

Minishell AST (Abstract Syntax Tree) Checklist

This checklist covers the implementation of the Abstract Syntax Tree (AST) used to structure and execute shell command logic in Minishell.

- [] Define `t_command_tree` with left/right and type
- [] Support node types: `N_EXEC`, `N_PIPE`, `N_ANDIF`, `N_OR`
- [] Create AST node creation functions (e.g., `create_exec_node()`)
- [] Assign left/right children correctly during parsing
- [] Wrap simple commands into `N_EXEC` with `t_exec` as data
- [] Build tree recursively from token list
- [] Respect operator precedence: `()`, `&&`, `||`, `|`
- [] Handle grouping with parentheses as subtrees
- [] Ensure AST structure is testable with example inputs
- [] Implement execution logic that traverses AST recursively
- [] Free entire AST tree with `free_ast()`
- [] Optional: add `print_ast()` for debugging purposes

Use this checklist to ensure your AST is robust, traversable, and easy to debug.