# SYSTEM SOFTWARE LAB

SHUAIB ABUBAKKER BAPPUTTY HAJI

TCR18CS056

S5, CSE

**ROLL NO. 56** 

## **EXPERIMENT 8**

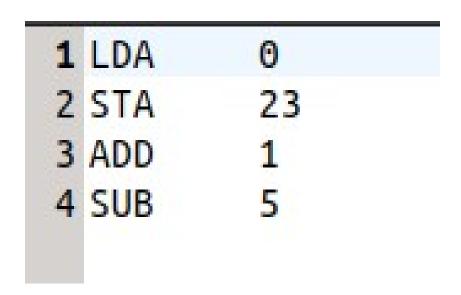
**AIM**: Implement pass one of a two pass assembler.

## **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



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:

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□ optab.txt

The output files have the following names:

- $\ \square$  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
                      TWO
              SUB
1009
              STA
                      BETA
1012 ALPHA
              RESW
                     1
      ONE
1015
              WORD
                      2
                      5
1018
      TWO
              WORD
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	1012	ALPHA

2 1015 ONE

3 1018 TWO

4 1021 BETA