

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell/minis... nov 15 11:50
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-na
>_ minishell> /bin/ls -l
total 160
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 bin
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 00:20 include
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 libft
-rw-rw-r-- 1 aamaral aamaral 1515 nov 15 00:20 Makefile
-rwxrwxr-x 1 aamaral aamaral 143048 nov 15 11:36 minishell
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 src
minishell> echo $?
0
minishell> ls -l -a
total 168
drwxrwxr-x 6 aamaral aamaral 4096 nov 15 11:36 .
drwxrwxr-x 3 aamaral aamaral 4096 nov 15 11:20 ..
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 bin
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 libft
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 include
drwxrwxr-x 1 aamaral aamaral 1515 nov 15 00:20 Makefile
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 minishell
minishell> echo $?
0
minishell> 
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell/minis... nov 15 11:54
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-na
>_ minishell> touch a b c
minishell> echo $?
0
minishell> ls
a b bin c include libft Makefile minishell src
minishell> rm a b c
rm: cannot remove 'a': No such file or directory
rm: cannot remove 'b': No such file or directory
rm: cannot remove 'c': No such file or directory
minishell> echo $?
1
minishell> 
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell/minis... nov 15 12:00
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-na
>_ minishell> ./minishell
minishell> echo $?
0
minishell> env | grep SHLVL
SHLVL=3
minishell> exit
minishell> 
```

```
Activities Terminal nov 15 12:01 pt
amaral@42porto:~/CommonCore/minishell/minihell/minis... cc -c -Wall -Wextra -Werror -c -o ft_printf.o ft_printf.c cc -c -Wall -Wextra -Werror -c -o ft_printf_utils.o ft_printf_utils.c cc -c -Wall -Wextra -Werror -c -o ft_print_char.o ft_print_char.c cc -c -Wall -Wextra -Werror -c -o ft_print_str.o ft_print_str.c cc -c -Wall -Wextra -Werror -c -o ft_print_ptr.o ft_print_ptr.c cc -c -Wall -Wextra -Werror -c -o ft_print_int.o ft_print_int.c cc -c -Wall -Wextra -Werror -c -o ft_print_uint.o ft_print_uint.c cc -c -Wall -Wextra -Werror -c -o ft_print_hex.o ft_print_hex.c cc -c -Wall -Wextra -Werror -c -o ft_print_hex_up.o ft_print_hex_up.c cc -c -Wall -Wextra -Werror -c -o ft_strcmp.o ft_strcmp.c cc -c -Wall -Wextra -Werror -c -o ft_free_split.o ft_free_split.c ar lr libft.a ft_isalpha.o ft_isalnum.o ft_isascii.o ft_isprint.o f t_strlen.o ft_mensem.o ft_bzero.o ft_memcpy.o ft_memmove.o ft_strl at.o ft_toupper.o ft_tolower.o ft_strdup.o ft_substr.o ft_stri n.o ft_strerror.o ft_split.o ft_itoa.o ft_strdup.o ft_striplr.o ft_putchar_fd.o ft_putstr.o ft_putendl_fd.o ft_putstrn.o ft_putstr_fd.o ft_putendl_fd.o ft_putstrn.o ft_lstat.o ft_lstatlast.o ft_lstatd.back.o ft_lsnew.o ft_lstdelone.o ft_lsdelfront.o ft_lsdelsize.o ft_lsdelclear.o ft_lsfirst.o ft_lslast.o ft_lsnext_line.o g next_line_utils.o ft_printf.o ft_printf_utils.o ft_printchar.o ft_print_hex.o ft_strcmp.o ft_free_split.o make[1]: Leaving directory '/home/amaral-/CommonCore/minishell/minihell/minis... minihell-minain/libft' cc -g -fsanitize=address bin/minishell.o bin/constructors.o bin/build_tree.o bin/n/execute_tree.o bin/free_tree.o bin/token_list.o bin/echo_env.pwd_buildin.o bin/unset_buildin.o bin/export_buildin.o bin/exit_buildin.o bin/cd_buildin.o bin/ut ils_init.o bin/errors.o bin/var_utils.o bin/export_print.o bin/signals.o -llibft -l -fstack-protector-strong -o minishell minishell ./.minishell minishell echo $? 0 minishell> 
```

```
Activities Terminal nov15 12:06 pt 20% x
amaral@42porto:~/CommonCore/minishell/minihell/minis... ↵
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minis... ↵
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ ls
bin include libft Makefile minishell src
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ ""ls""
bin include libft Makefile minishell src
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ ""ls""
bin include libft Makefile minishell src
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ =====
==5974==ERROR: LeakSanitizer: detected memory leaks
Direct leak of 32 byte(s) in 1 object(s) allocated from:
#0 0x7fb0a46b4887 in __interceptor_malloc ../../../../src/libbs
asan_malloc_0_linux.cpp:145
#1 0x7fb0a45e5bac in xmalloc (/lib/x86_64-linux-gnu/libreadline
)
Indirect leak of 68 byte(s) in 4 object(s) allocated from:
#0 0x7fb0a46b4887 in __interceptor_malloc ../../../../src/libbs
asan_malloc_0_linux.cpp:145
#1 0x7fb0a45e5bac in xmalloc (/lib/x86_64-linux-gnu/libreadline
)
SUMMARY: AddressSanitizer: 100 byte(s) leaked in 5 allocation(s).
minishell> [ ]
```



Activities Terminal nov 15 12:09 amaral-@42porto: ~/CommonCore/minishell/minihell/minis... amaral-@42porto: ~/CommonCore/minishell/minihell/minishell-main (7)/minis... amaral-@42porto: ~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ ls -l ls -l: command not found amaral-@42porto: ~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$? 127 amaral-@42porto: ~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ "ls -l" total 168 drwxrwxr-x 2 amaral amaral 4096 nov 15 12:01 bin drwxrwxr-x 2 amaral amaral 4096 nov 15 00:20 Include drwxrwxr-x 2 amaral amaral 4096 nov 15 12:01 libft -rw-rw-r-- 1 amaral amaral 1515 nov 15 00:20 Makefile -rwxrwxr-x 1 amaral amaral 143048 nov 15 12:01 minishell drwxrwxr-x 2 amaral amaral 4096 nov 15 11:36 src minis > echo \$? 0 minis >

Activities Terminal nov 15 12:13

```

minishell> "ls -l"
ls : command not found
minishell> echo $?
127
minishell> ""ls -l""
total 160
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 12:01 bin
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 12:01 include
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 12:01 libft
-rw-rw-r-- 1 aamaral- aamaral- 1515 nov 15 00:20 Makefile
-rwxrwxr-x 1 aamaral- aamaral- 143048 nov 15 12:01 minishell
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 11:36 src
minishell> echo $?
0
minishell> """ls -l"""
ls : command not found
minishell> echo $?
127
minishell> """"ls -l"""
total 160
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 12:01 bin
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 00:20 include
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 12:01 libft
-rw-rw-r-- 1 aamaral- aamaral- 1515 nov 15 00:20 Makefile
-rwxrwxr-x 1 aamaral- aamaral- 143048 nov 15 12:01 minishell
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 11:36 src
minishell> echo $?
0
minishell> []

```

Page 2 of 3 0 words, 0 characters Default Page Style

Activities Terminal nov 15 12:20

```

minishell> 'ls'
bin include libft Makefile minishell src
minishell> echo $?
0
minishell> 'ls'
bin include libft Makefile minishell src
minishell> ''ls''
bin include libft Makefile minishell src
minishell> echo $?
0
minishell> ''''ls'''
bin include libft Makefile minishell src
minishell> echo $?
0
minishell> 'ls -l'
ls : command not found
minishell> echo $?
127
minishell> ''ls -l''
total 160
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 12:01 bin
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 00:20 include
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 12:01 libft
-rw-rw-r-- 1 aamaral- aamaral- 1515 nov 15 00:20 Makefile
-rwxrwxr-x 1 aamaral- aamaral- 143048 nov 15 12:01 minishell
drwxrwxr-x 2 aamaral- aamaral- 4096 nov 15 11:36 src
minishell> echo $?
0
minishell> []

```

Page 1 of 3 0 words, 0 characters Default Page Style

Activities Terminal nov 15 12:33

