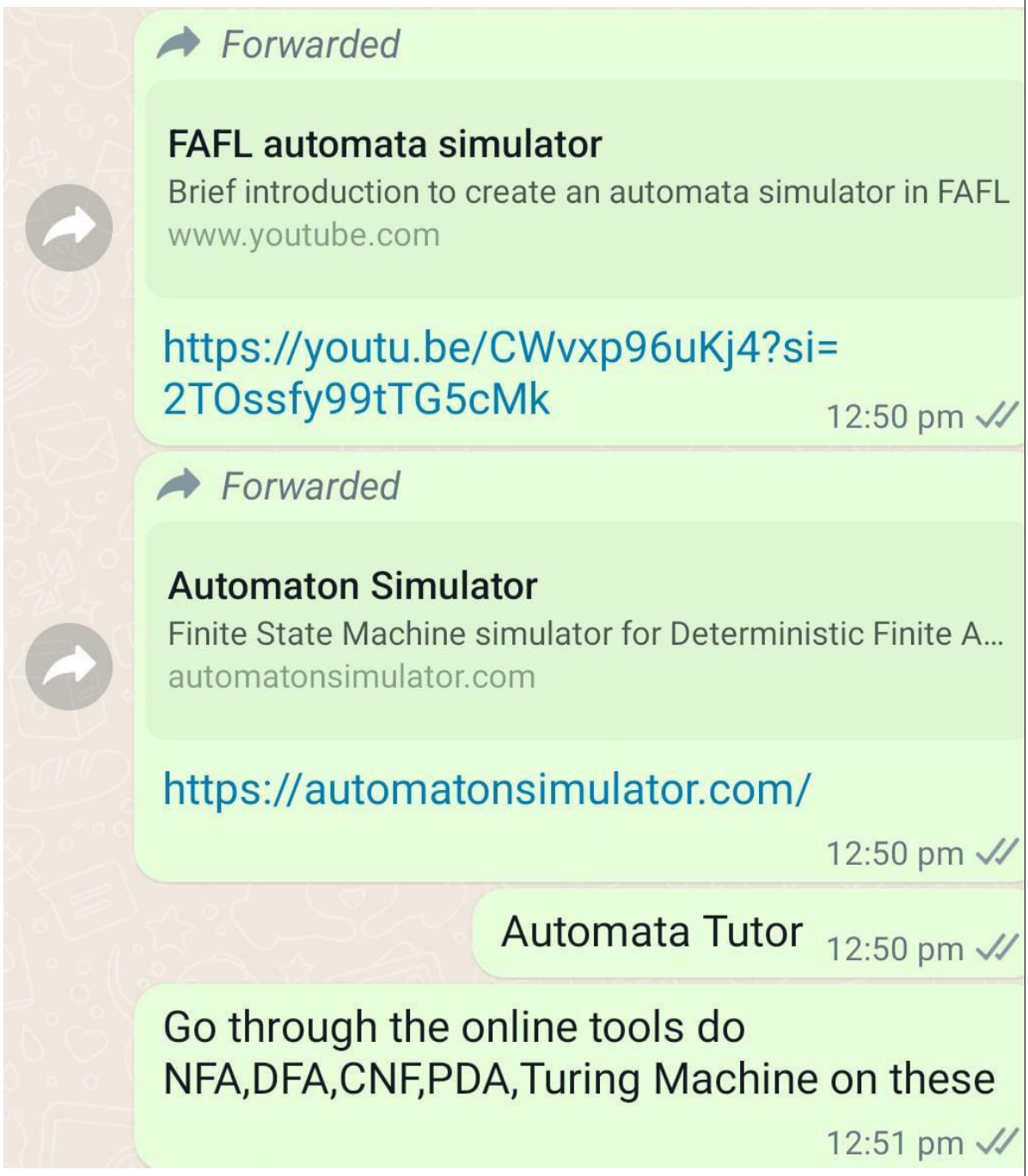
Flip Class Activity Report

ACTIVITY REPORT	
Academic Year	2023-24
Activity Title	Flip class
Course	CST301 Formal Languages and Automata Theory
Brief Description	The activity has been done to analyse the self learning capability of students
Intended students	Semester 5 CSE students
Prepared by	Ms.Jomy George
Date	4-12-2023

The following topics were given for preparation:

- Automata Simulator
- Automata Tutor
  How this is used to simulate NFA, DFA, PDA, Chomsky Normal Form

Classroom Assessment Methodology (TLP) followed:
During the class students were asked to submit a presentation on the topic shared .There were total 54 students participated in this Activity .The flip class was conducted to check the knowledge ,analysis and self-learning capability of the students to solve the problem given 1. Explain a formal representation of a given regular language as a finite state automaton, regular grammar, regular expression and Myhill-Nerode relation. 2. [Cognitive knowledge level: Understand]. 3. Design a Pushdown Automaton and a Context-Free Grammar for a given context-free language. [Cognitive knowledge level : Apply].


