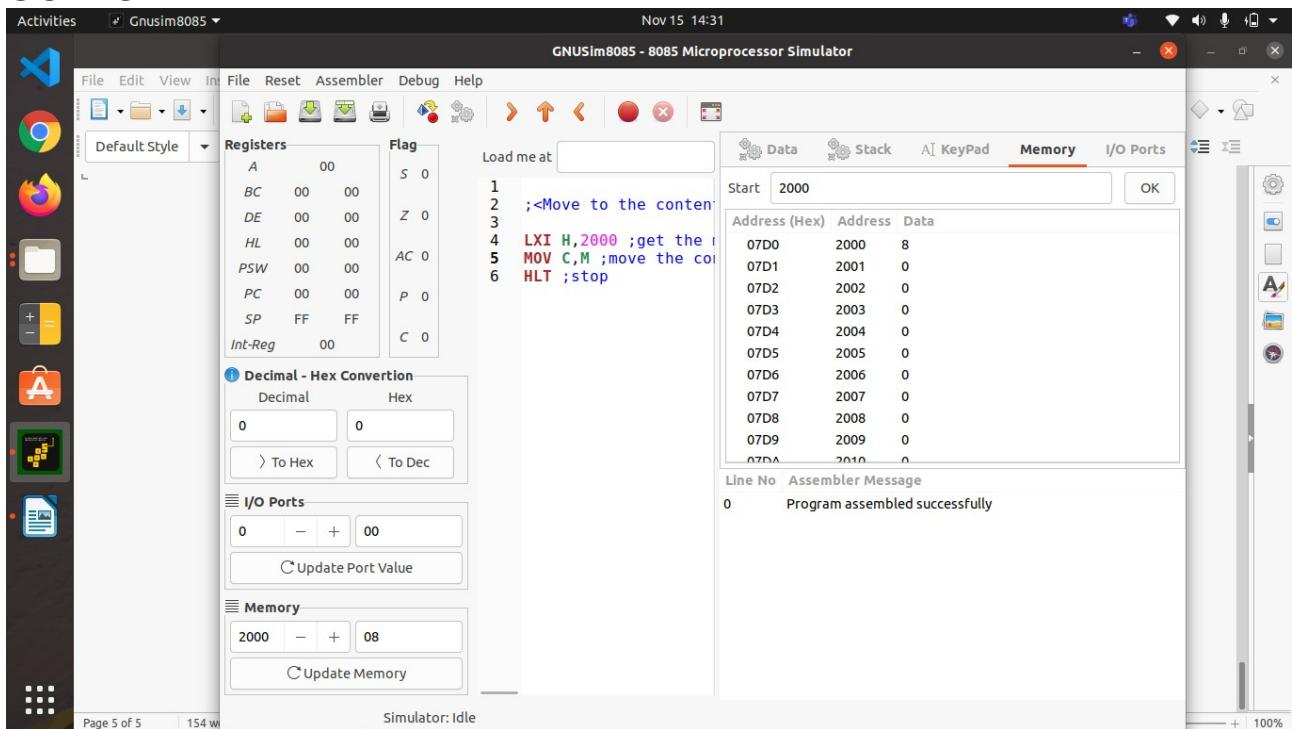
MOV C,M ;move the content of memory location whose address is in the HL pair to the register C

HLT ;stop

OUTPUT 1



OUTPUT 2



OUTPUT 3

The screenshot shows the GNUSim8085 - 8085 Microprocessor Simulator interface. The assembly code is as follows:

```
1  
2 ;<Move to the conten  
3  
4 LXI H,2000 ;get the  
5 MOV C,M ;move the co  
6 HLT ;stop
```

The registers and flags are displayed on the left. The memory dump on the right shows the following data:

Address (Hex)	Address	Data
07D0	2000	8
07D1	2001	0
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0

The assembler message at the bottom indicates: "Program assembled successfully".

OUTPUT 4

The screenshot shows the GNUSim8085 - 8085 Microprocessor Simulator interface. The assembly code is as follows:

```
1  
2 ;<Move to the conten  
3  
4 LXI H,2000 ;get the  
5 MOV C,M ;move the co  
6 HLT ;stop
```

The registers and flags are displayed on the left. The memory dump on the right shows the following data:

Address (Hex)	Address	Data
07D0	2000	8
07D1	2001	0
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0

The assembler message at the bottom indicates: "Program assembled successfully".