```

minis > ls'
bin include libft Makefile minishell src
minis > echo $?
0
minis > ls" -l"
ls : command not found
minis > echo $?
127
minis > ls > "a"b
minis > echo $?
0
minis > ls
ab bin include libft Makefile minishell src
minis > ls > "$USER"
minis > echo $?
0
minis > ls
$USER' aamaral- ab bin include libft Makefile minishell src
minis > echo ls""$USER""a
ls$USER" a
minis > echo $?
0
minis > echo ls"$USER"
ls$USER"
minis > []

```

Page 3 of 3 0 words, 0 characters Default Page Style

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell/minishell... nov 15 12:43

```

minis > ls | wc |
bad syntax
minis > echo $?
2
minis > ls <
bad syntax
minis > echo $?
2
minis > ls >
bad syntax
minis > echo $?
2
minis > ls <> a
bad syntax
minis > echo $?
2
minis > ls || a
a command not found
minis > echo $?
127
minis > | ls
bad syntax
minis > echo $?
2
minis > echo $random_var
minis > echo $?
0
minis > echo $?
$ minis > echo $?
0
minis > 

```

aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell... ls | wc |
> ^C
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ ls <
bash: syntax error near unexpected token `newline'
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
2
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ ls >
bash: syntax error near unexpected token `newline'
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
2
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ ls <> a
bash: syntax error near unexpected token `>'
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
2
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ ls || a
'USER' aamaral ab bin include lib libf minishell src
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ | ls
bash: syntax error near unexpected token `|'
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
2
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$random_va

aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?

aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
\$ aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
\$ aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
\$ aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell/minishell... nov 15 13:02

```

minishell> cat Makefile | grep Random
NAME = minishell
NAME_BONUS = minishell_bonus
SRC_LIST = minishell.c constructors.c build_tree.c execute_token.c
          token_llst.c echo_env_pwd_buildin.c
          unset_buildin.c export_buildin.c ext_
          cd_buildin.c utils_init.c errors.c var_
          int.c signals.c
SRC_LIST_BONUS = minishell.c

SRC_DIR = src/
SRC_DIR_BONUS = src_bonus/
SRC = $(addprefix $(SRC_DIR), $(SRC_LIST))
SRC_BONUS = $(addprefix $(SRC_DIR_BONUS), $(SRC_LIST_BONUS))

BIN_DIR = bin/
BIN_DIR_BONUS = bin_bonus/
BIN = $(addprefix $(BIN_DIR), $(SRC_LIST:.c=.o))
BIN_BONUS = $(addprefix $(BIN_DIR_BONUS), $(SRC_LIST_BONUS:.c=))

LIBFT_DIR = libft/
LIBFT = $(addprefix $(LIBFT_DIR), libft.a)

CC = cc
CFLAGS = -g -fsanitize=address #Wall -Werror -Wextra
RM = rm -rf

all: $(NAME)
$(NAME): $(BIN) $(LIBFT)
        $(CC) $(CFLAGS) $(BIN) -L$(LIBFT_DIR) -lft -lreadline

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell/minishell... nov 15 13:06

```

minis > echo $USER$HOME
aamaral-/home/aamaral-
minis > echo $?
0
minis > echo $'HOME'
$HOME
minis > echo $245HOME
$245HOME
minis > a.txt
a.txt: command not found
minis > echo $?
127
minis > --minishell
--minishell: command not found
minis > echo $?
127
minis > 

```

aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$USER\$HOME
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$'HOME'
\$HOME
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$245HOME
\$245HOME
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ a.txt
a.txt: command not found
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
127
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ --minishell
--minishell: command not found
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$ echo \$?
127
aamaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main\$

```
Activities Terminal nov 15 13:14 ⓘ
amaral@42porto:~/CommonCore/minishell/minihell/minis... ↵ amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat < Makefile
minis > Cat < Makefile | grep NAME | grep $ NAME = minishell
NAME_BONUS = minishell_bonus
all: $NAME
$(NAME): $(BIN) $(LIBFT)
$(CC) $(CFLAGS) $(BIN) -L$(LIBFT_DIR) -lft -lreadline $(NAME): $(BIN) $(LIBFT)
$(CC) $(CFLAGS) $(BIN_BONUS) -L$(LIBFT_DIR) -lft -o $(NAME) $(CC) $(CFLAGS) $(BIN) -L$(LIBFT_DIR) -lft -lreadline -o $(NAME)
$(RM) $(NAME)
$(RM) $(NAME_BONUS)
minis > echo $?
0
minis > cat < Makefile | grep Swnflw NAME
grep: NAME: No such file or directory
minis > echo $?
2
minis > ↵ amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ ↵
```

```
Activities Terminal nov 15 13:22 ⓘ
amaral@42porto:~/CommonCore/minishell/minihell/minis... ↵ amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat < amaral-
|grep $USER
amaral- is my user
amaral- is my user
: command not found
minis > naoexiste
naoexiste: command not found
minis > ↵ amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat < amaral-
|grep $USER
amaral- is my user
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ Snaoexiste
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ naoexiste
naoexiste: command not found
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ ↵
```

```
Activities Terminal nov 15 13:31 ⓘ
amaral@42porto:~/CommonCore/minishell/minihell/minis... ↵ amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat << a
heredoc> $USER
heredoc> a
amaral-
minihell> echo $?
0
minihell> cat << a
heredoc> '$USER'
heredoc> a
'amaral-'
minihell> echo $?
0
minihell> cat << a
heredoc> "$USER"
heredoc> a
"amaral-"
minihell> echo $?
0
minihell> cat << a
heredoc> $naoexiste
heredoc> a
minihell> echo $?
0
minihell> ↵ amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat << a
$USER
> a
amaral-
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat << a
> "USER"
> a
"USER"
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat << a
> $naoexiste
> a
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ cat << $USER
> amaral-
> amaral-
> nao salu
> $USER
amaral-
nao salu
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-main$ ↵
```

```
Activities Terminal nov 15 13:45 ⓘ
amaral@42porto:~/CommonCore/minishell/minihell/minishell> cat < ab > b.txt
minishell> echo $?
0
minishell> cat < a.txt < c.txt > b.txt >> d.txt
a.txt: No such file or directory
minishell> echo $?
1
minishell> cat < c.txt > b.txt >> d.txt
minishell> cat d.txt
ab
bin
include
libft
Makefile
minishell
src
minishell> amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell->
minishell> cat < ab > b.txt
minishell> echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat < a.txt < c.txt > b.txt >> d.txt
minishell> bash: a.txt: No such file or directory
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> touch c.txt
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat < ab < c.txt > b.txt >> d.txt
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat < c.txt < a.b > b.txt >> d.txt
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat d.txt
ab
bin
include
libft
Makefile
minishell
src
minishell> amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell->
```

```
Activities Terminal nov 15 13:49 ⓘ
amaral@42porto:~/CommonCore/minishell/minihell/minishell> cat < c.txt < ab
minis> ab
minis> bin
minis> include
minis> libft
minis> Makefile
minishell
src
minis> echo $?
0
minis> cat < c.txt | sort < ab
minis> ab
minis> bin
minis> include
minis> libft
minis> Makefile
minishell
src
minis> echo $?
0
minis> amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell->
minishell> cat < c.txt < ab
minishell> bin
minishell> include
minishell> libft
minishell> Makefile
minishell> minishell
src
minishell> amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell->
```

```
Activities Terminal nov 15 13:58 ⓘ
amaral@42porto:~/CommonCore/minishell/minihell/minishell> cat >> c.txt
minishell> this
minishell> is
minishell> a
minishell> test
minishell> echo $?
0
minishell> cat >> c.txt
minishell> this is a test
minishell> ^C
minishell> minishell> echo $?
0
minishell> cat << a
minishell> heredoc>
minishell> heredoc>
minishell> heredoc> a
minishell> echo $?
0
minishell> cat << a | sort
minishell> heredoc> b
minishell> heredoc> c
minishell> heredoc> d
minishell> heredoc> z
minishell> heredoc> r
minishell> heredoc> t
minishell> heredoc> a
minishell> b
minishell> c
minishell> d
minishell> r
minishell> t
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat >> c.txt
isto
e
um teste
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat >> c.txt
isto e um teste
^C
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> echo $?
130
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat << a | sort
>
>
> a
>

amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> echo $?
0
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat << a | sort
> a
amaral@42porto:~/CommonCore/minishell/minihell/minishell-main (7)/minishell-> cat << a | sort
>
```

