ART
Animation Rendering Tool

Programming Languages and Translators

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Why would you use ART?

Animations are great for Everything!

➢ Education
➢ Simulations for research
➢ FUN!

Examples:

- Animate the planetary system
- Simulate properties of physics
- Draw simple drawings to demonstrate algorithms
How does ART work?

source_file.art

1. Lexer
   → Token ID
2. Parser
   → Syntax analysis using grammar
3. AST
4. Semantics
   → Semantic analysis
5. SAST
6. Code Gen
   → LLVM Byte Code .bc

Executable Program

Assembly Linking (static)

gcc

Assembly file for target device
How did we work on it?

<table>
<thead>
<tr>
<th>Date</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 28</td>
<td>Project Proposal completed</td>
</tr>
<tr>
<td>October 8</td>
<td>First commit/development architecture setup</td>
</tr>
<tr>
<td>October 25</td>
<td>Language reference Manual completed</td>
</tr>
<tr>
<td>October 30</td>
<td>Lexer and parser completed</td>
</tr>
<tr>
<td>November 13</td>
<td>Code generation partially completed</td>
</tr>
<tr>
<td>November 15</td>
<td>Hello world code compiles</td>
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<tr>
<td>December 17</td>
<td>Semantics checking complete</td>
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<tr>
<td>December 18</td>
<td>Code generation fully completed.</td>
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<tr>
<td>December 18</td>
<td>Test suite (comprehensive) complete</td>
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<tr>
<td>December 19</td>
<td>Final report complete</td>
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- **Workflow:**
  - GitHub Repository

- **Preprocessing:**
  - Ocaml 4.02.3

- **Compilation:**
  - LLVM 3.8

- **Dev Tools:**
  - Sublime Text
  - Vim
DEMO TIME!