Assembly language program

16 spring 21b

Line	Location	symbol	opcode	Exp	Object code
10	0000	Test	START	0	–
20	0000	FIRST	LDA	#3	032003
30	0003		STX	THREE	132010
40	0006		LDX	=X'00'	072010
50	0009		+LDS	THREE	6f100016
60	000D		ADDR	A,X	9001
70	000f		+STA	RESULT,X	0f900013
80	0013	RESULT	RESW	1	–
90	0016	THREE	RESW	1	–
100	0019		END	FIRST	–
	0019	*	=X'00'	.	00

↳ current address

→ It's a SIC/XE

(i) Location done (ii) object code done

(iii) show all data structure

LITTAB

name	value	address	length
=X'00'	00	0019	1

(hex मा) → (2 ने भाग लगाउने)

SYMTAB

name	Test	FIRST	RESULT	THREE
address	0000	0000	0013	0016

(iv) object program

H^Test^000000^000019

T^0000000^13^032003^132010^072010^6f100016^9001^0f900013

T^000019^01^00

M^00000A^5

M^000016^5

E^000000

16-fall 2b

Line	Location	Symbol	opcode	exp	Object code
10	1000	STRCPY	START	1000	—
20	1000	FIRST	LDX	ZERO	041016
30	1003	MOVECH	LDCH	STR1,X	509 00F
40	1006		STCH	STR2,X	549 0013
50	1009		TIX	ELEVEN	2C1021
60	100C		JLT	MOVECH	381003
70	100F	STR1	BYTE	C'ABCD'	414243 44 (suppose)
80	1013	STR2	RESB	11	—
90	101E	ZERO	WORD	0	000000
100	1021	ELEVEN	WORD	11	00000B
110	1024		END	FIRST	—

(iii) DATA STRUCTURE

a. OPTAB (in 8n)

b. SYMTAB

name	STRCPY	FIRST	MOVECH	STR1	STR2	ZERO	Eleven
value	1000	1000	1003	100F	1013	101E	1021

(iv) Obj. program (file)

H^STRCPY^001000^000024

T^001000^13^041016^---^414243 44

T^00101E^06^000000^00000B

E^001000.

2015 Spring 2b

done in 2016 spring ☺

2015 Fall 21b

2000

Line	Loc	Symbol	opcode	exp	Object code
10	2000	STTD	START	2000	-
20	2000	INPUT	LDA	ZERO	00 2018
30	2003	INLOOP	TD	INDEV	E0 2019
40	2006		JEQ	INLOOP	30 2003
50	2009		STCH	DATA	54 201B
60	200C	OUTLP	TD	OUTDEV	E0 201A
70	200F		JEQ	OUTLP	30 200C
80	2012		LDCH	DATA	50 201B
90	2015		WD	OUTDEV	DC 201B
100	2018	ZERO	BYTE	X'0'	00
110	2019	INDEV	BYTE	X'F1'	F1
120	201A	OUTDEV	BYTE	X'05'	05
130	201B	DATA	RESB	1	-
140	201E		END	INPUT	-

object code file (SYMTAB do on your own)

H^STTD^002000^00001E

T^002000^1B^002018^---^DC201B^00^F1^05

E^002000

~~2015 fall 2b~~ 2014 Spring 2b

Line	Loc	Symbol	opcode	Exp	object code
10	1500	SUM	START	1500	—
20	1500	SUMMA	LDX	ZERO	041547
30	1503		LDA	ZERO	001547
40	001506	LBL	ADD	XXX,X	189512
50	1509		TIX	CNT	2C1544
60	150C		JLT	LBL	381506
70	150F		STA	TOTAL	0C154A
80	1512	XXX	RESW	50 (32 in hex)	—
90	1544	CNT	RESW	1	—
100	1547	ZERO	WORD	0	000000
110	154A	TOTAL	RESW	1	—
120	154D	END	SUMMA		—

Data structure

a. SYMTAB

name	SUM	SUMMA	LBL	XXX	CNT	ZERO	TOTAL
value	1500	1500	1506	1512	1544	1547	154A

Object code file

H^SUM^001500^0000 4D

T^001500^12^041547^---^0C154A

T^001547^03^000000

E^001500

2014 fall 21b

Line	Loc	symbol	opcode	Exp	object code
10	1000	PQR	START	1000	–
20	1000	FIRST	LDA	Alpha	00 101B
30	1003		ADD	INCR	18 1027
40	1006		SUB	ONE	1C 1018
50	1009		STA	BETA	0C 101E
60	100C		LDA	GAMMA	00 1021
70	100F		ADD	INCR	18 1027
80	1012		SUB	ONE	1C 1018
90	1015		STA	DELTA	0C 1024
100	1018	ONE	WORD	1	000001
110	101B	ALPHA	RESW	1	–
120	101E	BETA	RESW	1	–
130	1021	GAMMA	RESW	1	–
140	1024	DELTA	RESW	1	–
150	1027	INCR	RESW	1	–
160	102A		END	FIRST	–

Object code file

H^PQR^001000^00002A

T^001000^1B^001013^---^001018 000001

E^001000

2013 spring : हैं न

2013 fall : done in 2016 fall 21b

2012 fall : हैं न

2012 spring हैं न

2011 fall : हैं न

2010 fall : हैं न

2009 spring : हैं न

2009 fall : हैं न

2008 fall : हैं न

2007 spring : हैं न

2007 fall : हैं न

2006 fall : हैं न

2004 fall : हैं न