Activities Terminal nov 15 14:04

```
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ cat << a | sort <  
heredoc> teste  
heredoc> a  
ab  
bin  
include  
libft  
Makefile  
minishell  
src  
minis  > echo $?  
0  
minis  > cat << a | sort > a.txt  
heredoc> g  
heredoc> s  
heredoc> y  
heredoc> b  
heredoc> a  
minis  > echo $?  
0  
minis  > cat a.txt  
b  
g  
s  
y  
minis  >
```

```
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ cat << a | sort <  
< ab  
> teste  
> a  
ab  
bin  
include  
libft  
Makefile  
minishell  
src  
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ echo $?  
0  
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ cat << a | sort >  
> a.txt  
> g  
> s  
> y  
> b  
> a  
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ echo $?  
0  
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ cat a.txt  
b  
g  
s  
y  
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$
```

Page 4 of 4 0 words, 0 characters Default Page Style 0,00 / 0,00 6,69 x 3,10 100%

Activities Terminal nov 15 14:08

```
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ cat << a | sort <  
heredoc> k  
heredoc> r  
heredoc> c  
heredoc> h  
heredoc> a  
heredoc> j  
heredoc> d  
heredoc> t  
heredoc> p  
heredoc> b  
d  
j  
p  
t  
minis  > echo $?  
0  
minis  >
```

```
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ cat << a | sort <  
< b  
> r  
> c  
> h  
> a  
> j  
> d  
> t  
> p  
> b  
d  
j  
p  
t  
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$ echo $?  
0  
aamaral@42porto:~/CommonCore/minishell/minihell/minishell$
```

Page 4 of 4 0 words, 0 characters Default Page Style 0,00 / 0,00 6,69 x 3,10 100%

Activities Terminal nov 16 15:18

```
aamaral@42porto:~/CommonCore/minishell/minihell$ echo hey > ab  
bash: syntax error near unexpected token `>'  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?  
2  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo hey >> ab  
bash: syntax error near unexpected token `>'  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?  
2  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo hey > b.txt >> ab  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?  
0  
aamaral@42porto:~/CommonCore/minishell/minihell$ cat b.txt  
aamaral@42porto:~/CommonCore/minishell/minihell$ cat ab  
ab  
bin  
include  
libft  
Makefile  
minishell  
src  
hey  
hey  
minis  > echo hey >> b.txt > ab  
minis  > echo $?  
minis  > cat b.txt  
minis  > echo hey > $naoexiste  
No such file or directory  
minis  > echo $?  
1  
minis  >
```

```
aamaral@42porto:~/CommonCore/minishell/minihell$ echo hey >> b.txt > ab  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?  
0  
aamaral@42porto:~/CommonCore/minishell/minihell$ cat b.txt  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo hey > $naoexiste  
bash: $naoexiste: ambiguous redirect  
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?  
1  
aamaral@42porto:~/CommonCore/minishell/minihell$
```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 15:30
aamaral@42porto:~/CommonCore/minishell/minihell$ > ab cat | < b.txt cat
aamaral@42porto:~/CommonCore/minishell/minihell$ hey
minis > echo $?
0
minis > ls > a.txt -l -a
minis > echo $?
0
minis > cat a.txt
total 188
drwxrwxr-x 6 aamaral aamaral 4096 nov 16 14:52 .
drwxrwxr-x 12 aamaral aamaral 4096 nov 15 11:20 ..
-rw-rw-r-- 1 aamaral aamaral 70 nov 15 13:15 $USER
-rw-rw-r-- 1 aamaral aamaral 64 nov 15 13:16 aamaral-
-rw-rw-r-- 1 aamaral aamaral 4 nov 16 15:15 ab
-rw-rw-r-- 1 aamaral aamaral 0 nov 16 15:24 a.txt
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 12:01 bin
-rw-rw-r-- 1 aamaral aamaral 0 nov 16 15:11 b.txt
-rw-rw-r-- 1 aamaral aamaral 92 nov 15 13:55 c.txt
-rw-rw-r-- 1 aamaral aamaral 88 nov 15 13:44 d.txt
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 12:01 libf
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 12:01 libft
-rw-rw-r-- 1 aamaral aamaral 1515 nov 15 00:20 Makefile
-rw-rw-r-- 1 aamaral aamaral 143048 nov 16 14:52 minishell
drwxrwxr-x 2 aamaral aamaral 4096 nov 15 11:36 src
minis > > a.txt
minis > echo $?
1
minis > > a.txt
minis > echo $?
1
minis > > f.txt
minis > echo $?
1
minis > > 

```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 15:49
aamaral@42porto:~/CommonCore/minishell/minihell$ >< a > a.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ >< a > h.txt
> a
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | Snaoexiste
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ < naoexiste Snaoexiste
bash: naoexiste: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ Snaoexiste > l.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ Snao existe ls
existe: command not found
aamaral@42porto:~/CommonCore/minishell/minihell$ Snaoexiste ls
SUSER ab b1n c.txt f.txt libft libft Makefile src
aamaral- a.txt b.txt d.txt H.txt K.txt L.txt minishell
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls > src
bash: src: Is a directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ 

```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 15:56
aamaral@42porto:~/CommonCore/minishell/minihell$ minis > cat < naoexiste
naoexiste: No such file or directory
minis > echo $?
1
minis > cat < naoexiste | cat < ab
naoexiste: No such file or directory
aamaral- is my user
ab
b1n
include
libft
Makefile
minishell
src
minis > echo $?
0
minis > cat < ab | cat < naoexiste
naoexiste: No such file or directory
minis > echo $?
1
minis > cat < naoexiste | cat < naoexiste
naoexiste: No such file or directory
naoexiste: No such file or directory
minis > echo $?
1
minis > > 

```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:04
minis > wrong | ls
wrong: command not found
'SUSER' ab bin c.txt f.txt include libft Makefile src
minis > echo $?
0
minis > ls | wrong
wrong: command not found
minis > echo $?
127
minis > wrong | wronger
wrong: command not found
wronger: command not found
minis > echo $?
127
minis > cat | cat | ls
'SUSER' ab bin c.txt f.txt include libft Makefile src
aamaral- a.txt b.txt d.txt h.txt k.txt l.txt minishell
minis > echo $?
0
minis > ls | grep a | grep e | grep k
Makefile
minis > echo $?
0
minis > 
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:04
aamaral@42porto:~/CommonCore/minishell/minihell$ wrong | ls
'SUSER' ab bin c.txt f.txt include libft Makefile src
aamaral- a.txt b.txt d.txt h.txt k.txt l.txt minishell
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | wrong
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ wrong | wronger
wronger: command not found
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ cat | cat | ls
'SUSER' ab bin c.txt f.txt include libft Makefile src
aamaral- a.txt b.txt d.txt h.txt k.txt l.txt minishell
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | grep a | grep e | grep k
Makefile
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ 
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:12
minis > ls | grep a | grep M > t.txt
minis > echo $?
0
minis > cat t.txt
Makefile
minis > ls > t.txt | grep a | grep M
minis > echo $?
1
minis > cat t.txt
'SUSER'
aamaral-
ab
a.txt
bin
b.txt
c.txt
d.txt
f.txt
h.txt
include
k.txt
libft
l.txt
Makefile
minishell
src
t.txt
minis > ls | grep a > a.txt | grep M
minis > echo $?
1
minis > cat a.txt
aamaral-
ab
a.txt
Makefile

