

SYSTEM SOFTWARE LAB

SHUAIB ABUBAKKER BAPPUTTY HAJI

TCR18CS056

S5, CSE

ROLL NO. 56

EXPERIMENT 8

AIM: Implement pass one of a two pass assembler.

DESCRIPTION:

i) Two input files are to be provided.

Input.txt – This file contains the assembly program.

1	COPY	START	1000
2	-	LDA	ALPHA
3	-	ADD	ONE
4	-	SUB	TWO
5	-	STA	BETA
6	ALPHA	RESW	1
7	ONE	WORD	2
8	TWO	WORD	5
9	BETA	RESW	1
10	-	END	-

ii. optab.txt

1	LDA	0
2	STA	23
3	ADD	1
4	SUB	5

To compile the program, the file path of the input.txt should be specified inside readme() and optab.txt should be specified in searchOptab().

The C files have the following names: pgm.c

The input files have the following names:

☐ input.txt

☐ optab.txt

The output files have the following names:

☐ symtab.txt This stores the address of variables and labels.

☐ copy.txt This stores the a copy of the input program and address.

OUTPUT SCREENSHOT:

```

shuaib@shuaib-pc:~/Documents/ss/apz$ gcc pgm.c
shuaib@shuaib-pc:~/Documents/ss/apz$ ./a.out
LC::1000
1000  -      LDA      ALPHA
1003  -      ADD      ONE
1006  -      SUB      TWO
1009  -      STA      BETA
1012  ALPHA  RESW     1
1015  ONE    WORD     2
1018  TWO    WORD     5
1021  BETA   RESW     1
1024  -      END      -
Program Length : 24

```

copy.txt

1	COPY	START	1000	
2	1000	-	LDA	ALPHA
3	1003	-	ADD	ONE
4	1006	-	SUB	TWO
5	1009	-	STA	BETA
6	1012	ALPHA	RESW	1
7	1015	ONE	WORD	2
8	1018	TWO	WORD	5
9	1021	BETA	RESW	1
10	1024	-	END	-

symtab.txt

1	10^{12}	ALPHA
2	10^{15}	ONE
3	10^{18}	TWO
4	10^{21}	BETA