

Microprocessor Lab

Address

Mnemonic

OP Code

2000

LXI D, 3200H

11 1000

2001

Data

00

2002

Data

32

2003

MVI A, 01H

3E

2004

Data

01

2005

MVI C, 08H

OE

2006

Data

08

2007

STAX D

12

2008

INX D

13

2009

ADD A

87

200A

DCR C

0D

200B

JNZ 2007H

C2

200C

Data

07

200D

Data

20

200E

RST₅

EF5

H, A VOM

8005

G XAT2

2005

H X39

4005

Output:

Addr.	Value
3200	1
3201	2
3202	4
3203	8
3204	10
3205	20
3206	40
3207	80

Addr.	Value
3230	24
3231	AC
3232	B8
3233	2F
3234	10

Address	Mnemonic	OP Code
2000	LXI H, 3234H	21
2001	Data	34
2002	Data	32
2003	LXI D, 3040H	11
2004	Data	40
2005	Data	30
2006	MVI C, 05H	0E
2007	Data	05
2008	MOV A, M	7E
2009	STAX D	12
200A	DCX H	2B

200B	JN X	D	13
200C	DCR	C	0D
200D	JNZ	2008H	C2
200E	Data	08	
200F	Data	20	
2010	RST	EF	

Output → 0301

Addr	Value
3040	10
3041	2F
3042	B8
3043	AC
3044	24

Gr-10

✓ Shweta
1/09/23

Address	Value
3100H	01H

(1)

Address

Harmonic

OP Code

2000

58

LDA 3100H

3A

2001

48

Data

00

2002

40

Data

31

2003

58

CMA

2F

2004

58

INRA

3C

2005

40

RST

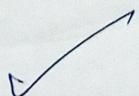
EF

Register	Value
A	FfH

✓

②	Address	Mnemonic	Op Code	
	2000	LDA 3200H	3A	
	2001	Data	00	3200H
	2002	Data	32	3204H
	2003	MOV B,A	47	0005
	2004	LDA 3204H	3A	1005
	2005	Data	04	5005
	2006	Data	32	8005
	2007	STA 3200H	32	4005
	2008	Data	00	
	2009	Data	32	2005
	200A	MOV A,B	78	
	200B	STA 3204H	32	
	200C	Data	04	
	200D	Data	32	
	200E	RSTS	EF	

checked



Address	Value
3200H	7H
3204	3H

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Address

Mnemonic

OP Code

Register

Address

Value

2000	MVI A, $0E_H$	3E	2000H	OE_H
2001	Data	OE	A	
2002	MVI C, 00_H	OE		
2003	Data	00		
2004	MVI B, 08_H	06		
2005	Data	08		
2006	RAR	1F		
2007	JNC $200B_H$	D2		
2008	Data	OB		
2009	Data	20		
200A	INR C	0C		
200B	DCR B	05		
200C	JNZ 2006_H	C2		
200D	Data	06		
200E	Data	20		
200F	RST 5	EF		

Register Value
C 03_H

Checked
Taylup

Gru-10

Showm
08/09/23

ET - 8085 AD

Press → Reset → Ex mem → Type the first address of your program

Press → Next → Type the first OP code → Next
↓

Op code one by one

Last Op code for this hit - EF → Next

• How to run program :-

Press Reset → Go → Type first address of program
↓

Press . fill

• How to check & result :-

- To check register content -

Press Shift → Exam Reg → Type name of the Reg.

- For memory content -

Ex mem → Type the address

Starting Address - 2000

Instructions :-

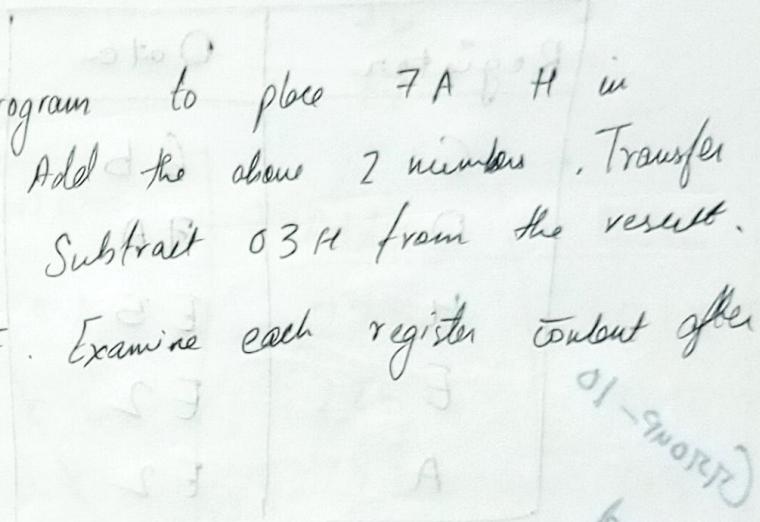
Address	Mnemonic	OP Code
2000	MVI C, 45H	0E
2001	Data	45H
2002	MOV B, C	41
2003	MOV D, C	51
2004	RST	CF