PROGRAM 5

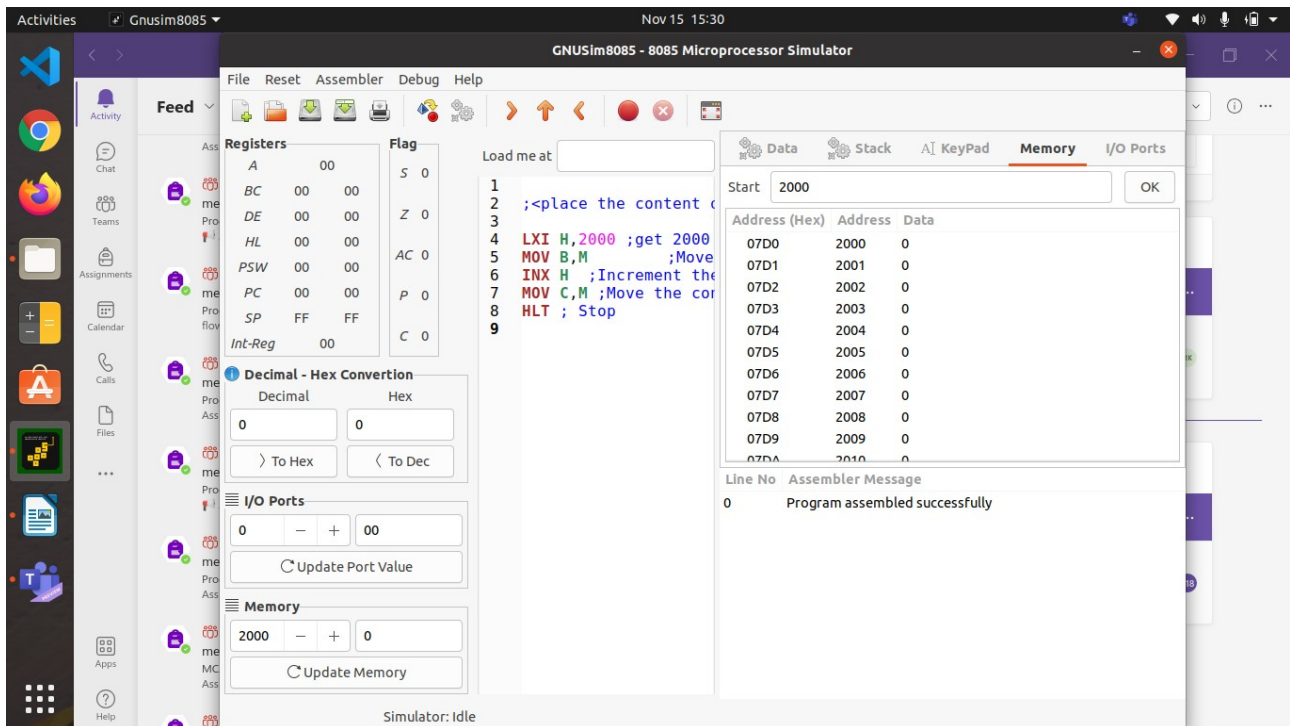
; Assembler generated listing; Not editable.

; Generated by GNUSim8085: <http://www.gnusim8085.org/>

; <place the content of memory location 2000H in register B and that of 2201H in register C the content of 2000H and 2201H are 11H and 12H respectively>

```
4200 21 D0 7    LXI H,2000 ;get 2000 in HL pair
4203 46        MOV B,M;Move the content of 2000H to B
4204 23        INX H ;Increment the HL pair by one
4205 4E        MOV C,M ;Move the content of 2001H to C
4206 76        HLT ; Stop
```

OUTPUT 1



OUTPUT 2

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers: A 00, BC 00 00, DE 00 00, HL 07 D0, PSW 00 00, PC 42 03, SP FF FF, Int-Reg 00. Flag: S 0, Z 0, AC 0, P 0, C 0.

Load me at: 1 ;<place the content c, 2, 3, 4 LXI H,2000 ;get 2000, 5 MOV B,M ;Move, 6 INX H ;Increment the, 7 MOV C,M ;Move the cor, 8 HLT ; Stop, 9

Memory: Start 2000. Address (Hex) Address Data: 07D0 2000 11, 07D1 2001 12, 07D2 2002 0, 07D3 2003 0, 07D4 2004 0, 07D5 2005 0, 07D6 2006 0, 07D7 2007 0, 07D8 2008 0, 07D9 2009 0, 07DA 2010 0.

Line No Assembler Message: 0 Program assembled successfully

Simulator: Program running

OUTPUT 3

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers: A 00, BC 00 00, DE 00 00, HL 07 D0, PSW 00 00, PC 42 03, SP FF FF, Int-Reg 00. Flag: S 0, Z 0, AC 0, P 0, C 0.

