Ushelless

Miro-Whiteboard:

https://miro.com/app/dashboard/

Eval sheet:

https://github.com/wis-aerrajiy/school21-checklists/blob/update_minishell/ng_3_minishell.pdf

Resources:

- Git
  - https://medium.com/@jonathanmines/the-ultimate-github-collaboration-guide-df816e98fb67
- Shell: http://linuxcommand.org/lc3_learning_the_shell.php
- Harvard Lecture about Shells: https://cs61.seas.harvard.edu/site/2019/Section7/
- Shell Command Language: https://pubs.opengroup.org/onlinepubs/9699919799/utilities/V3_chap02.html
- Evtl wichtige Designinspirationen fuer Lexer:

  Compilers - Principles, Techniques, and Tools (2006).pdf

- write your own shell: https://www.cs.purdue.edu/homes/grr/SystemsProgrammingBook/Book/Chapter5-WritingYourOwnShell.pdf
- write a shell in c: https://brennan.io/2015/01/16/write-a-shell-in-c/
- tiny shell: http://www.cems.uwe.ac.uk/~irjohnso/coursenotes/lrc/system/shell/cs3.htm
- Brian Will Shell and Terminal Youtube series: https://youtube.com/watch?v=07Q9oqNLXB4&feature=share
- **Building a tokenizer and parser from scratch: https://www.youtube.com/watch?v=4m7ubrdbWQU**
- Good introduction to lexing and parsing: https://www.youtube.com/watch?v=SToUyjAsaFk
- Writing lexer and parser by hand: https://supunsetunga.medium.com/writing-a-parser-getting-started-44ba70bb6cc9

- Crafting interpreters: https://craftinginterpreters.com/

- guter Blog: https://www.codequoi.com/en/home-english/

Important bash definitions: https://www.gnu.org/software/bash/manual/html_node/Definitions.html#index-special-builtin

Redirections:

- order of redirections: https://stackoverflow.com/questions/17975232/shell-redirection-i-o-order
- more regarding redirections: https://unix.stackexchange.com/questions/14246/precedence-of-stdin-and-stdout-redirection-in-bash/14249#14249

Processes:

- list processes in gdb: `info os`

Alex Notizen

Lexer

Implementing lexers and parser: https://www.cse.chalmers.se/edu/year/2015/course/DAT150/lectures/proglang-04.html

Parser

Lexer ↔ Parser Interface

How the original Bash processes commands:

3.1.1 Shell Operation

The following is a brief description of the shell's operation when it reads and executes a command. Basically, the shell does the following:

1. Reads its input from a file (see Shell Scripts), from a string supplied as an argument to the `-c` invocation option (see Invoking Bash), or from the user's terminal.
2. Breaks the input into words and operators, obeying the quoting rules described in Quoting. These tokens are separated by `metacharacters`. Alias expansion is performed by this step (see Aliases).
3. Parses the tokens into simple and compound commands (see Shell Commands).
4. Performs the various shell expansions (see Shell Expansions), breaking the expanded tokens into lists of filenames (see Filename Expansion) and commands and arguments.
5. Performs any necessary redirections (see Redirections) and removes the redirection operators and their operands from the argument list.
6. Executes the command (see Executing Commands).
7. Optionally waits for the command to complete and collects its exit status (see Exit Status).

Testcases

☑ Open Bugs

☑ Tasks

◎ Projects