```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:12
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | grep a | grep M > a.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cat a.txt
Makefile
aamaral@42porto:~/CommonCore/minishell/minihell$ ls > a.txt | grep a | grep M
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ cat a.txt
aamaral-
ab
a.txt
Makefile
src
t.txt
'aamaral@42porto:~/CommonCore/minishell/minihell$ ls | grep a > a.txt | grep M
'aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ cat a.txt
aamaral-
ab
a.txt
Makefile

```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:19
minishell> ls | grep a > a.txt | grep M > b.txt
minishell> echo $?
1
minishell> cat a.txt
aamaral-
ab
a.txt
Makefile
minishell> cat b.txt
minishell> cat < Makefile | cat < a.txt
aamaral-
ab
a.txt
Makefile
minishell> echo $?
0
minishell> 
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:19
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | grep a > a.txt | grep M >
b.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ cat a.txt
aamaral-
ab
a.txt
Makefile
aamaral@42porto:~/CommonCore/minishell/minihell$ cat b.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ cat < Makefile | cat < a.txt
aamaral-
ab
a.txt
Makefile
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ 
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:23

```

minishell> ola
ola: command not found
minishell> echo $?
127
minishell> wrong | wrong
wrong: command not found
wrong: command not found
minishell> echo $?
127
minishell> Snaexiste
: command not found
minishell> echo $?
127
minishell> cat < naoexiste
naoexiste: No such file or directory
minishell> echo $?
1
minishell> wrong < naoexiste
naoexiste: No such file or directory
minishell> echo $?
1
minishell> expr $? + $?
0
minishell> echo $?
1
minishell> 
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:23

```

aamaral@42porto:~/CommonCore/minishell/minihell$ ola
Command 'ola' not found, did you mean:
  command 'ora' from snap ora (4.3.2)
  command 'lola' from deb lola (1.6-1)
  command 'cola' from deb git-cola (3.12.0-1)
  command 'ols' from deb speech-tools (1:2.5.0-12)
  command 'tla' from deb tla (1.3.5+dfsg1-2build1)
  command 'olad' from deb ola (0.10.8.nojsmin-2)
See 'snap info <snapname>' for additional versions.
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ wrong | wrong
wrong: command not found
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ Snaexiste
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cat < naoexiste
bash: naoexiste: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ wrong < naoexiste
bash: naoexiste: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ expr $? + $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ 
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:30

```

minishell> pwd
/home/aamaral-/CommonCore/minishell/minihell
minishell> cd
minishell> echo $?
0
minishell> pwd
/home/aamaral-
minishell> cd -
/home/aamaral-/CommonCore/minishell/minihell
minishell> echo $?
0
minishell> cd ..
minishell> echo $?
0
minishell> pwd
/home/aamaral-
minishell> cd ..
~: No such file or directory
minishell> echo $?
1
minishell> cd /
/: Success
minishell> echo $?
1
minishell> pwd
/
minishell> cd ../../..
../../.: Success
minishell> echo $?
1
minishell> pwd
/
minishell> 
```

Activities Terminal aamaral@42porto:/ nov 16 16:30

```

aamaral@42porto:~/CommonCore/minishell/minihell$ pwd
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ cd
aamaral@42porto:~/CommonCore/minishell/minihell$ pwd
/home/aamaral-
aamaral@42porto:~/CommonCore/minishell/minihell$ cd -
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd -
/home/aamaral-
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd /
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cd ..
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 16:37

```

minishell> pwd
/home/aamaral-/CommonCore/minishell/minihell
minishell> cd src
src: Success
minishell> echo $?
1
minishell> pwd
/home/aamaral-/CommonCore/minishell/minihell/src
minishell> cd naoexiste
naoexiste: No such file or directory
minishell> echo $?
1
minishell> cd a b
minishell: cd: too many arguments
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minishell> cd naoexiste
aamaral- bin a.txt c.txt h.txt libft minishell
aamaral- bin d.txt include l.txt src
ab b.txt f.txt k.txt Makefile t.txt
minishell> echo $?
0
minishell> ls | cd
minishell> echo $?
0
minishell> cd | wrong
wrong: command not found
minishell> echo $?
127
minishell> cd | wrong
wrong: command not found
minishell> echo $?
0
minishell> 
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell/src nov 16 16:37

```

aamaral@42porto:~/CommonCore/minishell/minihell$ pwd
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ cd src
aamaral@42porto:~/CommonCore/minishell/minihell/src$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell/src$ pwd
/home/aamaral-/CommonCore/minishell/minihell/src
aamaral@42porto:~/CommonCore/minishell/minihell/src$ cd naoexiste
bash: cd: naoexiste: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell/src$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell/src$ cd a b
bash: cd: too many arguments
aamaral@42porto:~/CommonCore/minishell/minihell/src$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell/src$ cd | ls
build_tree.c errors.c export_print.c token_list.c
cd_buildin.c execute_tree.c free_tree.c unset_buildin.c
constructors.c exit_buildin.c minishell.c utils_int.c
echo_env_pwd_buildin.c export_buildin.c signals.c var_utils.c
aamaral@42porto:~/CommonCore/minishell/minihell/src$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell/src$ ls | cd
aamaral@42porto:~/CommonCore/minishell/minihell/src$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell/src$ cd | wrong
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell/src$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell/src$ wrong | cd
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell/src$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell/src$ 
```

Activities Terminal nov 16 16:45

```
aamaral@42porto:~/CommonCore/minishell/minihell$ cd -n | ls
'mUSER' a.txt c.txt h.txt libft minishell
aamaral- bin d.txt include l.txt src
minis > echo $?
0
minis > ls | cd -n
minis > echo $?
0
minis > cd a b | ls
'mUSER' a.txt c.txt h.txt libft minishell
aamaral- bin d.txt include l.txt src
ab b.txt f.txt k.txt Makefile t.txt
minis > echo $?
0
minis > ls | cd a b
minis > echo $?
0
minis > cd > a.txt
minis > echo $?
0
minis > pwd
/home/aamaral-/CommonCore/minishell/minihell
minis > cd < u.txt
u.txt: No such file or directory
minis > echo $?
1
minis > pwd
/home/aamaral-/CommonCore/minishell/minihell
minis > 
```

Activities Terminal nov 16 16:45

```
aamaral@42porto:~/CommonCore/minishell/minihell$ cd -n | ls
bash: cd: -n: invalid option
cd: usage: cd [-L|[-P [-e]] [-@]] [dir]
build_tree.c errors.c export_print.c token_list.c
'cd_buildin.c execute_tree.c free_tree.c unset_buildin.c
constructors.c exit_buildin.c minishell.c utils_init.c
echo_env_pwd buildin.c export_buildin.c signals.c var_utils.c
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | cd -n
bash: cd: -n: invalid option
cd: usage: cd [-L|[-P [-e]] [-@]] [dir]
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
2
aamaral@42porto:~/CommonCore/minishell/minihell$ cd a b | ls
bash: cd: too many arguments
build_tree.c errors.c export_print.c token_list.c
cd_buildin.c execute_tree.c free_tree.c unset_buildin.c
constructors.c exit_buildin.c minishell.c utils_init.c
echo_env_pwd buildin.c export_buildin.c signals.c var_utils.c
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | cd a b
bash: cd: too many arguments
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ cd > o.txt
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ cd < u.txt
bash: u.txt: No such file or directory
aamaral@42porto:~$ 
/home/aamaral-/CommonCore/minishell/minihell$ cd < u.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ 
```

Activities Terminal nov 16 16:50

