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---SIC Simplified Instructional Computer Assembler---
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-----A simple SIC Assembler Pass1-----
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symbol instructions reference

1	Prog1	START	0x0
2	--	LDA	ZERO
3	--	STA	INDEX
4	LOOP	LDX	INDEX
5	--	LDA	ZERO
6	--	STA	ALPHA, X
7	--	LDA	INDEX
8	--	ADD	THREE
9	--	STA	INDEX
10	--	COMP	K300
11	--	TXD	TWENTY
12	--	JLT	LOOP
13	INDEX	RESW	1
14	ALPHA	RESW	100
15	ZERO	WORD	0
16	K300	WORD	100
17	THREE	WORD	3
18	TWENTY	WORD	20
19	--	End	Prog1

```
loc  symbol instructions reference
```

0	loc	symbol	instructions	reference
0	0x0000	Prog1	START	0x0
1	0x0000	--	LDA	ZERO
2	0x0003	--	STA	INDEX
3	0x0006	LOOP	LDX	INDEX
4	0x0009	--	LDA	ZERO
5	0x000c	--	STA	ALPHA, X
6	0x000f	--	LDA	INDEX
7	0x0012	--	ADD	THREE
8	0x0015	--	STA	INDEX
9	0x0018	--	COMP	K300
10	0x001b	--	TIJ	TWENTY
11	0x001e	--	HLT	LOOP
12	0x0021	INDEX	RESW	1
13	0x0024	ALPHA	RESW	100
14	0x0150	ZERO	WORD	0
15	0x0153	K300	WORD	100
16	0x0156	THREE	WORD	3
17	0x0159	TWENTY	WORD	20
18	0x015c	--	End	Prog1

symbol	loc
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	symbol	loc
0	Prog1	0x0000
1	LOOP	0x0006
2	INDEX	0x0021
3	ALPHA	0x0024
4	ZERO	0x0150
5	K300	0x0153
6	THREE	0x0156
7	TWENTY	0x0159

```
loc  symbol instructions reference  object_code
```

	loc	symbol	instructions	reference	object_code
0	0x0000	Prog1	START	0x0	--
1	0x0000	--	LDA	ZERO	0x000150
2	0x0003	--	STA	INDEX	0x0c0021
3	0x0006	LOOP	LDX	INDEX	0x040021
4	0x0009	--	LDA	ZERO	0x000150
5	0x000c	--	STA	ALPHA, X	0x0c0024
6	0x000f	--	LDA	INDEX	0x000021
7	0x0012	--	ADD	THREE	0x180156
8	0x0015	--	STA	INDEX	0x0c0021
9	0x0018	--	COMP	K300	0x280153
10	0x001b	--	TTX	TWENTY	0x2c0159
11	0x001e	--	JLT	LOOP	0x380006
12	0x0021	INDEX	RESW	1	no obj. code
13	0x0024	ALPHA	RESW	100	no obj. code
14	0x0150	ZERO	WORD	0	0x000000
15	0x0153	K300	WORD	100	0x000064
16	0x0156	THREE	WORD	3	0x000003
17	0x0159	TWENTY	WORD	20	0x000014
18	0x015c	--	End	Prog1	--

```
H/0Prog1.0x000000.0x00015c
t/0x000000.0x21.0x000150.0x0c0021.0x040021.0x000150.0x0c0024.0x000021.0x180156.0x0c0021.0x280153.0x2c0159.0x380006
t/0x000150.0x0c.0x000000.0x000064.0x000003.0x000014
E/0x000000
```

```
PS C:\Users\khale\OneDrive\Desktop\AAST\system proj1\New folder>
```