Two Pass Assembler

Input Program:

	START	501	
	READ	A	
	READ	B	
	MOVER	AREG	A
	ADD	AREG	B
	MOVEM	AREG	C
	PRINT	C	
A	DS	1	
B	DS	1	
C	DS	1	
	END		

2. Intermediate Code (Variant I)

(AD, 01)	(C, 501)	
(IS, 09)	(S, 01)	
(IS, 09)	(S, 02)	
(IS, 04)	(1)	(S, 01)
(IS, 01)	(1)	(S, 02)
(IS, 05)	(1)	(S, 03)
(IS, 10)	(S, 03)	
(DL, 02)	(C, 1)	
(DL, 02)	(C, 1)	
(DL, 02)	(C, 1)	
(AD, 02)		

Pass I Output:

1. OPTAB (Mnemonic Table)

Mnemonic Opcode	Class	Mnemonic Info
READ	IS	(09, 1)
MOVER	IS	(04, 1)
ADD	IS	(01, 1)
MOVEM	IS	(05, 1)
PRINT	IS	(10, 1)
DS	DL	R#7
START	AD	R#11
END	AD	R#9

3. SYMTAB (Symbol Table)

Symbol	Address	Length
A	507	1
B	508	1
C	509	1

Pass II Output:

501	+09	0	507
502	+09	0	508
503	+04	1	507
504	+01	1	508
505	+05	1	509
506	+10	0	509
507			
508			
509			