

## SP – ASSIGNMENT

### **Assembler that supports Reallocation and Literals Group - 4**



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Aim: Assembler that supports Reallocation and Literals

Contents:	Source Code	-	Assembler.cpp
	Intermediate	-	Intermediate.cpp
	Assembler Listing	-	Final.cpp
	Input File	-	test.txt
	Output File	-	Output.txt

Compilation:

Open terminal in the respective folder.

# Type “g++ assembler.cpp”.

# Type “./a.out {filename}”. i.e filename = test.txt

Working of program

# It inputs the program instructions from “test.txt”.

# It creates an OPTAB (Operation Code Table) using “INS.txt” file .

# Pass 1 :

➤ Generate location counter for each instruction

➤ Stores labels address in symtab

➤ Generates Littab and empties it when “LTORG” or “END” is encountered.

➤ Checks for valid instruction.

➤ Checks for symbol duplication.

➤ Checks for End is specified or not.

# It generates the intermediate file in “intermediate.txt”.

# Pass 2 :

➤ Checks for valid parameters .

➤ Checks for address field overflow .

➤ Assigns different flags {n,i,x,b,p,e}.

➤ Generates object code.

# It shows assembly listing in “Final.txt”.

# It also generates the object program in “Output.txt”.

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Thank You

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