GLASS

Milestone Five Progress Report

Team: Tommy Galletta, Alexander Lockard

Faculty Advisor: Dr. Stansifer

First Release!

- The first publicly available version of our tool is available on the download page of our project website

Milestone Five Task Matrix

Task	Completion %	Tommy	Xander	Todo
Implement GUI for main system interactions	90%	0%	90%	Cleanup code and add unit tests
Implement script interpretation system	90%	80%	10%	Add additional functionalities, polish existing features
Update and extend documentation on website as appropriate	80%	40%	40%	Continue refining and extending documentation
Create presentation poster	100%	70%	30%	N/A

Task Discussion

Implement script interpretation system

- Lexer, parser, and interpreter for script implemented with features including (but not limited to):
  - Integer, boolean, and String data types
  - If-else statements
  - Variable declaration and assignment
  - “Production functions”

```
name Expression_Syntax

tokens {
    active {
        ADDOP : /@|~/
        MULOP : /%|&/
        LPAREN : /\</
        RPAREN : /\>/
        NUMBER : /0|[1-9][0-9]*/
    }

    ignored COMMENT : /#.*(\r\n)?/
}

productions {
    [EX_1]  EXPRESSION -> EXPRESSION ADDOP TERM
    [EX_2]  => TERM.

    [TERM_1] TERM -> TERM MULOP FACTOR
    [TERM_2] => FACTOR.

    [FAC_1] FACTOR -> NUMBER
    [FAC_2] => LPAREN EXPRESSION RPAREN.
}
<10&9 @ 15%3 ~ 2> % 3
# the above is the same as (10*9 + 15/3 - 2) / 3
```

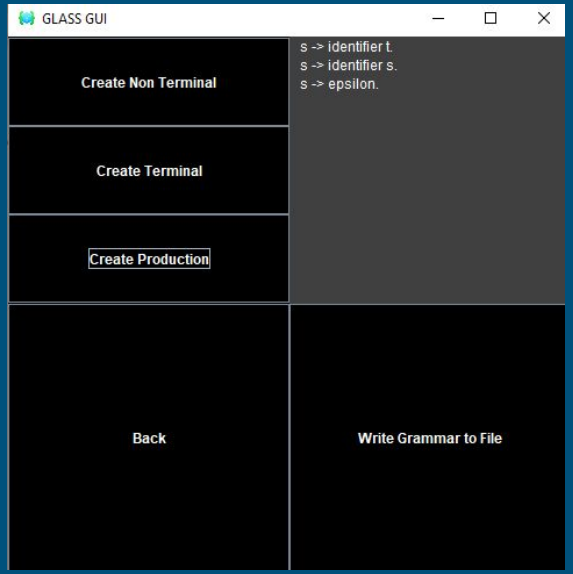
```
print("Final result:", traverse());

production EX_1 {
    x = child(0);
    if (child(1) == "@") { x = x + child(2); }
    else { x = x - child(2); }
    return x;
}

production TERM_1 {
    x = child(0);
    if (child(1) == "&") { x = x * child(2); }
    else { x = x / child(2); }
    return x;
}

production EX_2 { return child(0); }
production TERM_2 { return child(0); }
production FAC_1 { return child(0); }
production FAC_2 { return child(1); }
```

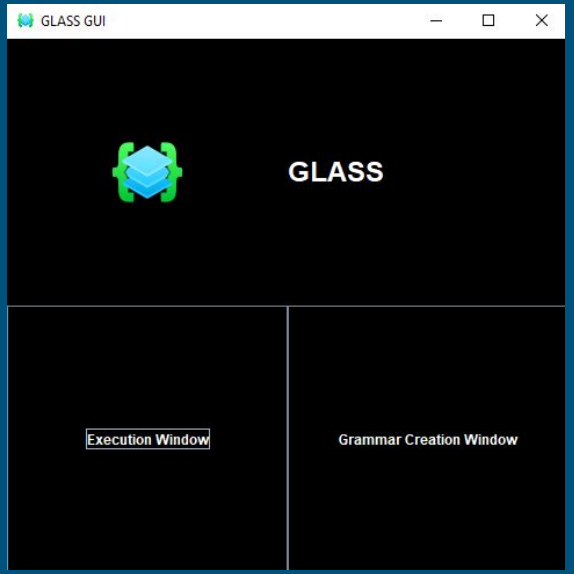
```
INFO: Execution complete.
Final result: 31
```

Task Discussion

GUI for main system interactions

- All windows have been implemented
- Users can define a grammar, save it to a file, and execute the entire framework from the GUI





Task Discussion

Presentation poster

- Presentation poster has been created and can be found on project website

Documentation

- Updates have been made to documentation to further document previously existing features, as well as to document newly implemented features

Demo Time!

Milestone Six Plan

Task	Tommy	Xander
Polish implemented features	50%	50%
Finalize user documentation	80%	20%
Conduct evaluation and analyze results	65%	35%
Test/demo of the entire system	0%	100%
Create user/developer manual	20%	80%
Create demo video	100%	0%

Discussion of Planned Tasks

Polish implemented features

- A pass of all existing features will be performed to ensure all existing features are performing as expected.

Finalize user documentation

- Web-hosted user documentation will be finalized and will include all relevant information required to use the tool effectively.

Discussion of Planned Tasks (cont.)

Conduct evaluation and analyze results

- Contact a variety of computer science students and have them perform a series of tasks using our tools. We will record the time it takes them to complete the tasks, along with any points of confusion they happen across while completing the tasks.
- These users will then complete a small survey about their experience using the tool

Test/demo of the entire system

- Prepare a demonstration of an “end-to-end” usage of our tool, including creating a syntax definition, preparing a source file, and writing a small script file to interpret the parsed source.

Discussion of Planned Tasks (cont.)

Create user/developer manual

- Create a PDF document containing information about this tool that is relevant for those who wish to use or expand on our tool.

Create demo video

- Create a video demonstrating how the tool is used and how it can be used in practice.

Faculty Advisor Feedback

- The GUI is a unique feature to the project, potentially the “number one” unique feature.
- While our advisor had some comments about how it may be a “hard ask” for the user to learn a new scripting language for our tool in particular, he did appreciate the fact that our scripting language was “Java-like”.
- Advisor further emphasized the importance of attempting to use our tool for the tasks we originally had in mind when creating it.

Questions?