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LP Assignment

Pass-I of macro processor

(3118)

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Title: Pass-I of two pass macro processor

Problem statement:

Design suitable data structures & implement a pass-I of a two-pass macro processor.

Objectives

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

Software & Hardware:

1) 64-bit windows OS
2) 8-GB RAM & 512 GB SSD
3) Eclipse 2020 IDE
4) i5-8265U @ 1.6 GHz.

Learning Outcomes:

1) Identify & create the MDT & MNT.
2) Pass the parameter to the macro.
3) To separate the macro defns from the same code

Theory:

1) Macro processing feature allows the programmes to write short hand version of a program. i.e. modular programming.
2) The macro processor replaces each macro invocation with the corresponding sequence

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of statement ie. macro expansion.

3) Tasks done by the macro processor are as follows:

i) recognize macro definitions.
ii) save macro definitions, recognize macro calls
iii) Expand macro calls.

4) Pass-I tasks

i) Save the macro definition
ii) Perform processing of assembler directives
iii) Create intermediate file.

Algorithm:

i) START.
ii) Read .asm file.
iii) Create MNT & MDT.
iv) Create KPDT
v) Create intermediate code file.
vi) END.

Testcases & Output:

Screenshots are Attached.

Conclusion:

In this assignment I understood the working of pass-I macro processor & it's function. Also implemented the same in java programming language.