

# Tech Stack

- **Programming Language:** C
- **Version Control:** Git
- **Build System:** GNU Make
- **AST VISUALIZER:** Graphviz

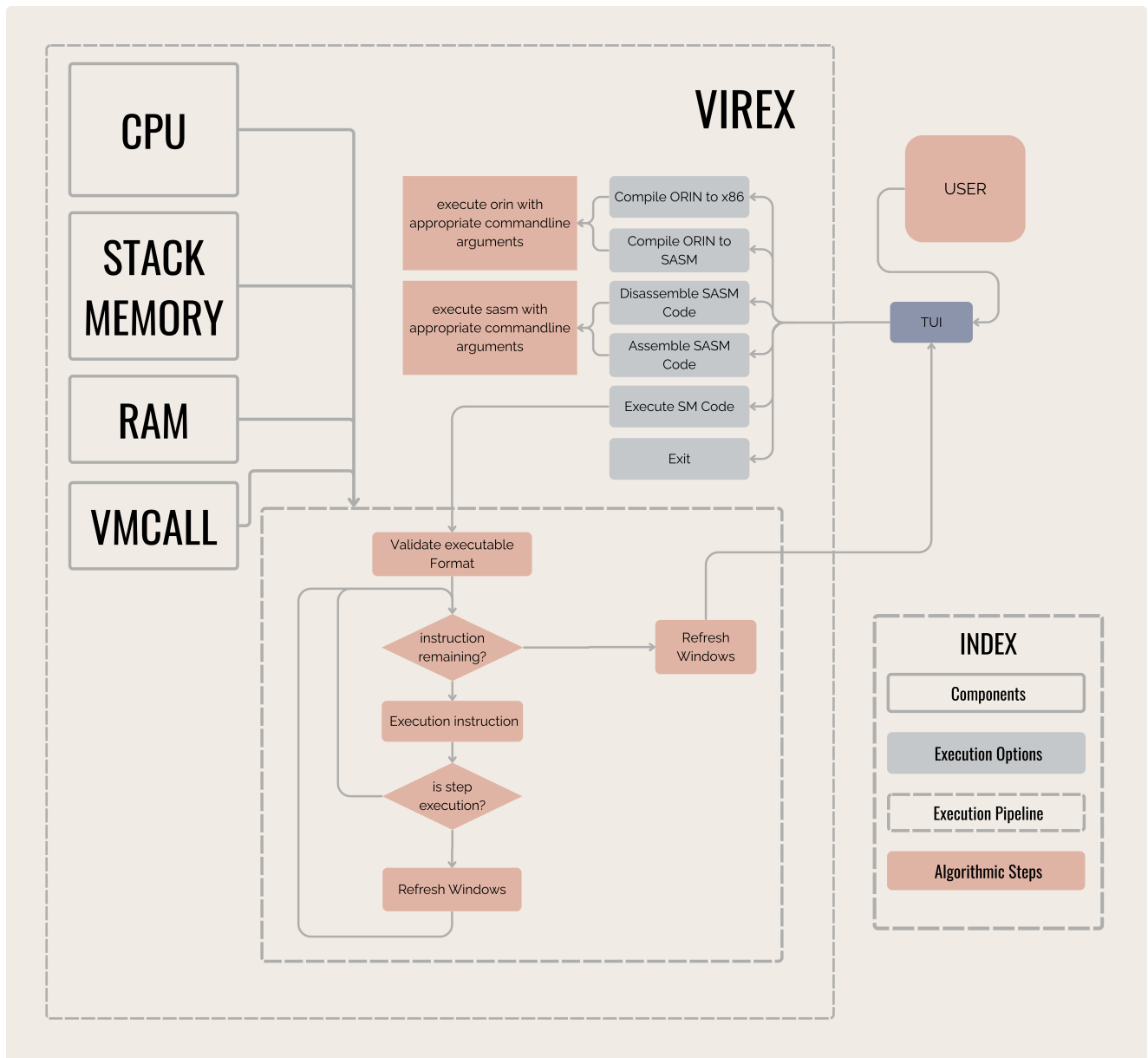


## Project Structure

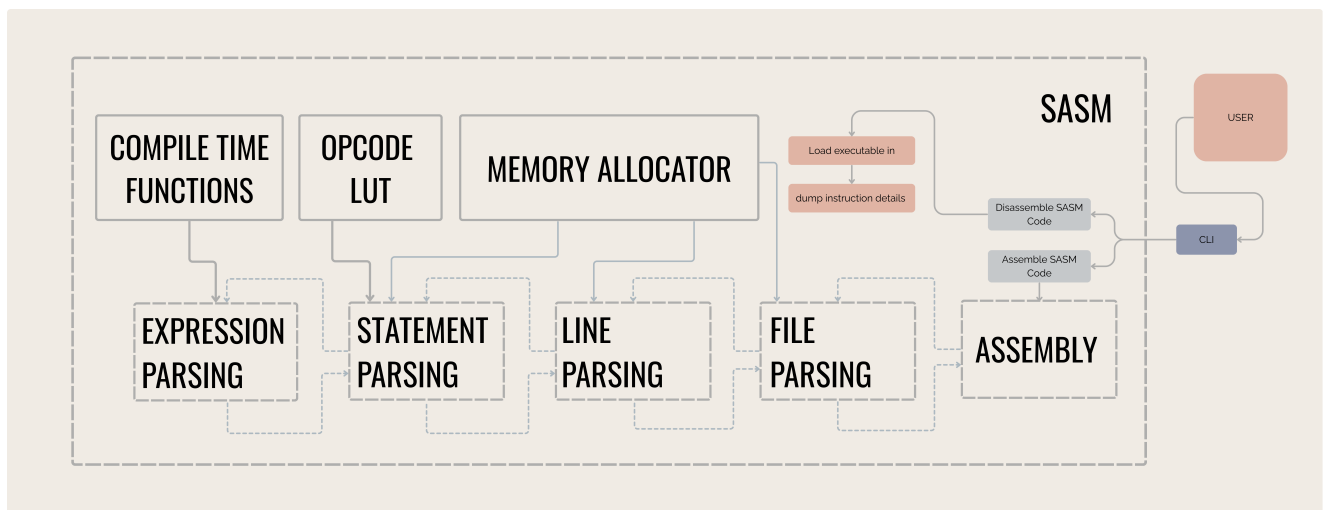
```
VIREX
├─ build/
├─ docs/ # Reference
documentation
├─ examples/ # Sample programs
├─ extras/
|   └─ orin_grammar.txt # Grammer for ORIN
(PROTOTYPE)
├─ html/ # Latest Build of the
documentation website
├─ include/ # Public headers for VM,
SASM, OCC
├─ install.sh # Install script for
linux
├─ LICENSE # GPL-3
├─ Makefile # RULES: virex, sasm,
occ, html, clean
├─ mkdocs.yml
├─ README.md
├─ requirements.txt # requirements for
mkdocs
├─ src/ # Core implementation
