

Team 12 - ARROW

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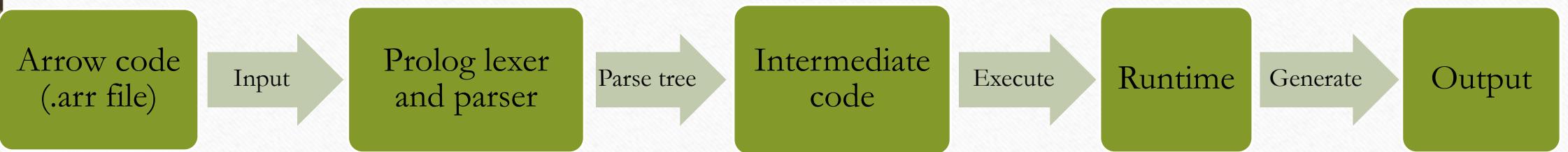
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Key features of the language

- Imperative language - Inspiration from C language
- Statically typed
- Data types – int, float, bool, string
- Decision control statement – if and else
- Looping construct – while
- Developed completely in Prolog.

Language Design Flow



Lexical Analyzer and Parser

- Written in Prolog DCG.
- Lexer generates a list of tokens eliminating spaces, tabs and new lines.
- Parser generates a parse tree using the grammar of the language.
- Parses in a top-down fashion.

Intermediate Code

- Parse tree is the intermediate code.
- Output to a separate file.
- Easily generated using DCG.
- Used by the compiler to evaluate the code.

Runtime

- Evaluated using Prolog DCG.
- Environment is a list of tuples.
- Used reduction rules to evaluate the code.