

JSH \$

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Building

1. Un-tar Source Code or acquire via git:

`git clone https://github.com/jeanralphaviles/jsh.git`

2. Run: `cd jsh/`

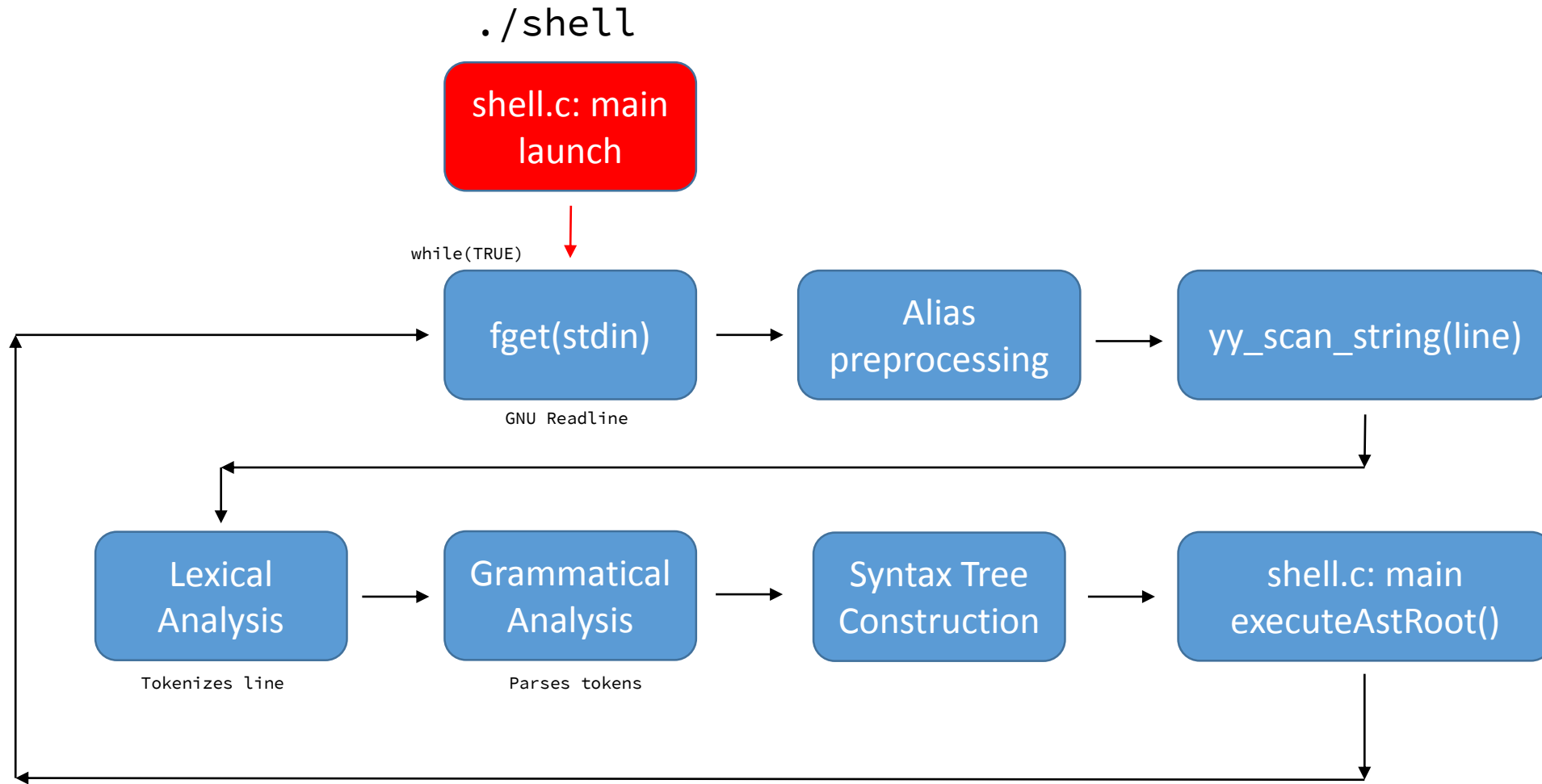
3. Build: `sh configure.sh`

4. Run via: `./shell`

5. Brace yourself

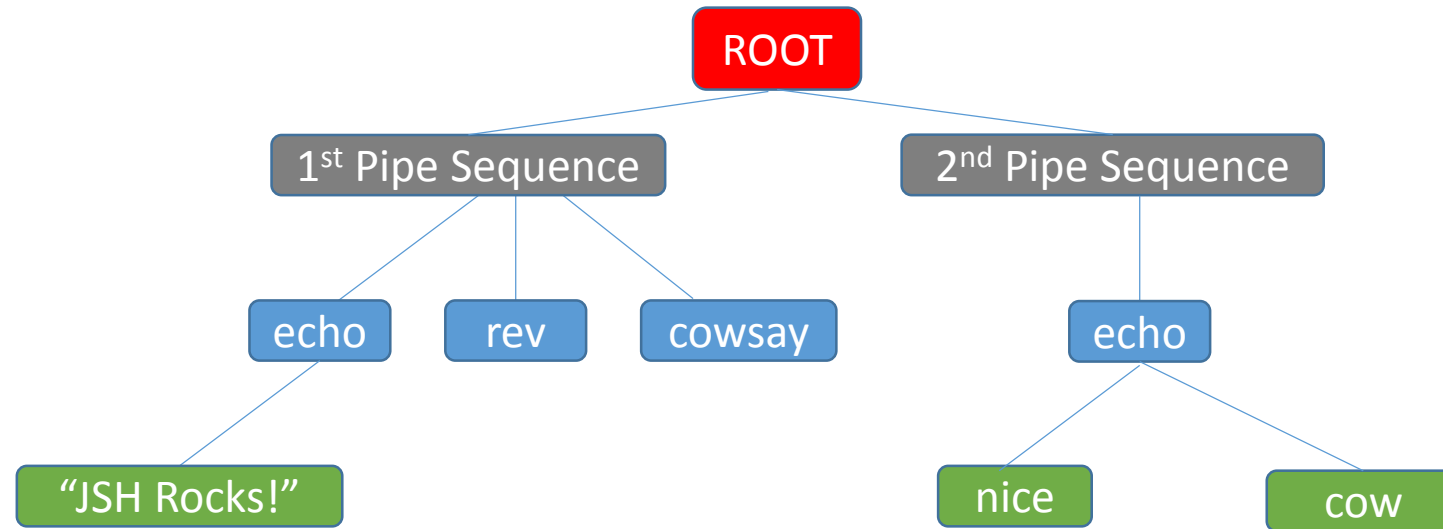
6. (cleanup with `sh cleanup.sh`)

Flow



Abstract Syntax Tree Execution

```
jsh $ echo "JSH Rocks!" | rev | cowsay && echo nice cow
```



Key

Pipe Sequence

Command

Argument

Output

```
jsh /home/Joseph $ echo "JSH Rocks!" | rev | cowsay && echo nice cow
```

```
-----  
< !skcoR HSJ >  
-----
```

```
      ^__^  
      (oo)\_____  
      (__)\\       )\\/\  
           ||----w |  
           ||     ||
```

```
nice cow
```

```
jsh /home/Joseph $ █
```

Features

- Quoted String Literals
- Piping
- IO Redirection (via '`<`', '`>`', and '`>>`')
- `setenv`, `printenv`, `unsetenv`.
- `cd` (no args brings to `/home/USER`)
- `alias`, `unalias`, (including infinite alias detection)
- `bye`
- `stderr` redirection and connection to `stdout`
- Backgrounding via '`&`'
- IO Redirection and piping of builtin commands.
- Environmental Variable Expansion via `${VAR}`

Features, cont.

- Wildcard Matching (* and ?)
- Tilde Expansion
- '&&' and '| |' flow control symbols
- Escaping of Characters via prepending '\'
- Command Completion using <ESC> key
- Emacs and Vim Key Bindings
- Process Killing via '<Control-C>', '<Control-D>'
- Working directory displayed at prompt
- Warnings for builtin commands
- Colored prompt and warnings
- Command History via Arrow Keys