```
aamaral@42porto:~/CommonCore/minishell/minihell$ pwd
/home/aamaral-/CommonCore/minishell/minihell
minihell> cd < naoexiste
naoexiste: No such file or directory
minihell> echo $?
1
minihell> pwd
/home/aamaral-/CommonCore/minishell/minihell
minihell> cd << a
heredoc> a
minihell> echo $?
0
minihell> pwd
/home/aamaral-/CommonCore/minishell/minihell
minihell> 
```

Activities Terminal nov 16 16:50

```
aamaral@42porto:~/CommonCore/minishell/minihell$ pwd
/home/aamaral-/CommonCore/minishell/minihell
minihell> cd < naoexiste
naoexiste: No such file or directory
minihell> echo $?
1
minihell> pwd
/home/aamaral-/CommonCore/minishell/minihell
minihell> cd << a
> a
minihell> S echo $?
0
minihell> pwd
/home/aamaral-
minihell> 
```

Activities Terminal nov 16 17:03

```
aamaral@42porto:~/CommonCore/minishell/minihell$ echo
minis > echo
minis > echo $?
0
minis > echo -n
minis > echo $?
0
minis > echo -n -n -n -n
minis > echo $?
0
minis > echo -nnnnnnnn
minis > echo $?
0
minis > echo -n2 -n hey
-n2 -n hey
minis > echo $?
0
minis > echo "Hello"World!
HelloWorld!
minis > echo $?
0
minis > echo "newline.\n\tbackslash:\\\\"
newline.\n\tbackslash:\\\\
minis > echo $?
0
minis > echo -n "in the same line"
in the same lines?
0
minis > 
```

Activities Terminal nov 16 17:03

```
aamaral@42porto:~$ echo
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo -n
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo -n -n -n -n
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo -nnnnnnnn
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo -n2 -n hey
-n2 -n hey
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo "Hello, World!"
Hello, World!
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo "Hello"World!
HelloWorld!
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo newline.\n\tbackslash:\\\\"
> \
aamaral@42porto:~$ echo "newline.\n\tbackslash:\\\\"
newline.\n\tbackslash:\\\\
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ echo -n "in the same line"
in the same line
aamaral@42porto:~$ echo $?
0
aamaral@42porto:~$ 
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:12

```

minis > echo "ls > a.txt d 'a'"
ls > a.txt d 'a'
minis > echo $?
0
minis > echo "ls > '$USER' 'a'"
ls > 'aamaral.' a
minis > echo $?
0
minis > echo '$HOME > ho | me.txt'
$HOME > ho | me.txt
minis > echo $?
0
minis > echo ' '
minis > echo $?
0
minis > echo ~
minis > echo $?
0
minis > echo ~/-
~/-
minis > echo $?
0
minis > echo -/12345
-/12345
minis > echo $?
0
minis > echo -12345
-12345
minis > echo $?
0
minis > echo -> ^C
minis > echo -
/home/aamaral-
minis > echo $?
0
minis > echo -/
/home/aamaral -/
minis > echo $?
0
minis > echo -/12345
-/home/aamaral-/12345
minis > echo $?
0
minis > echo -12345
-12345
minis > echo $?
0
minis > echo $
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:19

```

minis > echo | ls
$USER' a.txt b.txt c.txt h.txt libft minishell
aamaral- bin d.txt include l.txt src
ab b.txt f.txt k.txt Makefile t.txt
minis > echo $?
0
minis > ls | echo
minis > echo $?
0
minis > wrong | echo
wrong: command not found
minis > echo $?
0
minis > echo | wrong
wrong: command not found
minis > echo $?
0
minis > cat a.txt
127
minis > echo > a.txt
minis > echo $?
0
minis > cat a.txt
anything
minis > echo < a.txt
minis > echo $?
0
minis > echo $
```

aamaral@42porto:~/CommonCore/minishell/minihell\$ echo | ls
\$USER' ab bin c.txt d.txt include libft Makefile src
aamaral- a.txt b.txt f.txt k.txt l.txt minishell t.txt
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$ ls | echo
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$ wrong | echo
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo | wrong
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo > a.txt
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$ cat a
cat: a: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell\$ cat a.txt
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo anything > a.txt
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$ cat a.txt
anything
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo < a.txt
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:23

```

minishell> echo < naoexiste
naoexiste: No such file or directory
minishell> echo $?
1
minishell> echo << a
heredoc>
heredoc> a
minishell> echo $?
0
minishell> echo ~
~-
minishell> echo $?
0
minishell> echo ++
--+
minishell> echo $?
0
minishell> 
```

aamaral@42porto:~/CommonCore/minishell/minihell\$ echo < naoexiste
bash: naoexiste: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
1
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo << a
>
> a
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$?
0
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo ~-
~/home/aamaral-
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo ~-
~/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$OLDPWD
~/home/aamaral-
aamaral@42porto:~/CommonCore/minishell/minihell\$ echo \$PWD
~/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell\$

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:26

```
XDG_CURRENT_DESKTOP=ubuntu:GNOME
VTE_VERSION=6800
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/92602159_7a4b_4564_800b_e03fc4
00181b
GNOME_SETUP_DISPLAY=:1
LESSCLOSE=/usr/bin/lesspipe %s %
XDG_SESSION_CLASS=user
TERM=xterm-256color
LC_IDENTIFICATION=pt_PT.UTF-8
LESSOPEN=| /usr/bin/lesspipe %
USER=aamaral-
GNOME_TERMINAL_SERVICE=:1.100
DISPLAY=:0
SHLVL=1
LC_TELEPHONE=pt_PT.UTF-8
QT_IM_MODULE=ibus
LC_MEASUREMENT=pt_PT.UTF-8
DBUS_STARTER_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a06572
65562beb
LC_TYPE=pt_PT.UTF-8
XDG_RUNTIME_DIR=/run/user/1000
LC_TIME=pt_PT.UTF-8
XDG_DATA_DIRS=/usr/share/ubuntu:/usr/local/share/:/var/lib/snap/de
sktop
PATH=/home/aamaral-/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bl
n:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
GDMSESSION=ubuntu
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a06
57265562beb
LC_NUMERIC=pt_PT.UTF-8
_=./minishell
minishell> echo $?
0
minishell>
```

aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:26

```
VTE_VERSION=6800
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/77db950f_46b5_45a6_bfd6_d9dbe4
3fd4d
GNOME_SETUP_DISPLAY=:1
LESSCLOSE=/usr/bin/lesspipe %s %
XDG_SESSION_CLASS=user
TERM=xterm-256color
LC_IDENTIFICATION=pt_PT.UTF-8
LESSOPEN=| /usr/bin/lesspipe %
USER=aamaral-
GNOME_TERMINAL_SERVICE=:1.100
DISPLAY=:0
SHLVL=1
LC_TELEPHONE=pt_PT.UTF-8
QT_IM_MODULE=ibus
LC_MEASUREMENT=pt_PT.UTF-8
DBUS_STARTER_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a06572
65562beb
LC_TYPE=pt_PT.UTF-8
XDG_RUNTIME_DIR=/run/user/1000
LC_TIME=pt_PT.UTF-8
XDG_DATA_DIRS=/usr/share/ubuntu:/usr/local/share/:/var/lib/snap/de
sktop
PATH=/home/aamaral-/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bl
n:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
GDMSESSION=ubuntu
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a06
57265562beb
LC_NUMERIC=pt_PT.UTF-8
_=./minishell
OLDPWD=/home/aamaral-
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:30

```
minishell> env -n
minishell buildin specific: Invalid argument
minishell> echo $?
2
minishell> env a
minishell buildin specific: Invalid argument
minishell> echo $?
2
minishell> env | wc -l
56
minishell> echo $?
0
minishell> env | grep PATH
PATH=/home/aamaral-/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bl
n:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
minishell> echo $?
0
minishell> env | grep NAOEXISTE
minishell> echo $?
1
minishell> ls | env
SHELL=/bin/bash
SESSION_MANAGER=local/42porto:@tmp/.ICE-unix/1616,unix/42porto:/tmp/.ICE-unix/
1616
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_DESKTOP_SESSION_ID=thls-is-deprecated
LC_ADDRESS=pt_PT.UTF-8
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_PT.UTF-8
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
XMODIFIERS=@l=ibus
```

aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:30

```
env -n
env: invalid option `n'
Try `env --help' for more information.
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
125
aamaral@42porto:~/CommonCore/minishell/minihell$ env a
env: `a': No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ env | wc -l
57
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ env | grep PATH
PATH=/home/aamaral-/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bl
n:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ env | grep NAOEXISTE
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | env
SHELL=/bin/bash
SESSION_MANAGER=local/42porto:@tmp/.ICE-unix/1616,unix/42porto:/tmp/.ICE-unix/
1616
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_DESKTOP_SESSION_ID=thls-is-deprecated
LC_ADDRESS=pt_PT.UTF-8
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_PT.UTF-8
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
XMODIFIERS=@l=ibus
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:33