Load me at: 1 ;<place the content c, 2, 3, 4 LXI H,2000 ;get 2000, 5 MOV B,M ;Move, 6 INX H ;Increment the, 7 MOV C,M ;Move the cor, 8 HLT ; Stop, 9

Memory: Start 2000. Address (Hex) Address Data: 07D0 2000 11, 07D1 2001 12, 07D2 2002 0, 07D3 2003 0, 07D4 2004 0, 07D5 2005 0, 07D6 2006 0, 07D7 2007 0, 07D8 2008 0, 07D9 2009 0, 07DA 2010 0.

Line No Assembler Message: 0 Program assembled successfully

Simulator: Program running

OUTPUT 4

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers: A 00, BC 0B 00, DE 00 00, HL 07 D0, PSW 00 00, PC 42 04, SP FF FF, Int-Reg 00. Flags: S 0, Z 0, AC 0, P 0, C 0.

Decimal - Hex Conversion: Decimal 0, Hex 0. Buttons: > To Hex, < To Dec.

I/O Ports: 0, 00. Buttons: Update Port Value.

Memory: 2001, 0C. Buttons: Update Memory.

Load me at: []

1 ;<place the content
2
3
4 LXI H,2000 ;get 2000
5 MOV B,M ;Move
6 INX H ;Increment the
7 MOV C,M ;Move the co
8 HLT ; Stop
9

Start 2000 OK

Address (Hex)	Address	Data
07D0	2000	11
07D1	2001	12
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0

Line No Assembler Message
0 Program assembled successfully

Simulator: Program running

OUTPUT 5

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers: A 00, BC 0B 00, DE 00 00, HL 07 D1, PSW 00 00, PC 42 05, SP FF FF, Int-Reg 00. Flags: S 0, Z 0, AC 0, P 0, C 0.

Decimal - Hex Conversion: Decimal 0, Hex 0. Buttons: > To Hex, < To Dec.

I/O Ports: 0, 00. Buttons: Update Port Value.

Memory: 2001, 0C. Buttons: Update Memory.

Load me at: []

1 ;<place the content
2
3
4 LXI H,2000 ;get 2000
5 MOV B,M ;Move
6 INX H ;Increment the
7 MOV C,M ;Move the co
8 HLT ; Stop
9

