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 II)

(AD, 01)	(C, 501)	
(IS, 09)	A	
(IS, 09)	B	
(IS, 04)	AREG	A
(IS, 01)	AREG	B
(IS, 05)	AREG	C
(IS, 10)	C	
(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			