

Minishell Memory Freeing Checklist

This checklist ensures all dynamically allocated memory used during the lifetime of Minishell is properly freed before the program exits. This includes tokens, AST, redirections, environment, and user input.

- [] Implement free_minishell(t_minishell *mini)
- [] Free token list (t_list *token_list)
 - [] Free each t_token value
 - [] Free list nodes
- [] Free AST recursively (t_command_tree *)
 - [] Traverse left and right nodes
 - [] Free t_exec inside N_EXEC nodes
 - [] Free infiles and outfile lists
- [] Free environment list (t_list *envp)
 - [] Free each t_env key/value
- [] Free envp_arr (char **)
- [] Free input string (mini->input)
- [] Free current working directory (mini->cwd)
- [] Nullify all freed pointers to avoid dangling access
- [] Handle cleanup if execution was interrupted (e.g., Ctrl-C)
- [] Free any heredoc temporary files if created
- [] Ensure no memory leaks (test with valgrind)

Use this checklist to guarantee clean program termination and leak-free memory.