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## LP Assignment

31118

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Title: Pass-II of two pass assembler macro-processor

### Problem Statement:

Write a java program for pass-II of a two-pass macro processor. The output of first pass (MNT, MDT & KPDT) should be input for this assignment.

### Objectives:

- 1) Understand the internals of language translators
- 2) Handle tasks like YACC & LEX.
- 3) Understand the operating system internals & functionalities with implementation point of view.

### Software & Hardware:

- i) 64-bit windows OS
- ii) 8-GB RAM & 512GB SSD
- iii) Eclipse 2020 IDE
- iv) i5-8265U @ 1.6GHz.

### Theory:

Macro processing feature allows the programmer to write shorthand version of a program (modular programming). The macro processor replaces each macro invocation with the corresponding sequence of statements.

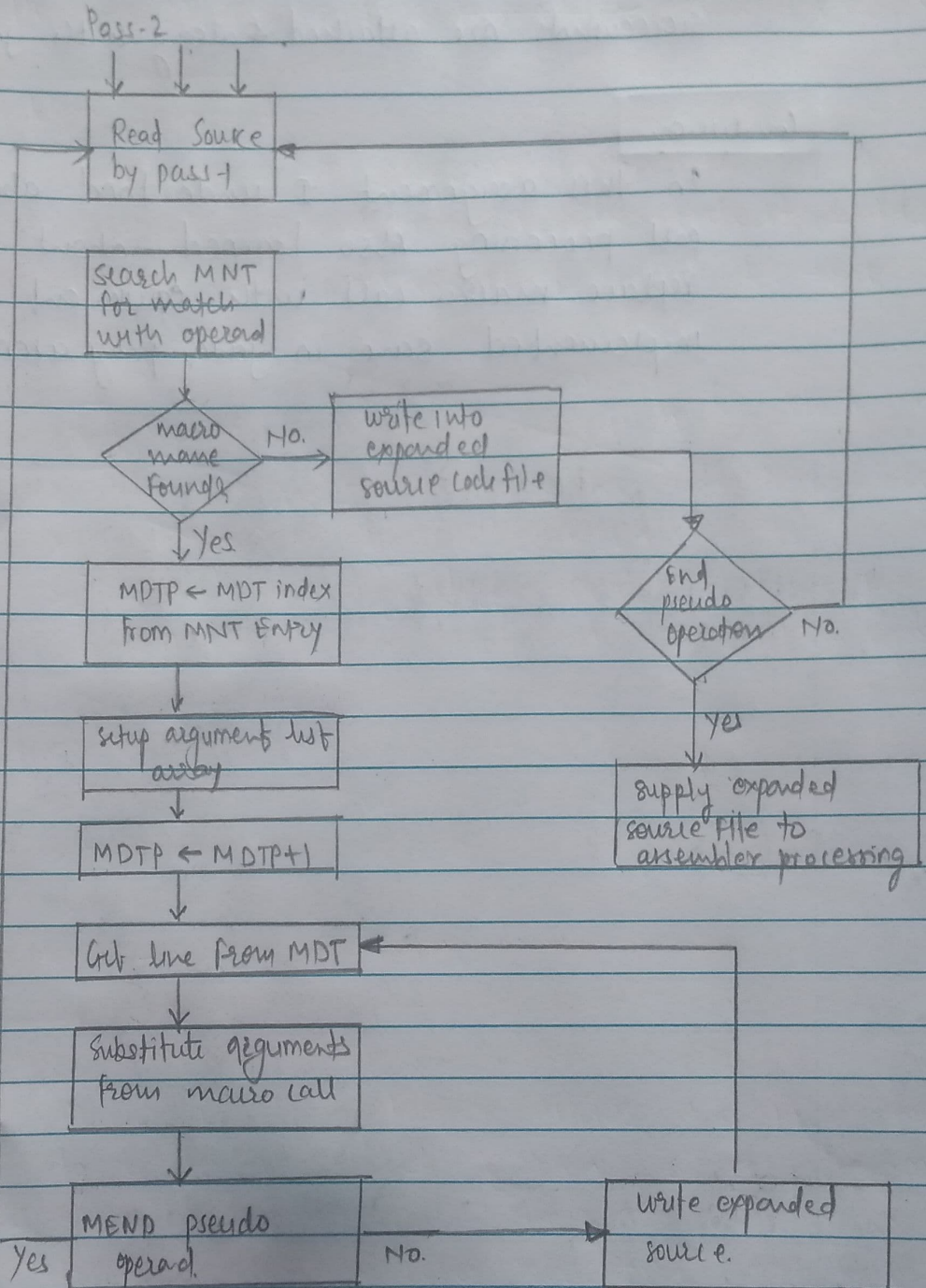


### Tasks done by macro process

- Recognise the macro definitions
- Store the macro definition, recognise macro calls
- Expand macro calls

### Algorithm:

- Scan program for macro calls for each macro call -
  - scan MNT to detect macro name & its address in MDT.
  - Replacement of all formal parameters by actual parameters.
  - Replace macro call by model statements from MDT.





### Testcases:

screenshots are attached & along with java implementation

### Conclusion:

In this assignment I understood about macro call processing. Also learned about how to replace macro call with equivalent code & implemented same in java programming language.