Artificial Intelligence [CSL7610] Assignment – 2

Submitted by

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QUESTION:

Given a formula in propositional logic, write a code to put appropriate and necessary brackets in the formula following the precedence order of operators. If not possible, output "Not well formed formula".

Note-1: We will use the following characters for different operators:
AND: &
OR : |
NOT : !
IMPLICATION : >
BICONDITIONAL : ~

Note-2: Each propositional symbol will be denoted by a capital letter (e.g., A, B, C, …, etc.).

Note-3: The input formula will never contain the truth values "True" and "False".

Examples:
1. Input:
    P|Q&R~Q>!R
    Output:
    (P|(Q&R))~(Q>(!R))

2. Input:
    A>B|C
    Output:
    A>(B|C)

3. Input:
    A>B>C
    Output:
    Not well formed formula

4. Input:
    P|Q&>R
    Output:
    Not well formed formula