

Course Title: Theory of Computation

Course Code: 12IS43

Introduction to Theory of Computation (ToC) course is offered as a core course for 3rd semester students.

Learning about automata with pen and paper can be difficult, time consuming and error-prone. JFLAP program makes it possible to create and simulate automata. With JFLAP student can create automata of different types and it is easy to change them if required. JFLAP supports creation of DFA and NFA, Regular Expressions, PDA, Turing Machines, Grammars and more.

Given JFLAP files for all examples that a student can run using open – source software to simulate and show how they work and to verify solutions to problems. This has enabled them to use modern engineering tools.

Setup JFLAP is available from the homepage: (www.JFLAP.org). From there press “Get FLAP” and follow the instructions. It is noticed that JFLAP have a .JAR extension. This means that there is a need for Java to run JFLAP. With Java correctly installed it can simply select the program to run it. It is also possible to use a command console run it from the files current directory with, Java -jar JFLAP.jar.

Students get deeper insight into the course by the means of following:

JFLAP - An Interactive Formal Languages and Automata Package Rodger, Finley, ISBN: 0763738344

JFLAP assignments for JFLAP - An Interactive Formal Languages and Automata Package
<http://www.cs.duke.edu/csed/jflap/jflapbook/files/>

Getting Started with JFLAP, Colorado State University

<http://www.cs.colostate.edu/~massey/Teaching/cs301/RestrictedAccess/JFLAP/gettingstarted.html>

Given debugging exercises as assignment where the student debugs and fixes an incorrect or incomplete solution to really understand how things work.

Along with the abovementioned methods, students are given with NPTEL materials, notes from various standard universities to understand the concepts in depth and helped them in solving model and previous year question papers.

The concepts studied and the objective questions solved have helped the students to apply the skills and logic in their self-study components. Self-study presentation has helped the students to improve their communication skills.