

MNIT Jaipur
Systems Programming Lab.

Batch: All

Due Date: 13/03/2018

Mini Project: Multi-purpose MACRO Pre-Processor

Design a MACRO pre-processor that is suitable for Low-level language (NASM/GAS).

- Prepare and submit a document to define the syntax of your macro. Consider the properties enlisted in point “Design Goal”, and include enough examples to demonstrate all the features.
- Implement the corresponding MACRO pre-processor. Please note that, your document should act as a technical documentation of your MACRO.

Please submit the document and program for PART-1 before first deadline. After that, modify your code and document for PART-2.

Design Goal:

Your designed pre-processor should have important features, like,

- (i) **PART-1**
 - a. Parameter Substitution (positional and parametric, default value)
 - b. Nested MACRO definitions
 - c. Comments
- (ii) **PART-2**
 - a. Single-line/multi-line definitions
 - b. Conditional Macros, **etc.**

Special Notes:

- (i) The program should not be restricted by number of variables, number of nested levels, number of parameters passed etc.
- (ii) Importantly, implement the feature of variable number of parameter passing, where one can pass any number of elements to a MACRO.

Coding Instructions:

- (i) Write your program in either C, or Python.
- (ii) Maintain proper indentation. Un-indented programs will lose marks.
- (iii) Comment your code properly for each important operations. Uncommented programs will lose marks.

Submission Guidelines:

- (i) Your codes will go through plagiarism check. Marks will reduce depending on the amount of similarity with other programs of your peers or on the internet.
- (ii) Submit example programs along with your code. Submit at least one example for each feature in all the three languages.
- (iii) Further code submission guideline will be notified later.
- (iv) Remember, more features, proper implementation, and proper examples will lead to better evaluation.