

UNIX Utilities Project

This covers my implementation of the popular unix command-line tools coded in C.

- my-cat: displays file contents
- my-grep: searches for patterns in files
- my-zip: compresses a file
- my-unzip: decompresses files compressed by my-zip

All of the programs are written in C and compile with `-Wall` and `-Werror` showing no warnings.

Implementation details

- All programs properly handle file opening errors and invalid arguments.
- Proper memory management with no leaks
- Handles edge cases such as empty files and missing files.

Repo:

<https://github.com/LUTVeeti/K-ytt-j-rjestelm-t-ja-systeemiohjelmointi-projektit.git>

Usage guide and examples

1. my-cat

Compile: `gcc -o my-cat my-cat.c -Wall -Werror`

Use the following command `./my-cat [filename]`

```
● veethicc@VeetinTykki:~/systeemiohjelmointi$ ./my-cat output.txt
a file
is
this
hello
```

2. my-grep

Compile: `gcc -o my-grep my-grep.c -Wall -Werror`

Use the following command `./my-grep "search-term" [filename]`

```
● veethicc@VeetinTykki:~/systeemiohjelmointi$ ./my-grep "hello" output.txt
hello
```

You can also search for a pattern from multiple files:

```
● veethicc@VeetinTykki:~/systeemiohjelmointi$ ./my-grep "hello" input.txt output.txt
hello
hello
```

3. my-zip

Compile: `gcc -o my-zip my-zip.c -Wall -Werror`

Use the following command `./my-zip [filename] > compressedfilename.z`

```
● veethicc@VeetinTykki:~/systeemiohjelmointi$ ./my-zip input.txt > compressedinput.z
📦 compressedinput
```

You can also zip multiple files:

```
● veethicc@VeetinTykki:~/systeemiohjelmointi$ ./my-zip input.txt output.txt > compressedinputoutput.z
```

4. my-unzip

Compile: `gcc -o my-unzip my-unzip.c -Wall -Werror`

Use the following command `./my-unzip filename.z`

```
● veethicc@VeetinTykki:~/systemiohjelointi$ ./my-unzip compressedinputoutput.z
hello
this
is
a filea file
is
this
hello
```