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SSC

ASSIGNMENT - 2

TITLE :

Design of Pass 2 of two pass assembler

AIM :

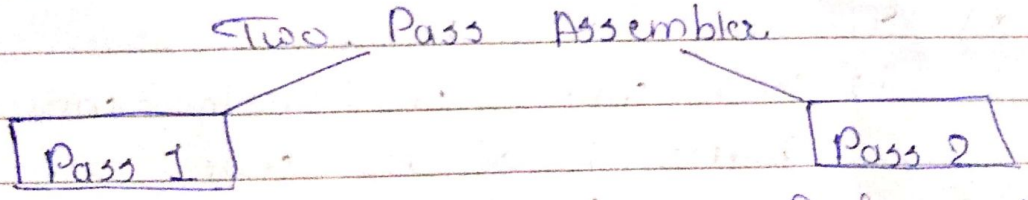
Design suitable data structure and implement pass 2 of two pass assembler pseudo machine.

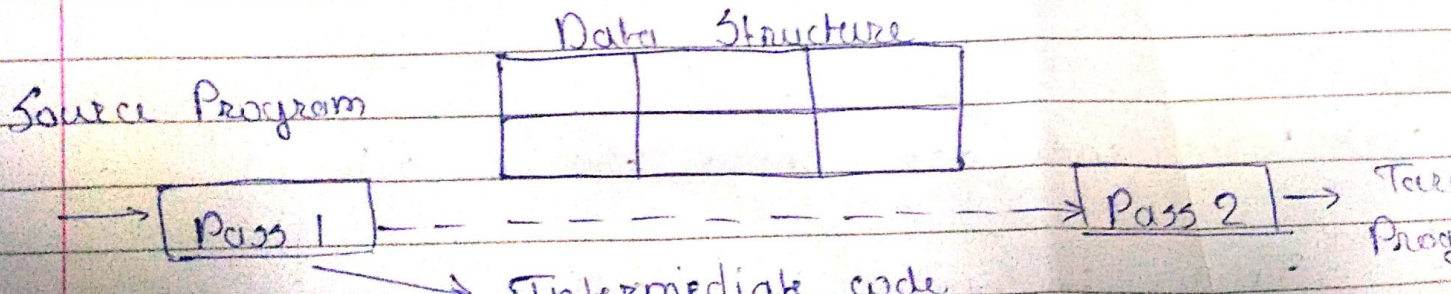
OBJECTIVE :

Design suitable data structure and implement pass 2 of two pass assembler pseudo machine subset should consist of a two instruction from each category and few assembler directives.

THEORY :

Design of a two Pass Assembler





ALGORITHM For Pass II

1) code_area_address = address of code area;
   loc cntr = 0

2) While next statement is not an END statement
   a) clear machine_code_buffer
   b) If a start or origin statement then
      i) loc cntr = value specified in operand field.
      ii) Size = Size of memory area clequired by DC | DS

   c) If an imperative statement
      i) Get operand address from SYMTAB or LITTAB
      ii) Assemble instruction in machine code buffer.
      iii) Size = Size of instruction;

   d) If size != 0 then,
      i) Move content of machine code_buffer to address code_area_address to loccenter.
      ii) Locenter = locenter + Size

3) Write code area input output file

INPUT : Symbol table and Intermediate code generated by Pass I

OUTPUT :

I) final output (After Pass II)

Address (LC value)	Opcode	op and I (value / Address)	operand 2 value / Addres

CONCLUSION :

The function of Pass II in an assembler are studied.

PLATFORM :

LINUX JAVA