PUNE INSTITUTE OF COMPUTER TECHNOLOGY

Department of Computer Engineering

SPOSL

K-1 Batch Roll no-31109

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**Assignment A3**

TITLE : Pass I of a two pass macro processor.

PROBLEM STATEMENT : Design suitable data structures and implement pass-I of a two-pass macro processor using OOP features in Java.

OBJECTIVE :

• Understand the internals of language translators

• Handle tools like LEX and YACC

• Understand the operating system internals and functionalities with implementation point of view

S/W PACKAGES AND HARDWARE APPARATUS USED :

64-bit open source Linux (Fedora 20) Eclipse IDE, JAVA I3 and I5 machines

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 i.e. macro expansion.

Tasks done by the macro processor

• Recognize macro definitions

• Save the macro definition recognize macro calls

• Expand macro calls

Tasks in pass I of a two pass macro processor

• Recognize macro definitions

• Save the macro definition(Create MDT,MNT,ALA)Perform processing of assembler directives(e.g. BYTE, RESW directives can affect address assignment)

• Create intermediate code file.

Steps to do /algorithm:

• Read .asm file.

• Create MNT and MDT.

• Create ALA.

• Create intermediate code file.

Conclusion :

We are able to do :

• Identify and create the MDT, MNT

• Pass the parameters to the macro

• To separate the macro definitions from the source code