Introduction to Flex and Bison

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Overview

- Motivation

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- Lexical analysis using Flex

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- Live Demo

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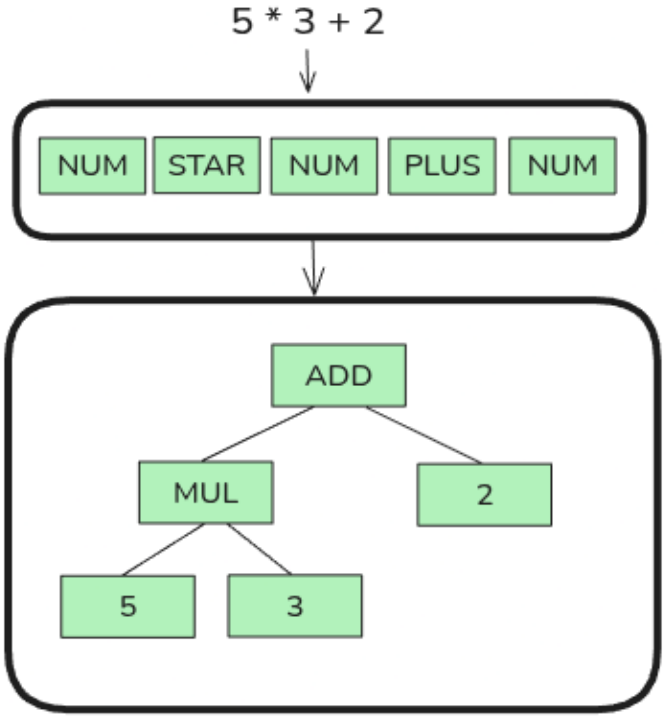

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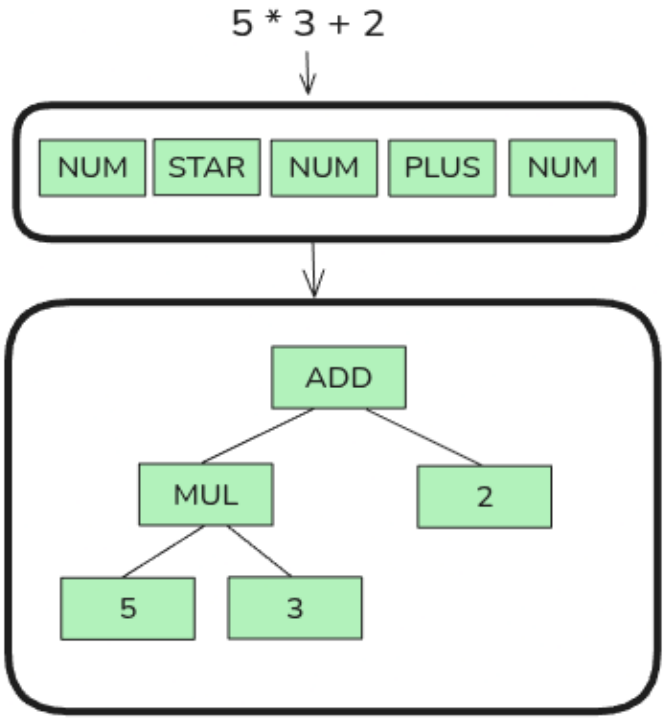

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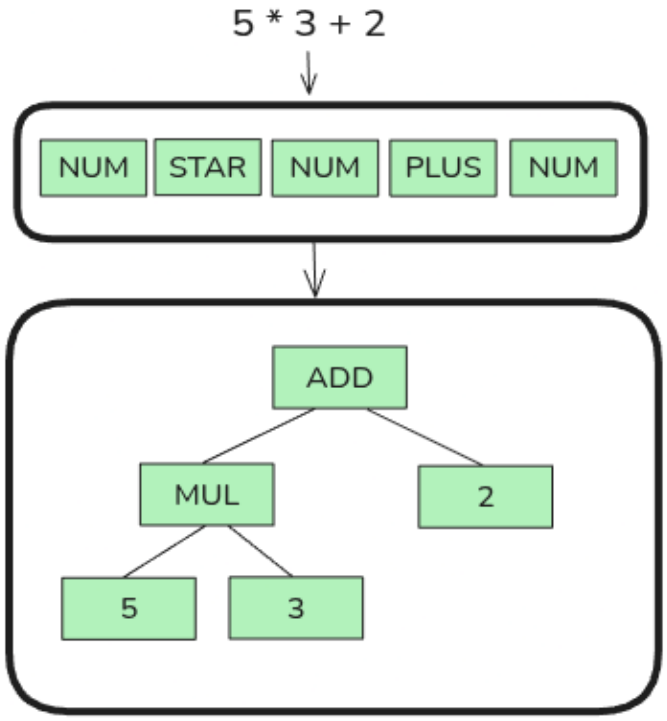
- **Lexical** and **syntactical** analysis phases
- Repetitive and error-prone code
- We can use **automated tools**!



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[0-9]+      { return NUMBER; }
if          { return IF; }
[a-zA-Z]+   { return IDENT; }
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- Conflicts are resolved using **longest match** and **rule ordering**

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```
%token NUM    // token declaration
%%
// nt : rule {action}
expr : expr '+' term   { $$ = $1 + $3; }
     | expr '-' term   { $$ = $1 - $3; }
     | term;
term : NUM;
%%
```

Live Demo

- We can use Flex and Bison together
- Let see how to do it in a simple language