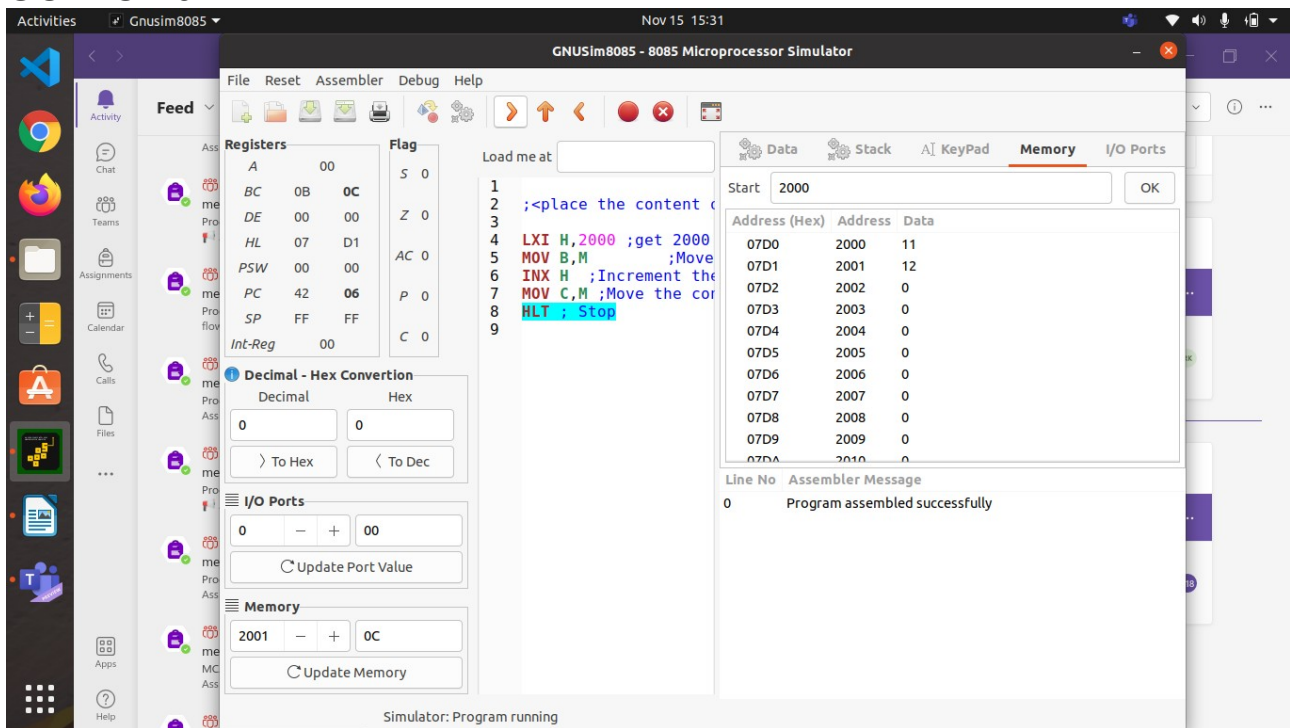
Start 2000 OK

Address (Hex)	Address	Data
07D0	2000	11
07D1	2001	12
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0

Line No Assembler Message
0 Program assembled successfully

Simulator: Program running

OUTPUT 6



PROGRAM 6

; Assembler generated listing; Not editable.

; Generated by GNUSim8085: <http://www.gnusim8085.org/>

; <Place 05 in the accumulator increment it by one and store the result in the memory location 2000H>

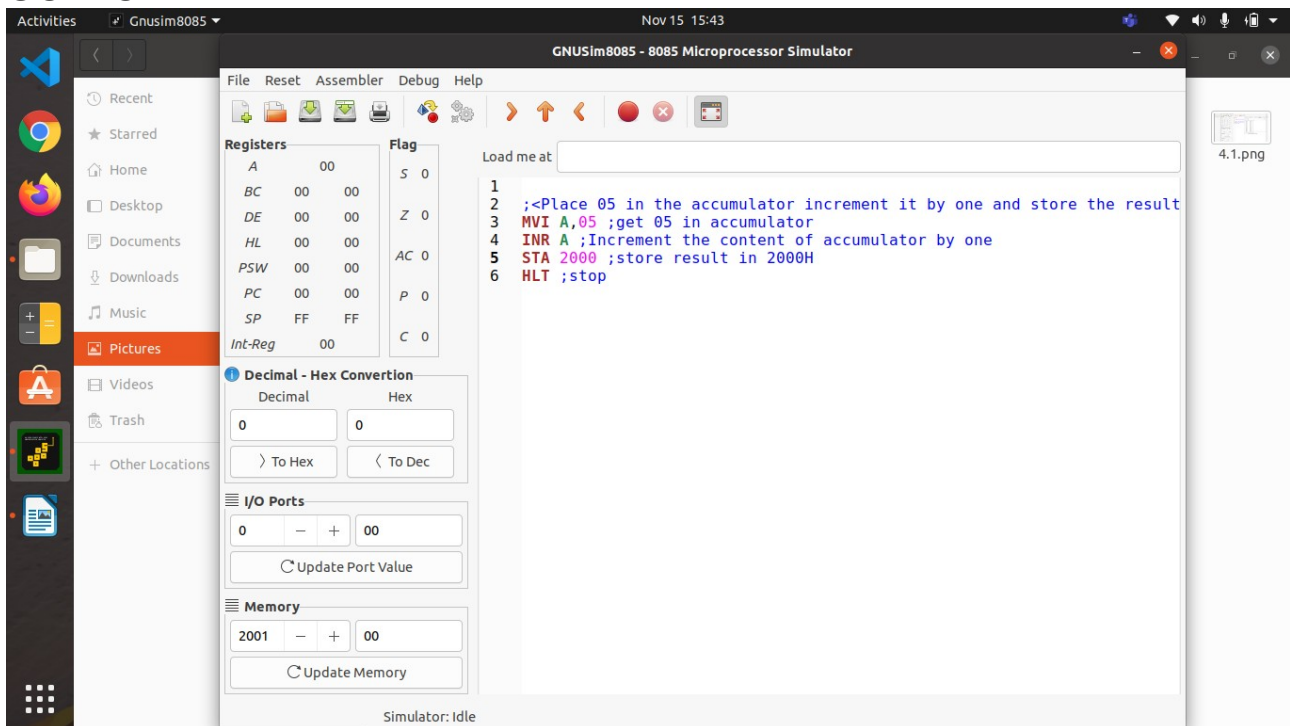
4200 3E 05 MVI A,05 ;get 05 in accumulator

