

Theory of Computation (TOC)
Programming Practice Exercises
Set-2

For **Section-B**, 3rd Semester B.Tech. IT

Instructor: Prof. Anupam

Date -31.08.2019
Submission Date-08.11.19

Instructions:

1. Submit code/programming solution of any three programs from the following based on your preference. A bonus weightage will be credited if students submitted more than four programs.
2. Individual groups have to submit the solution in the form of hardcopy (Programs, inputs, outputs) as well as softcopy (Code in your preferred language).
3. This will be evaluated after completion of C2 formative assessments.

NOTE: - We will assume each member of the group has a clear concept about the submitted code of the programs.

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1. Write a computer program which reads the rules of Context-free Grammar from a file and remove null production from given grammar.
 2. Write a computer program which reads the rules of Context-free Grammar from a file and determines whether a given string is acceptable by the Context-free grammar.
 3. Write a computer program which reads the rules of Context-free Grammar from a file and convert it into Chomsky normal form.
 4. Write a computer program to simulate Push-down Automata.
 5. Write a computer program to simulate a Universal Turing machine.