(VM, assembler, compiler)
├─ tests/ # Simple Test programs
written in SASM
├─ tools/
|   └─ fonts/
|       └─ EnvoyCodeR/ # font used when
building TUI
├─ themes/
|   └─ kitty/ # kitty terminal conf
used when building TUI
├─ vs_code/
|   └─ sasm_syntax_highlight/ # VS Code syntax
highlighter
```

## Architecture

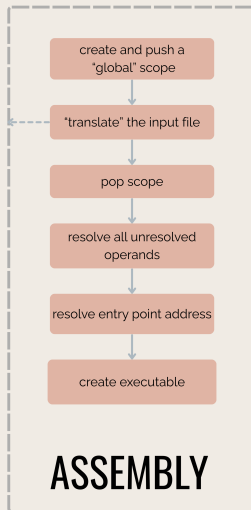
## VIREX



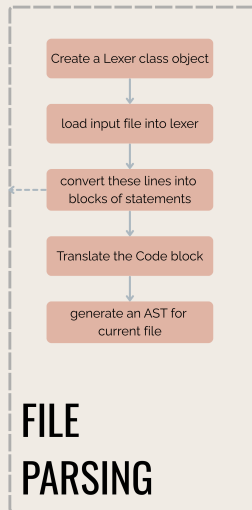
## SASM



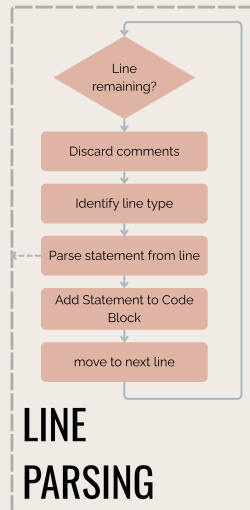
# Individual Components of SASM



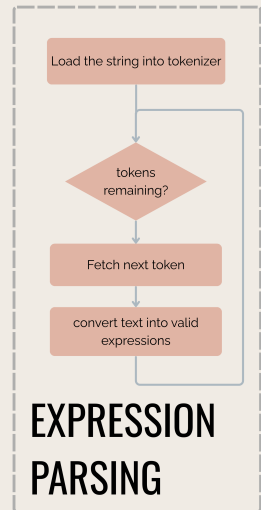
(a) Assembly Pipeline



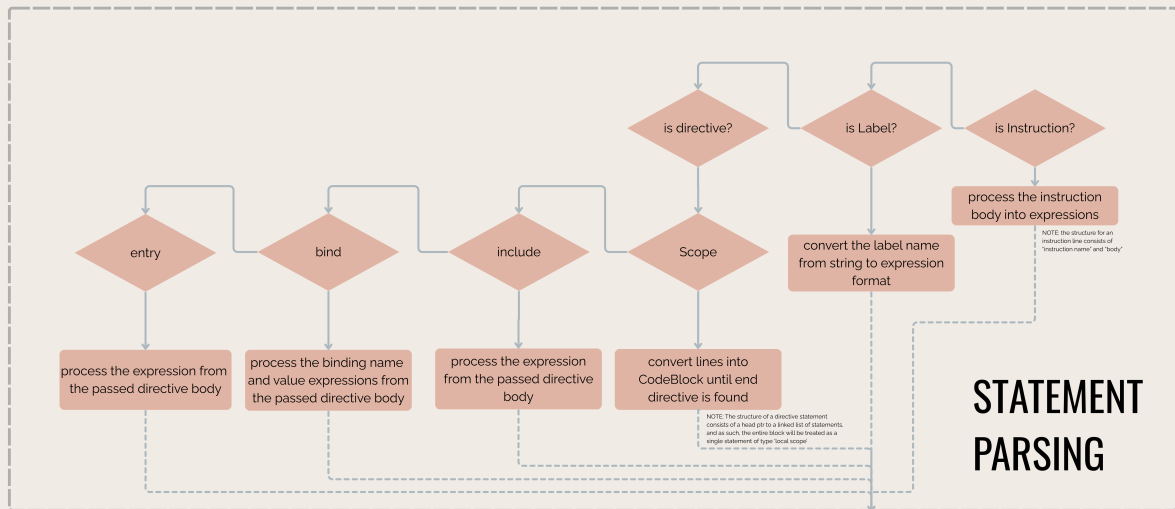
(b) File Parsing



(c) Line Parsing



(e) Expression Parsing



(d) Statement Parsing