4202 3C INR A ;Increment the content of accumulator by one

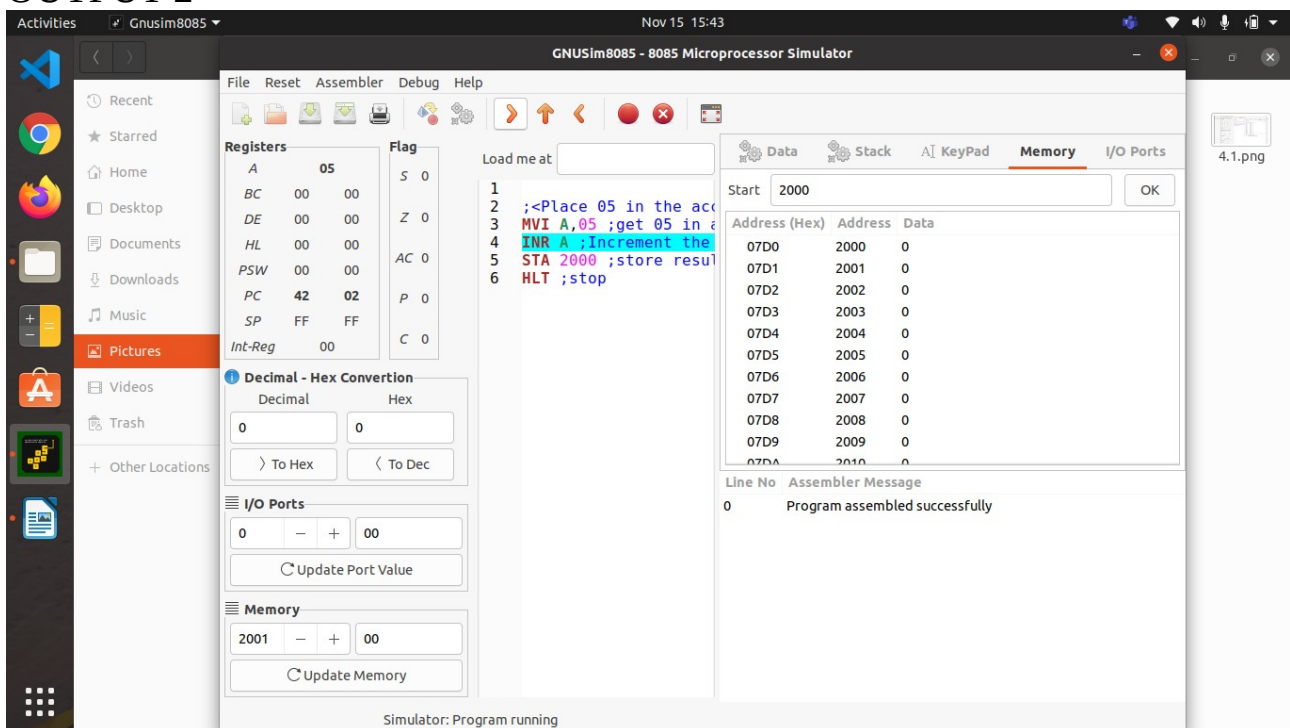
4203 32 D0 7 STA 2000 ;store result in 2000H

4206 76 HLT ;stop

OUTPUT 1



OUTPUT 2



OUTPUT 3

The screenshot shows the GNUSim8085 Microprocessor Simulator interface. The assembly code is as follows:

```
1 ;<Place 05 in the acc
2
3 MVI A,05 ;get 05 in a
4 INR A ;Increment the
5 STA 2000 ;store result
6 HLT ;stop
```

The registers section shows the following values:

Register	Value	Flag
A	06	S 0
BC	00 00	Z 0
DE	00 00	AC 0
HL	00 00	P 1
PSW	00 00	C 0
PC	42 03	
SP	FF FF	
Int-Reg	00	

The memory section shows the following values:

Address (Hex)	Address	Data
07D0	2000	0
07D1	2001	0
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0

The assembler message shows: "Program assembled successfully".

OUTPUT 4

The screenshot shows the GNUSim8085 Microprocessor Simulator interface after execution. The assembly code is the same as in Output 3:

```
1 ;<Place 05 in the acc
2
3 MVI A,05 ;get 05 in a
4 INR A ;Increment the
5 STA 2000 ;store result
6 HLT ;stop
```

The registers section shows the following values:

Register	Value	Flag
A	06	S 0
BC	00 00	Z 0
DE	00 00	AC 0
HL	00 00	P 1
PSW	00 00	C 0
PC	42 06	
SP	FF FF	
Int-Reg	00	

The memory section shows the following values:

Address (Hex)	Address	Data
07D0	2000	6
07D1	2001	0
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	0

The assembler message shows: "Program assembled successfully".