Pass1

Step1:

1. Prepare and initialize all data structures like MOT, POT, ST etc.
2. Open input source file and output intermediate file in respective mode
3. Initialize all pointers (MOTPTR, POTPTR) to point to first entry.
4. Initialize LC=0
5. Set error flag=OFF

Step2:

Read a line of source code

If ‘END’

If errorflag=OFF

Got o pass2

Else

Display- ‘Error ‘. Do reverse of step1 and quit

Else

Goto step3

Step3:

Analyse the statement

Case 1: only comment

- start from SOC and ignore everything till EOC

- goto step 2

Case 2: only label (eg. Loop: )

Check whether label present in ST

If not

-Insert label in ST

-addr= LC

-insert this address against label in ST

Else

Display-‘Duplicate label’ and set error flag=ON

Goto step 2

Case3: only Mnemonic(STOP)

-Search MOT for Mnemonic

-LC=LC+length

-goto step2

Case4: Mnemonic and operand(Load A)

-Search MOT for Mnemonic

-Search operand in ST. If present do nothing else insert operand in ST

-LC=LC+length

-goto step2

Case5: label and Mnemonic(back:stop)

-check whether label present in ST.

If not present

-Insert label in ST

-addr= LC

-insert this address against label in ST

Else

Display-‘Duplicate label’ and set error flag=ON

-Search MOT for mnemonic

-LC=LC+length

-goto step2

Case6:label ,mnemonic and operand(loop:jmp loop)

-check whether label present in ST.

If not present

-Insert label in ST

-addr= LC

-insert this address against label in ST

Else

Display-‘Duplicate label’ and set error flag=ON

-Search MOT for mnemonic

-Search operand in ST

If present do nothing else insert operand in ST

-LC=LC+length

-goto step2

Case7: pseudo opcode

Case - ‘start’ or ‘org’

-search POT for pseudo opcode

- read next operand and initialize LC with value of operand

- goto step2

Case - ‘ENDP’