```
minishell> env | ls
'SUSER' a.txt c.txt h.txt libft minishell
aamaral_ bin d.txt include l.txt src
ab b.txt f.txt k.txt Makefile t.txt
minishell> echo $?
0
minishell> wrong | env
wrong: command not found
SHELL=/bin/bash
SESSION_MANAGER=local/42porto:@tmp/.ICE-unix/1616,unix/42porto:/tmp/.ICE-unix/
1616
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_DESKTOP_SESSION_ID=thls-is-deprecated
LC_ADDRESS=pt_PT.UTF-8
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_PT.UTF-8
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
XMODIFIERS=@l=ibus
DESKTOP_SESSION=ubuntu
LC_MONETARY=pt_PT.UTF-8
GTK_MODULES=pall:atk:bridge
DBUS_STARTER_BUS_TYPE=session
PWD=/home/aamaral-/CommonCore/minishell/minihell
LOGNAME=aamaral-
XAUTHORITY=/run/user/1000/.mutter-Xwaylandauth.GF3UE2
HOME=/home/aamaral-
USERNAME=aamaral-
IM_CONFIG_PHASE=1
```

aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:33

```
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/77db950f_46b5_45a6_bfd6_d9dbe4
3fd4d
GNOME_SETUP_DISPLAY=:1
LESSCLOSE=/usr/bin/lesspipe %s %
XDG_SESSION_CLASS=user
TERM=xterm-256color
LC_IDENTIFICATION=pt_PT.UTF-8
LESSOPEN=| /usr/bin/lesspipe %
USER=aamaral-
GNOME_TERMINAL_SERVICE=:1.100
DISPLAY=:0
SHLVL=1
LC_TELEPHONE=pt_PT.UTF-8
QT_IM_MODULE=ibus
LC_MEASUREMENT=pt_PT.UTF-8
DBUS_STARTER_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a06572
65562beb
LC_TYPE=pt_PT.UTF-8
XDG_RUNTIME_DIR=/run/user/1000
LC_TIME=pt_PT.UTF-8
XDG_DATA_DIRS=/usr/share/ubuntu:/usr/local/share/:/var/lib/snap/de
sktop
PATH=/home/aamaral-/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bl
n:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
GDMSESSION=ubuntu
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a06
57265562beb
LC_NUMERIC=pt_PT.UTF-8
_=./minishell
OLDPWD=/home/aamaral-
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$
```

Activities Terminal nov 16 17:42

```
aamaral@42porto:~/CommonCore/minishell/minihell$ env | wrong
wrong: command not found
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ env -n | ls
minishell buildin specific: Invalid argument
'$USER'    a.txt   c.txt   h.txt   libft   minishell
aamaral- bin   d.txt   include l.txt   src
ab         b.txt   f.txt   k.txt   Makefile t.txt
minishell > echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | env -n
minishell buildin specific: Invalid argument
aamaral@42porto:~/CommonCore/minishell/minihell$ env -n | ls
minishell buildin specific: Invalid argument
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ env a | ls
minishell buildin specific: Invalid argument
'$USER'    a.txt   c.txt   h.txt   libft   minishell
aamaral- bin   d.txt   include l.txt   src
ab         b.txt   f.txt   k.txt   Makefile t.txt
minishell > echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | env a
env: 'a': No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
127
aamaral@42porto:~/CommonCore/minishell/minihell$ env > a.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cat a.txt
SHELL=/bin/bash
SESSION_MANAGER=local/42porto:@/tmp/.ICE-unix/1616,unix/42porto:/tmp/.ICE-unix/1616
QT_ACCESSIBILITY=1
COLORTERM=truecolor
aamaral@42porto:~/CommonCore/minishell/minihell$
```

Activities Terminal nov 16 17:43

```
=====
==4646==ERROR: LeakSanitizer: detected memory leaks
=====
Direct leak of 32 byte(s) in 1 object(s) allocated from:
#0 0x7f46be8b4887 in __interceptor_malloc ../../../../src/libsanitizer/asan
/asan_malloc_linux.cpp:145
#1 0x7f46bf244bac in xmalloc (/lib/x86_64-linux-gnu/libreadline.so.8+0x39ba
c)

Indirect leak of 34 byte(s) in 2 object(s) allocated from:
#0 0x7f46be8b4887 in __interceptor_malloc ../../../../src/libsanitizer/asan
/asan_malloc_linux.cpp:145
#1 0x7f46bf244bac in xmalloc (/lib/x86_64-linux-gnu/libreadline.so.8+0x39ba
c)

SUMMARY: AddressSanitizer: 66 byte(s) leaked in 3 allocation(s).
minishell >
```

Activities Terminal nov 16 17:46

```
XDG_CURRENT_DESKTOP=ubuntu:GNOME
VTE_VERSION=6800
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/92602159_7a4b_4564_800b_e03fc4
00101b
GNOME_SESSION_CLASS=user
TERM=xterm-256color
LC_IDENTIFICATION=pt_PT.UTF-8
LESSOPEN=| /usr/bin/lesspipe %
USER=aamaral-
GNOME_TERMINAL_SERVICE=:1.100
DISPLAY=:0
SHLVL=2
LC_TELEPHONE=pt_PT.UTF-8
QT_IM_MODULEibus
LC_MEASUREMENT=pt_PT.UTF-8
DBUS_STARTER_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a065726
65562beb
LC_CTYPE=pt_PT.UTF-8
XDG_RUNTIME_DIR=/run/user/1000
LC_TIME=pt_PT.UTF-8
XDG_DATA_DIRS=/usr/share/ubuntu:/usr/local/share/:/usr/share/:/var/lib/snap/de
sktop
PATH=/home/aamaral/_/local/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bl
n:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
GDMSESSION=ubuntu
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/1000/bus,guid=af1778296914ed6e38a0
657265562beb
LC_NUMERIC=pt_PT.UTF-8
_=./minishell
minishell > echo $?
0
minishell >
```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:48

```

minishell> env < naoexiste
naoexiste: No such file or directory
minishell> echo $?
1
minishell> env << a
heredoc> nada
heredoc> a
SHELL=/bin/bash
SESSION_MANAGER=local:42porto:@/tmp/.ICE-unix/1616,unix/42porto:/tmp/.ICE-unix/1616
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_NEXTGEN_SESSION_ID=thts-is-deprecated
LC_ADDRESSING_CTYPE=UTF-8
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_PT.UTF-8
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
XMODIFIERS=@im-libus
DESKTOP_SESSION=ubuntu
LC_MONETARY=pt_PT.UTF-8
GTK_MODULES=gail:atk:bridge
DBUS_STARTER_BUS_TYPE=session
PWD=/home/aamaral-/CommonCore/minishell/minihell
LOGNAME=aamaral
XDG_SESSION_DESKTOP=ubuntu
XDG_SESSION_TYPE=wayland
SYSTEMD_EXEC_PID=1616
XAUTHORITY=/run/user/1000/.mutter-Xwaylandauth.GF3UE2
HOME=/home/aamaral-
USERNAME=aamaral-
IN_CONFIG_PHASE=1
LC_PAPER=pt_PT.UTF-8

