



GLASS

Final Report

Team:

Tommy Galletta
Alexander Lockard

Faculty Advisor:

Dr. Stansifer



Final Release

The final version of our tool for this project, version 0.3.0a, is available on the download page of our [project website](#)



Milestone Six Task Matrix

Task	Completion %	Tommy	Xander
Polish implemented features	90%	45%	45%
Finalize user documentation	100%	80%	20%
Conduct evaluation and analyze results	100%	65%	35%
Test/demo of the entire system	100%	0%	100%
Create user/developer manual	100%	50%	50%
Create demo video	100%	100%	0%



Task Discussion

Polish implemented features

- Added several new features to the interpretation script system
- Reworked project website
- Many changes made and bugs fixed both for main system and GUI



Task Discussion (cont.)

Finalize user documentation

- Documentation updated to reflect all of the new additions and changes to GLASS
 - Documentation now contains over 20 individual subsections!
- Documentation for older versions of GLASS moved to an archive accessible on the project website



Task Discussion (cont.)

Conduct evaluation and analyze results

- Conducted user demos with 7 Florida Tech students of varying academic backgrounds
 - Each user performed a series of tasks, and the results were recorded and analyzed



Thank you to our testers!

- Erin Brasher
- Emma Conti
- Christopher DeMuro
- Evan Gunderson
- Christopher Hinton
- Ty Mercer
- Timothy Shane

You all helped to make this tool the best it can be!



Evaluation Results

- Syntax definitions, interpretation scripts, and documentation were all rated approximately a 9/10
- GUI scored 5.3/10, mostly due to uncaught bugs
- Overall rating for the tool was an 8/10



Task Discussion (cont.)

Create user/developer manual

- Created developer manual with information about how to extend the GLASS system

Create demo video

- Created a video showcasing the main features of GLASS and how to make an example syntax definition and interpretation script



Task Discussion (cont.)

Test/demo of the entire system

- Created demo of an example syntax definition, an example source file, and an example interpretation script

Speaking of which...

Demo Time!





Bonus: Practical Application

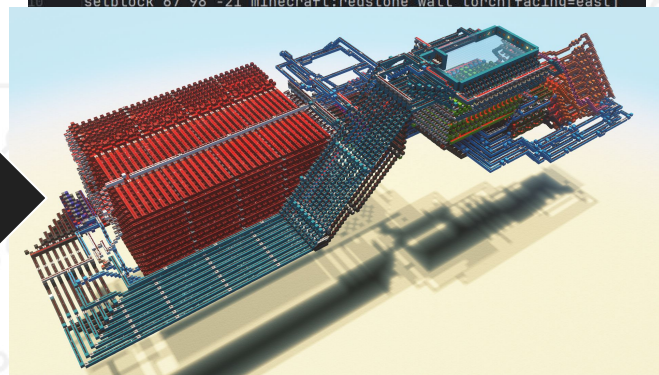
```
1  load ram0 reg0
2  add reg2 reg1
3  cinc reg3
4  dec reg0
5  jc 01h
6  load ram1 reg1
7  store reg2 ram2
8  store reg3 ram3
9  halt
```

```
John Monson/Assembly
times {
  title {
    load - /load/
    store - /store/
    addop - /addop/
    shop - /shop/
    subop - /subop/
    cincop - /cincop/
    decop - /decop/
    jumpop - /jumpop/
    halt - /halt/
  }
  reg_addr - /reg[0-15]/
  ram_addr - /ram[0-15]/
  mem_addr - /mem[0-15]/
}

[as] STATEMENT - LOAD_STATEMENT
[is] - STORE_STATEMENT
[as] - ADD_STATEMENT
[as] - INC_STATEMENT
[as] - SUBTRACT_STATEMENT
[as] - DEC_STATEMENT
[as] - JUMP_STATEMENT
[as] - HALT_STATEMENT

[load] LOAD_STATEMENT - load reg_addr
[store] STORE_STATEMENT - store reg_addr mem_addr
[add] ADD_STATEMENT - addop reg_addr reg_addr
[inc] INC_STATEMENT - incop reg_addr
[sub] SUBTRACT_STATEMENT - subop reg_addr reg_addr
[dec] DEC_STATEMENT - decop reg_addr
[jump] JUMP_STATEMENT - jumpop mem_addr
[halt] HALT_STATEMENT - halt
```

```
1  fill 71 98 -3 9 110 -33 air replace minecraft:redstone_wall_torch
2  setblock 71 98 -9 minecraft:redstone_wall_torch[facing=east]
3  setblock 69 98 -7 minecraft:redstone_wall_torch[facing=east]
4  setblock 69 98 -19 minecraft:redstone_wall_torch[facing=east]
5  setblock 69 98 -25 minecraft:redstone_wall_torch[facing=east]
6  setblock 67 98 -7 minecraft:redstone_wall_torch[facing=east]
7  setblock 67 98 -15 minecraft:redstone_wall_torch[facing=east]
8  setblock 67 98 -17 minecraft:redstone_wall_torch[facing=east]
9  setblock 67 98 -19 minecraft:redstone_wall_torch[facing=east]
10 setblock 67 98 -21 minecraft:redstone_wall_torch[facing=east]
```





Lessons Learned

- Importance of an agile development process
- Importance of code modularity
- Understanding project scope
- Importance of user feedback
- Version control and task accountability



Faculty Advisor Feedback

- The amount of flexibility the interpretation script provides is good
- The project website looks great
- Happy to see original use cases being tackled
- Happy with our commitment to the project overall

Questions?

