Flex

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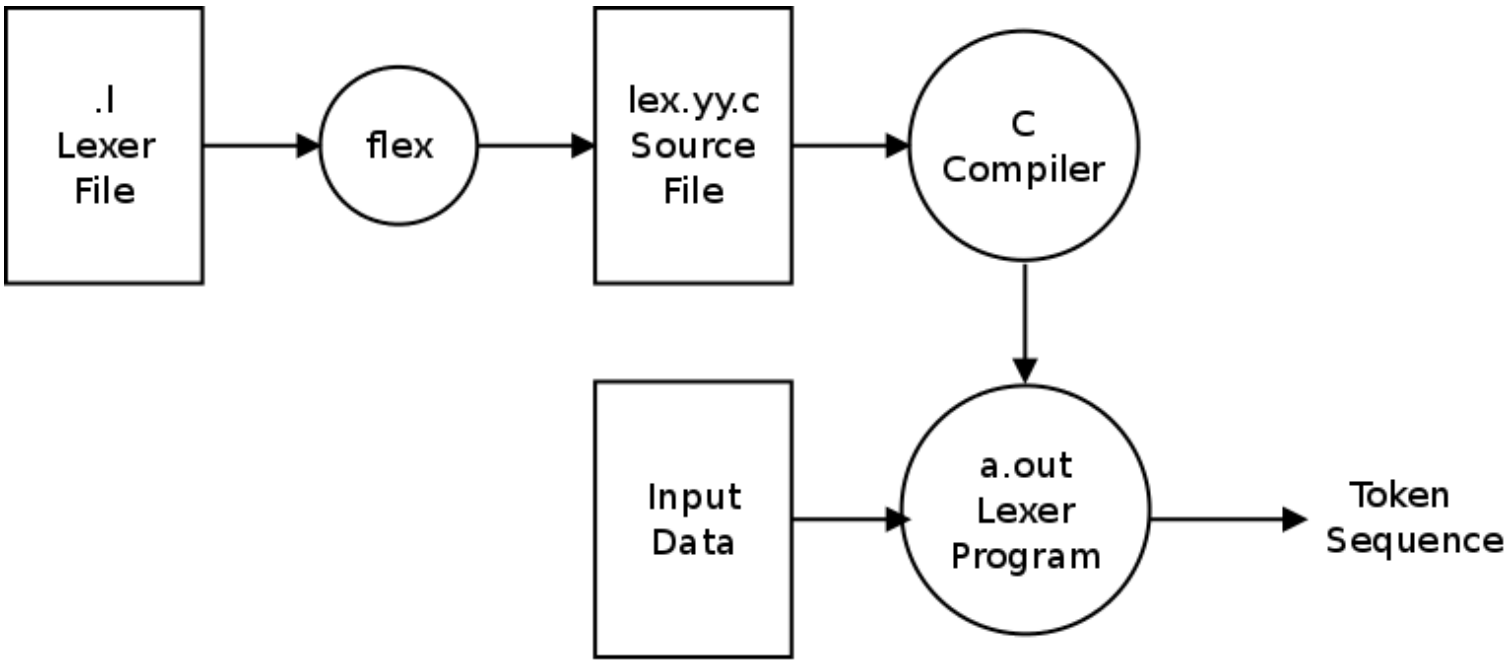
Administrativia

- 6 Assignments (40% of course grade)
  - Assignment 1 : 19 points
  - Assignment 2 : 9 points
  - Assignment 3 : 19 points
  - Assignment 4 : 9 points
  - Assignment 5 : 19 points
  - Assignment 6 : 19 points
  - **Total:** 94 points
- Mini-assignments in Lab session: 6 points

Flex

- Flex stands for *Fast Lexical Analyzer generator*
- Tool for generating lexical analyzers
- Manual: `https://www.cs.virginia.edu/~cr4bd/flex-manual/index.html`



Format of the input file

```
definitions
%%
rules
%%
user code
```

Definitions section

Declarations of simple name definitions to simplify the scanner specification.

They are of the form `name definition` *unintended*.

For example,

- `DIGIT [0-9]`
- `ID [a-z][a-z0-9]*`

Rules section

Defines RE patterns and actions to take when those patterns are encountered.

They are of the form `pattern action` *unintended*.

Actions can be arbitrary C statements. If the action is empty, then the input text that matched the pattern are discarded.

Patterns are regular expressions. See `https://www.cs.virginia.edu/~cr4bd/flex-manual/Patterns.html`.

User code section

Any code copied verbatim to the output.

Values available to the user

`char *yytext`

holds the text of the current token. NULL terminated. It may be modified but not lengthened (you cannot append characters to the end).

`int yyleng`

holds the length of the current token.

Demos