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:48

```

aamaral@42porto:~/CommonCore/minishell/minihell$ env < naoexiste
bash: naoexiste: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
'aamaral@42porto:~/CommonCore/minishell/minihell$ env << a
> nada
> a
SHELL=/bin/bash
SESSION_MANAGER=local:42porto:@/tmp/.ICE-unix/1616,unix/42porto:/tmp/.ICE-unix/1616
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_NEXTGEN_SESSION_ID=thts-is-deprecated
LC_ADDRESSING_CTYPE=UTF-8
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_PT.UTF-8
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
XMODIFIERS=@im-libus
DESKTOP_SESSION=ubuntu
LC_MONETARY=pt_PT.UTF-8
GTK_MODULES=gail:atk:bridge
DBUS_STARTER_BUS_TYPE=session
PWD=/home/aamaral-/CommonCore/minishell/minihell
LOGNAME=aamaral
XDG_SESSION_DESKTOP=ubuntu
XDG_SESSION_TYPE=wayland
SYSTEMD_EXEC_PID=1616
XAUTHORITY=/run/user/1000/.mutter-Xwaylandauth.GF3UE2
HOME=/home/aamaral-
USERNAME=aamaral-
IN_CONFIG_PHASE=1
LC_PAPER=pt_PT.UTF-8

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:53

```

minis > pwd
/home/aamaral-/CommonCore/minishell/minihell
minis > echo $?
0
minis > pwd -n
minishell: pwd: -n: invalid option
pwd: usage: pwd
minis > echo $?
2
minis > pwd a
/home/aamaral-/CommonCore/minishell/minihell
minis > echo $?
0
minis > ls | pwd
/home/aamaral-/CommonCore/minishell/minihell
minis > echo $?
0
minis > pwd | ls
'${USER}' a.txt c.txt h.txt libft minishell
aamaral- b.txt d.txt include l.txt src
ab b.txt f.txt k.txt Makefile t.txt
minis > echo $?
0
minis > pwd > a.txt
minis > echo $?
0
minis > cat a.txt
/home/aamaral-/CommonCore/minishell/minihell
minis > pwd < a.txt
/home/aamaral-/CommonCore/minishell/minihell
minis > echo $?
0
minis >

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:53

```

aamaral@42porto:~/CommonCore/minishell/minihell$ pwd
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
'aamaral@42porto:~/CommonCore/minishell/minihell$ pwd -n
bash: pwd: -n: invalid option
pwd: usage: pwd [-LP]
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
2
aamaral@42porto:~/CommonCore/minishell/minihell$ pwd a
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | pwd
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ pwd | ls
'${USER}' ab b.txt c.txt f.txt include libft Makefile src
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ pwd > a.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
'aamaral@42porto:~/CommonCore/minishell/minihell$ cat a.txt
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ pwd < a.txt
/home/aamaral-/CommonCore/minishell/minihell
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ []

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 17:56

```

minishell> pwd < naoexiste
naoexiste: No such file or directory
minishell> echo $?
1
minishell> pwd << a
heredoc> nada
heredoc> a
/home/aamaral-/CommonCore/minishell/minihell
minishell> echo $?
0
minishell> []

```

Activities Terminal nov 16 17:58

```
aamaral@42porto:~/CommonCore/minishell/minihell
```

```
* .xwd=01;35*.*.yuw=01;35*.*.cgn=01;35*.*.enf=01;35*.*.ogv=01;35*.*.acm=0
0;36*.*.au=00;36*.*.flac=00;36*.*.m4a=00;36*.*.mid=00;36*.*.mka=00;36*.*.
.mp3=00;36*.*.mpc=00;36*.*.ogg=00;36*.*.ra=00;36*.*.wav=00;36*.*.oga=00;36*.*.opus=00
:36*.*.spx=00;36*.*.xspf=00;36*.*.declare -x PATH="/home/aamaral/.local/bin:/usr/local/sbin:/usr/local/bin:/usr/
sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin"
declare -x PWD="/home/aamaral/CommonCore/minishell/minihell"
declare -x QT_ACCESSIBILITY="1"
declare -x QT_IM_MODULE="ibus"
declare -x SESSION_MANAGER="local/42porto:@tmp/.ICE-unix/1616,unix/42porto:/tmp/
.p/.ICE-unix/1616"
declare -x SHELL="/bin/bash"
declare -x SHLVL="2"
declare -x SSH_AGENT_LAUNCHER="gnome-keyring"
declare -x SSH_AUTH_SOCK="/run/user/1000/keyring/ssh"
declare -x STERMD_EXEC_ID=1616
declare -x TERM=xterm-256color
declare -x USER=aamaral
declare -x USERNAME="aamaral"
declare -x VTE_VERSION="6800"
declare -x WAYLAND_DISPLAY="wayland-0"
declare -x XAUTHORITY="/run/user/1000/.mutter-Xwaylandauth.GF3UE2"
declare -x XDG_CONFIG_DIRS="/etc/xdg/xdg-ubuntu:/etc/xdg"
declare -x XDG_CURRENT_DESKTOP="ubuntu:GNOME"
declare -x XDG_DATA_DIRS="/usr/share/ubuntu:/usr/local/share:/usr/share/:/var/
lib/snap/desktop"
declare -x XDG_MENU_PREFIX="gnome-"
declare -x XDG_RUNTIME_DIR="/run/user/1000"
declare -x XDG_SESSION_CLASS="user"
declare -x XDG_SESSION_DESKTOP="ubuntu"
declare -x XDG_SESSION_TYPE="wayland"
declare -x XMODIFIERS="@im=ibus"
minis > echo $?
0
minis >
```

```
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$
```

Activities Terminal nov 16 18:01

```
aamaral@42porto:~/CommonCore/minishell/minihell
```

```
minishell> export -k
minishell: export: -k: invalid option
export: usage: export [name[=value] ...]
minishell: export: -k: invalid option
export: usage: export [name[=value] ...]
minishell> echo $?
2
minishell> export | grep XDG
declare -x XDG_CONFIG_DIRS="/etc/xdg/xdg-ubuntu:/etc/xdg"
declare -x XDG_CURRENT_DESKTOP="ubuntu:GNOME"
declare -x XDG_DATA_DIRS="/usr/share/ubuntu:/usr/local/share:/usr/share/:/var/
lib/snap/desktop"
declare -x XDG_MENU_PREFIX="gnome-"
declare -x XDG_RUNTIME_DIR="/run/user/1000"
declare -x XDG_SESSION_CLASS="user"
declare -x XDG_SESSION_DESKTOP="ubuntu"
declare -x XDG_SESSION_TYPE="wayland"
minishell> echo $?
0
minishell> ls | export
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus,guid=af177829
6914ede6e38a065726562beb"
declare -x DBUS_STARTER_ADDRESS="unix:path=/run/user/1000/bus,guid=af1778296914
ed6e38a065726562beb"
declare -x DBUS_STARTER_BUS_TYPE="session"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=:0
declare -x GDMSESSION="ubuntu"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SETUP_DISPLAY=:1
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/92602159_7a4b_
800b_e03fc400181b"
declare -x GNOME_TERMINAL_SERVICE=:1.100"
declare -x
```

