Assignment 1

Name of Subject:	CD (01CE0714)	Name of Faculty:	Prof. Dhara Joshi
Date on Notice Board:	13/08/2024	Branch:	CE
Date of Submission:	30/08/2024	Semester:	7
Name of Topic:	Introduction to Compilers, Lexical Analysis		

1   Explain Phases of Compiler with neat figure for given statement: **c = a + b * RN**
(Where c, a, b are real numbers and RN is your Last two digits of your roll no. For eg. if your roll no is 920107034 then RN = "34")

2   Explain Cousins of Compiler in detail. (With Figure)

3   Answer the following.
    (a) Define the terms : Token, Pattern, Lexeme, Transition Diagram, Finite Automata, prefix, substring, subsequence.
    (b) Differentiate Compiler and Interpreter

4   Construct NFA using Thompson's notation for following regular expression, convert it into DFA using Subset Construction method and minimize DFA (if possible)
    (a) (a|b)*ab
    (b) ab (a|b)*

5   The length of the shortest string NOT in the language (Over sigma = (a,b)) of the following regular expression is b*a*(ab)*b* _____. Also specify Shortest Not acceptable String.

6   Explain Input Buffering Techniques in detail with algorithm and figure

Prof. Shilpa Singhal
Computer Engineering,
MU

Dr. Krunal Vaghela
Head of Department,
Computer Engineering,
MU