

SIC WITH SIC/XE COMPARISON

SUBMITTED BY,

RESHMA T R

ROLL NO 67

CSE S5

SIC					SIC/XE				
LOC	OBJCODE	SOURCE STATEMENT			LOC	OBJCODE	SOURCE STATEMENT		
00000	4B2006		JSUB	FINDAREA	00000	4B2006		JSUB	FINDAREA
00003	4B200F		JSUB	FINDPERIMETER	00003	4B2012		JSUB	FINDPERIMETER
00006	3F2FFD	halt	J	halt	00006	3F2FFD	halt	J	halt
00009	032021	FINDAREA	LDA	BREADTH	00009	010001	FINDAREA	LDA	#1
0000C	232021		MUL	LENGTH	0000C	23201B		MUL	BREADTH
0000F	0F2021		STA	AREA	0000F	23201B		MUL	LENGTH
00012	4F0000		RSUB		00012	0F201B		STA	AREA
					00015	4F0000		RSUB	
00015	032015	FINDPERIMETER	LDA	BREADTH	00018	010000	FINDPERIMETER	LDA	#0
00018	1B2015		ADD	LENGTH	0001B	1B200C		ADD	BREADTH
0001B	232006		MUL	TWO	0001E	1B200C		ADD	LENGTH
0001E	0F2015		STA	PERIMETER	00021	210002		MUL	#2
00021	4F0000		RSUB		00024	0F200C		STA	PERIMETER
					00027	4F0000		RSUB	
00024	000002	TWO	WORD	2	0002A	000005	BREADTH	WORD	5
00027	000000	ZERO	WORD	0	0002D	00000A	LENGTH	WORD	10
0002A	000001	ONE	WORD	1					
0002D	000007	BREADTH	WORD	5					
00030	00000A	LENGTH	WORD	10					
00033	000000	AREA	RESW	1	00030	000000	AREA	RESW	1
00036	000000	PERIMETER	RESW	1	00033	000000	PERIMETER	RESW	1

Comparison

SIC	SIC/XE
Direct addressing is used	Immediate addressing is used EG: LDA #1
Constants declaration: E.g. TWO WORD 2 ZERO WORD 0 ONE WORD 1	Not required as immediate addressing is used.

1.SIC

reshma.asm
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SICTools Machine Debug View

CPU

A 00001E	X 000000	L 000006
S 000000	T 000000	B 000000
SW 000000	F 000000000000	0.0
PC 000006	J (PC)-3	

Start Hex: 3F 20 00
Bin: 00111111 00100000 00000000

Step Opcode: 3C
Bits nixtpe: ni--p-

Disassembly

Address	Mnemonic	OpCode	Comment
00000	4B2006		JSUB (PC)+6 =FINDAREA
00003	4B200F		JSUB (PC)+15 =FINDERI...
00006	3F2FFD	halt	J (PC)-3 =halt
00009	032021	FINDAR_	LDA (PC)+33 =BREADTH
0000C	232021	MUL	(PC)+33 =LENGTH
0000F	0F2021	STA	(PC)+33 =AREA
00012	4F0000	RSUB	
00015	032015	FINDPE_	LDA (PC)+21 =BREADTH
00018	1B2015	ADD	(PC)+21 =LENGTH
0001B	232006	MUL	(PC)+6 =TWO
0001E	0F2015	STA	(PC)+21 =PERIMET...
00021	4F0000	RSUB	
00024	000002	TWO LDA	2 =0x000002
00027	000000	ZERO LDA	0 =0x000000
0002A	000001	ONE LDA	1 =0x000001
0002D	000005	BREADTH	5 =0x000005
00030	00000A	LENGTH	10 =0x00000A
00033	000032	AREA	50 =0x000032
00036	00001E	PERIME_	LDA 30 =0x00001E

Watch

Name	Address	Decimal	Hex	Char
TWO	00024	2	000002	
ZERO	00027	0	000000	
ONE	0002A	1	000001	
BREADTH	0002D	5	000005	
LENGTH	00030	10	00000A	
AREA	00033	50	000032	
PERIMETER	00036	30	00001E	

Memory

Address	Data
00000	4B 20 06 4B 20 0F 3F 2F FD 03 20 21 23 20 21 0F
00010	20 21 4F 00 00 00 03 20 15 18 20 15 23 20 0F 20
00020	15 4F 00 00 00 02 00 00 00 00 00 00 00 00 05
00030	00 00 0A 00 00 32 00 00 00 00 00 00 00 00 00
00040	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00050	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00060	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00070	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00080	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00090	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000A0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000B0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000C0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000D0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000E0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000F0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00100	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00110	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00120	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00130	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00140	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00150	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00160	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00170	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00180	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00190	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
001A0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
001B0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
001C0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
001D0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
001E0	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

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PC

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2.SIC/XE

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