

# INTERACTIVE STORY COMPILER

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## INTRODUCTION

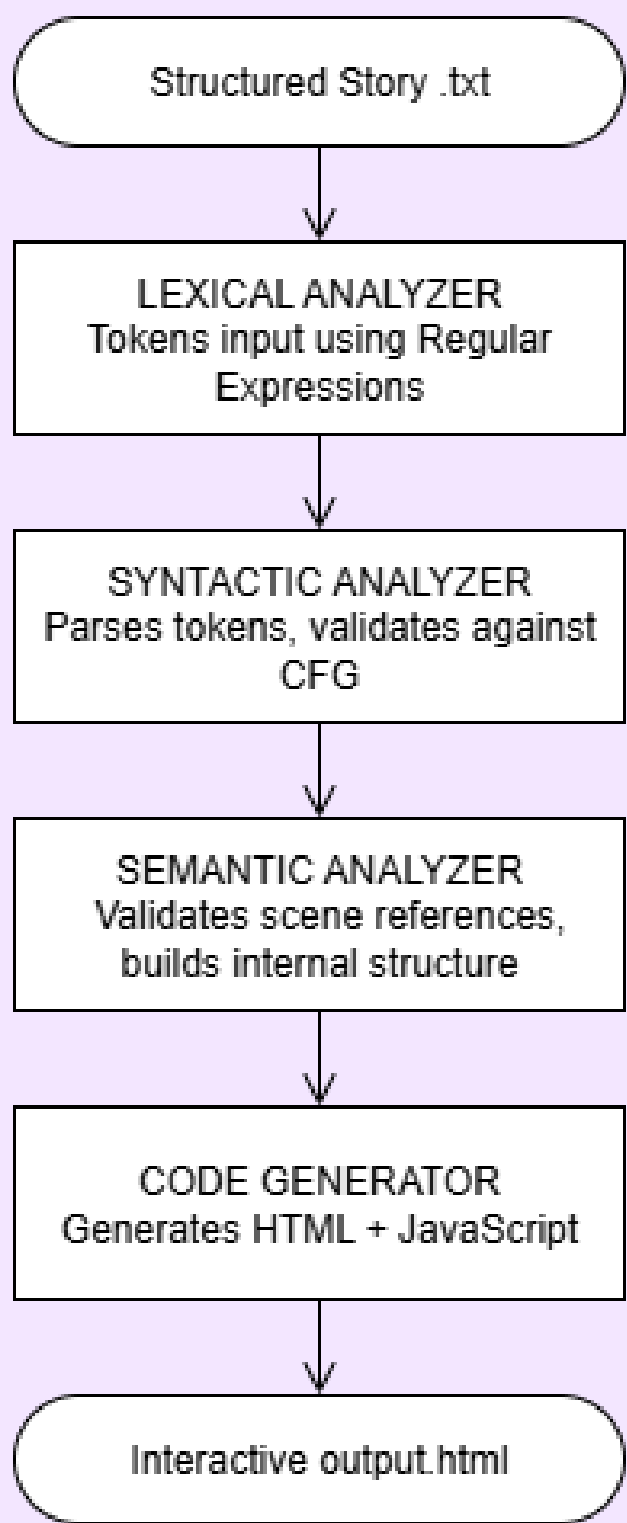
This project introduces an Interactive Story Compiler, an educational tool that transforms structured natural language into engaging, browser-based, interactive narratives. It makes abstract computation theory visually tangible

## GOAL

Design and implement a basic compiler that:

- Parses structured natural language stories.
- Generates interactive HTML 'choose-your-own-adventure' experiences.
- Visually demonstrates core compiler principles, FSM behavior, and CFG application."

## PROPOSED SOLUTION



*From text to interactive web*

```
scene: START
text: You wake up in a dark cave.
choice: Go left -> DRAGON
choice: Go right -> EXIT
```

## EXPERIMENTS

- Validate scene parsing
- Test transitions logic
- Ensure correct HTML generation

The input structure mirrors a context-free grammar, where non-terminals are scenes and production rules are user decisions.

## EXPECTED RESULTS

- Generate standalone HTML narratives
- Parse and validate simple branching stories
- Demonstrate FSM and CFG visually

## CONCLUSIONS

This Interactive Story Compiler effectively bridges the gap between abstract computational theory and practical application. It serves as an intuitive educational tool, reinforcing fundamental concepts of formal grammars, parsing, and machine logic through creative and interactive storytelling.

## REFERENCES

- Twine. <https://twinery.org>
- Ink. <https://www.inklestudios.com/ink>
- Sierra, C. A. (2025). Slides from Computer Science III: Theory of Computation. Universidad Distrital.



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