

ToC All Tasks

In this semester, there will be exams and JFLAP tasks within the scope of the ToC course. The student is expected to complete all tasks in time, and for each one, to prepare a YouTube video and explain these tasks in application. Video presentation for each task should not exceed 2 minutes. In all of the video presentations, the student is required to make a video recording so that the identification can be made. In the video recording, the student should first introduce himself, then quickly tell the title of the project and his/her problem. He/she should then run the application and comment on the results in a few sentences.

Task 1. Its DFA solution should plan and explain the solution of any regular language language problem that includes at least 5 states.

Task 2. Its NFA solution should plan and explain the solution to any regular language language problem that includes at least 5 states.

Task 3. The solution that converts the $aba^*(b+a)^*aa^*b^*$ expression to its equivalent DFA structure should be explained.

Task 4. A problem and its Context Free Grammar with at least 5 rules should be planned and explained in detail.

Task 5. A problem and its deterministic Pushdown Automaton with 3 states should be planned and explained in detail.

Task 6. The student should choose a non-context free language problem and prove that it is not an element of CFL using Pumping Lemma.

Task 7. The student should prepare a Turing machine that accept ambncmn language with only one tape. Student can add new symbols to Γ alphabet.

Students can ask questions about homework just by attending live classes. Those who cannot attend the lesson because their lessons conflict, can write their message to the channel about the lesson via MS Teams. Emails about assignments sent outside of MS Teams will not be answered.