Address	Mnemonic	OP	
2000	MVI C, 05H	0E	A = 7 C = C D = C
2001	MOV Data	05H	✓
2002	INR C	0C	✓
2003	MOV D, C	51	✓
2004	MVI A, 07	7003 E	✓
2005	MVI D, 08	07H	✓
2006	ADD D	82	✓
2007	ADD C	81	✓
2008	RST	EF	(circled)
Accumulation = 13H		Output	
		mon/ reg	Content

Srinivas | 08/08/2023

Microprocessor Lab

Q- Write the assembly language program to place $7A_H$ in register D and $6B_H$ in register C. Add the above 2 numbers. Transfer the result of addition to register A. Subtract 03_H from the result. Store the final result to register E. Examine each register content after executing the following program.



<u>Address</u>	<u>Mnemonic</u>	<u>OP Code</u>
2000	MVI D, $7A_H$	16
2001	Data	$7A_H$
2002	MVI C, $6B_H$	OE
2003	Data	$6B_H$
2004	MVI A, $0H$	3E
2005	Data	$0H$
2006	ADD C	81
2007	ADD D	82
2008	MOV H, A	67

2009

SUI , 03H

D6

200A

Data

03H

200B

MOV E, A

5F

200C

RST

FF

Register	Data
C	6b
D	7A
H	E5
E	E2
A	E2

Group-10CheckedShow
18/8/2023

- Q. Write the assembly language to fill 20 bytes of memory starting from 2250_{16} with natural numbers in increasing orders.

Addr.	Mnemonic	OP code
3000	LXI D, 250H	11
3001	Data	50H
3002	Data	51H
3003	MVI A, 01H	3FH
3004	Data	01H
3005	MVI B, 14H	06
3006	Data	14H

3007	STAX D	12
3008	INX D	13
3009	JNR A	3C
300A	DCR B	05
300B	JNZ 3007 APP B	C2
300C	Data	09
300D	Data	30
300E	MET	76
300F	RST	EP

Register	Address	Data
	F250H	01
	F251	02
	F252	03
	F253	04
	.	.
	.	.
	F263	14
Address	Data	
2250	01	
2251	02	
2252	03	
2253	04	
2254	05	
2255	06	
2256	07	
2257	08	
2258	09	
2259	DA	
225A	0B	
225B	0C	
225C	0D	
225D	0E	
225E	0F	
225F	10	
2260	11	
2261	12	
2262	13	
2263	14	

Address Data

checked

Tony dep

B- Write an assembly language program to generate a A.P. series of 8 terms with common difference 2 and store the series in the memory starting from F A00H / 3200H

B- Store number 24H in successive memory locations.

<u>Address</u>	<u>Mnemonic</u>	<u>OP Code</u>
2000	LXI D, 3200H	11
2001	Data	00
2002	Data	32
2003	MVI A, 1H	3E
2004	Data	01
2005	MVI B, 2H	06
2006	Data	02
2007	MVI C, 8H	0E
2008	Data	08
2009	STAX D	12
200A	INX D	13
200B	ADD A	87
200C	DCR C	0D
200D	JNZ 2009H	C2
200E	Data	09
200F	Data	20
2010	RST 5	EF

<u>Addr.</u>	<u>Value</u>
3200	01
3201	03
3202	05
3203	07
3204	09
3205	0B
3206	0D
3207	0F

(2)

<u>Addr.</u>	<u>Mnemonic</u>	<u>Opcode</u>
3000	LXI D, 3300 _H	11
3001	Data	00
3002	Data	33
3003	MVI A, 24 _H	3E
3004	Data	24
3005	MVI C, 1E _H	0E
3006	Data	1E
3007	STAX D	12
3008	JNX D	13
3009	DCR C	0D
300A	JNZ 3007 _H	C2

300B

300C

300D

Data

Data

RST 5

07

30

EF

Addr.	Value
3300	24
3301	24
3302	24
3303	24
3304	24
3305	24
3306	24
3307	24
3308	24
3309	24
330A	24
330B	24
330C	24
330D	24
330E	24
330F	24
3310	24
3311	24
3312	24
3313	24
3314	24
3315	24
3316	24
3317	24
3318	24
3319	24
331A	24
331B	24
331C	24
331D	24

Con-10

Sachin
25/08/23