Forwarded
FAFL automata simulator
Brief introduction to create an automata simulator in FAFL
www.youtube.com
https://youtu.be/CWvxp96uKj4?si=2TOssfy99tTG5cMk
12:50 pm
Forwarded
Automaton Simulator
Finite State Machine simulator for Deterministic Finite A...
automatonsimulator.com
https://automatonsimulator.com/
12:50 pm
Automata Tutor
12:50 pm
Go through the online tools do NFA,DFA,CNF,PDA,Turing Machine on these
12:51 pm

Automata Tutor v3

Solve Grammar to CNF (Comsky Normalform) problem

Problem

For the grammar G with the productions:

S -> a S b | x | S S

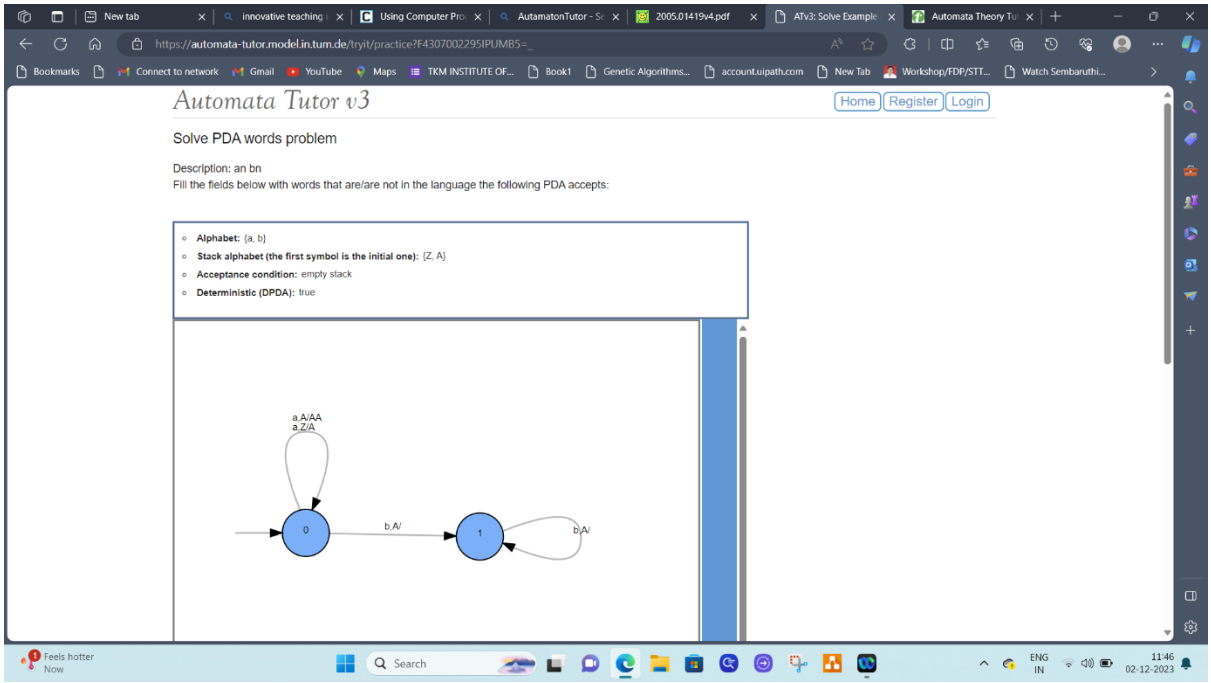
Give a CNF G' such that L(G') = L(G) \ {ε}
(remember: CNF allows only productions with the form "X -> Y Z" or "X -> a")

HELP: Grammar Syntax +

```
S->DE
S->x
S->SS
D->CS
E->b
C->a
```

Submit

Grade: 10/10



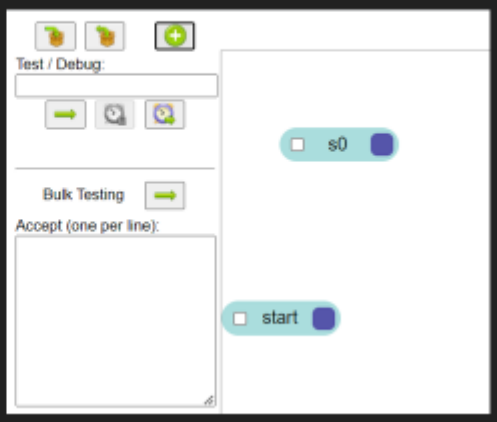
AutomatonSimulator: DFA

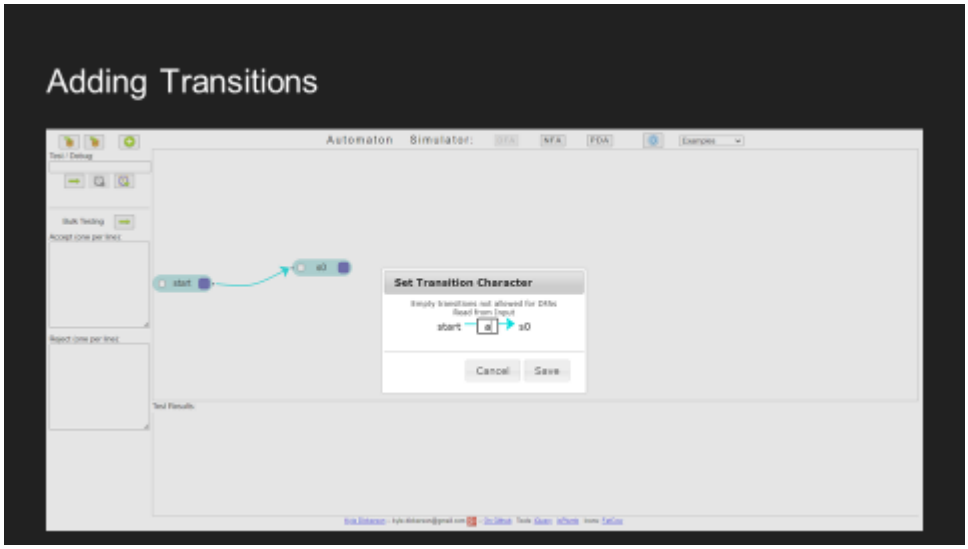
https://automatonsimulator.com/

UI

Adding States

Add new state my pressing the plus icon.





Conclusion
The students had a good discussion regarding the topics and attained PO1 ,PO5 and 12 for the given topic.