```
aamaral@42porto:~/CommonCore/minishell/minihell$ export | grep XDG
declare -x XDG_CONFIG_DIRS="/etc/xdg/xdg-ubuntu:/etc/xdg"
declare -x XDG_CURRENT_DESKTOP="ubuntu:GNOME"
declare -x XDG_DATA_DIRS="/usr/share/ubuntu:/usr/local/share:/usr/share/:/var/
lib/snap/desktop"
declare -x XDG_MENU_PREFIX="gnome-"
declare -x XDG_RUNTIME_DIR="/run/user/1000"
declare -x XDG_SESSION_CLASS="user"
declare -x XDG_SESSION_DESKTOP="ubuntu"
declare -x XDG_SESSION_TYPE="wayland"
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | export
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus,guid=af177829
6914ede6e38a065726562beb"
declare -x DBUS_STARTER_ADDRESS="unix:path=/run/user/1000/bus,guid=af1778296914
ed6e38a065726562beb"
declare -x DBUS_STARTER_BUS_TYPE="session"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=:0
declare -x GDMSESSION="ubuntu"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SETUP_DISPLAY=:1
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/77db950f_46b5_45a6_
bf6d_d9dbe443fd4d"
declare -x GNOME_TERMINAL_SERVICE=:1.100"
declare -x GTK_MODULES="gail:atk-bridge"
declare -x HOME="/home/aamaral."
aamaral@42porto:~/CommonCore/minishell/minihell$
```

Activities Terminal nov 16 18:04

```
aamaral@42porto:~/CommonCore/minishell/minihell
```

```
minishell> echo $?
0
minishell> export -k | ls
minishell: export: -k: invalid option
export: usage: export [name[=value] ...]
$USER ab bin c.txt f.txt include libft Makefile src
aamaral .bin d.txt include l.txt src
ab b.txt f.txt k.txt Makefile t.txt
minishell> echo $?
0
minishell> ls | export -u
minishell: export: -u: invalid option
export: usage: export [name[=value] ...]
minishell> echo $?
2
minishell> export > a.txt
minishell> echo $?
0
minishell> cat a.txt
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus,guid=af177829
6914ede6e38a065726562beb"
declare -x DBUS_STARTER_ADDRESS="unix:path=/run/user/1000/bus,guid=af1778296914
ed6e38a065726562beb"
declare -x DBUS_STARTER_BUS_TYPE="session"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=:0
declare -x GDMSESSION="ubuntu"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SETUP_DISPLAY=:1
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/77db950f_46b5_45a6_
bf6d_d9dbe443fd4d"
declare -x GNOME_TERMINAL_SERVICE=:1.100"
declare -x GTK_MODULES="gail:atk-bridge"
```

```
aamaral@42porto:~/CommonCore/minishell/minihell$ export | ls
$USER ab bin c.txt f.txt include libft Makefile src
aamaral .a.txt b.txt d.txt h.txt k.txt l.txt minishell t.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ export -k | ls
bash: export: -k: invalid option
export: usage: export [-fn] [name[=value] ...] or export -p
$USER ab bin c.txt f.txt include libft Makefile src
aamaral .a.txt b.txt d.txt h.txt k.txt l.txt minishell t.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | export -u
bash: export: -u: invalid option
export: usage: export [-fn] [name[=value] ...] or export -p
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
2
aamaral@42porto:~/CommonCore/minishell/minihell$ export > a.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ cat a.txt
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus,guid=af177829
6914ede6e38a065726562beb"
declare -x DBUS_STARTER_ADDRESS="unix:path=/run/user/1000/bus,guid=af1778296914
ed6e38a065726562beb"
declare -x DBUS_STARTER_BUS_TYPE="session"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=:0
declare -x GDMSESSION="ubuntu"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SETUP_DISPLAY=:1
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/77db950f_46b5_45a6_
bf6d_d9dbe443fd4d"
declare -x GNOME_TERMINAL_SERVICE=:1.100"
declare -x GTK_MODULES="gail:atk-bridge"
```

Activities Terminal nov 16 18:06

```
aamaral@42porto:~/CommonCore/minishell/minihell$ export < a.txt
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus,guid=af177829
6914ed6e38a0657265562beb"
declare -x DBUS_STARTER_ADDRESS="unix:path=/run/user/1000/bus,guid=af1778296914e
ed6e38a0657265562beb"
declare -x DBUS_STARTER_BUS_TYPE="session"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=:0"
declare -x GDMSESSION="ubuntu"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SETUP_DISPLAY=:1"
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/92602159_7a4b_4564
800b_e03f400181b"
declare -x GNAME_TERMINAL_SERVICE=:1.100"
declare -x GTK_MODULES="gail:atk-bridge"
declare -x HOME="/home/aamaral"
declare -x IM_CONFIG_PHASE=1"
declare -x LANG=en_US.UTF-8"
declare -x LC_ADDRESS="pt_PT.UTF-8"
declare -x LC_CTYPE="pt_PT.UTF-8"
declare -x LC_IDENTIFICATION="pt_PT.UTF-8"
declare -x LC_MEASUREMENT="pt_PT.UTF-8"
declare -x LC_MONETARY="pt_PT.UTF-8"
declare -x LC_NAME="pt_PT.UTF-8"
declare -x LC_NUMERIC="pt_PT.UTF-8"
declare -x LC_PAPER="pt_PT.UTF-8"
declare -x LC_TELEPHONE="pt_PT.UTF-8"
declare -x LC_TIME="pt_PT.UTF-8"
declare -x LESSCLOSE="/usr/bin/lesspipe %s %s"
declare -x LESSOPEN="| /usr/bin/lesspipe %s"
declare -x LOGNAME="aamaral"
declare -x LS_COLORS="rs=0:di=01:34:ln=01:36:mh=00:pi=40:33:so=01:35:do=01:35:bd
=40:33:01:cd=40:33:01:or=40:31:01:mi=00:su=37:41:sg=30:43:ca=30:41:tw=30:42:ow=3
b7d6_d9db4e43fd4d"
```

Activities Terminal nov 16 18:09

```
aamaral@42porto:~/CommonCore/minishell/minihell$ export < naoexiste
bash: naoexiste: No such file or directory
aamaral@42porto:~/CommonCore/minishell/minihell$ echo ?
|
|'aamaral@42porto:~/CommonCore/minishell/minihell$ export <> a
heredoc: nada
heredoc: a
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus,guid=af177829
6914ed6e38a0657265562beb"
declare -x DBUS_STARTER_ADDRESS="unix:path=/run/user/1000/bus,guid=af1778296914e
ed6e38a0657265562beb"
declare -x DBUS_STARTER_BUS_TYPE="session"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=:0"
declare -x GDMSESSION="ubuntu"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SETUP_DISPLAY=:1"
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/92602159_7a4b_4564
800b_e03f400181b"
declare -x GNAME_TERMINAL_SERVICE=:1.100"
declare -x GTK_MODULES="gail:atk-bridge"
declare -x HOME="/home/aamaral"
declare -x IM_CONFIG_PHASE=1"
declare -x LANG=en_US.UTF-8"
declare -x LC_ADDRESS="pt_PT.UTF-8"
declare -x LC_CTYPE="pt_PT.UTF-8"
declare -x LC_IDENTIFICATION="pt_PT.UTF-8"
declare -x LC_MEASUREMENT="pt_PT.UTF-8"
declare -x LC_MONETARY="pt_PT.UTF-8"
declare -x LC_NAME="pt_PT.UTF-8"
declare -x LC_NUMERIC="pt_PT.UTF-8"
declare -x LC_PAPER="pt_PT.UTF-8"
declare -x LC_TELEPHONE="pt_PT.UTF-8"
declare -x LC_TIME="pt_PT.UTF-8"
declare -x LESSCLOSE="/usr/bin/lesspipe %s %s"
declare -x LESSOPEN="| /usr/bin/lesspipe %s"
declare -x LOGNAME="aamaral"
declare -x LS_COLORS="rs=0:di=01:34:ln=01:36:mh=00:pi=40:33:so=01:35:do=01:35:bd
=40:33:01:cd=40:33:01:or=40:31:01:mi=00:su=37:41:sg=30:43:ca=30:41:tw=30:42:ow=3
b7d6_d9db4e43fd4d"
```

Activities Terminal nov 16 18:22

```
aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR=42 | ls
'aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR=42 | ls
'`SUSER` ab bin c.txt f.txt include libt Makefile src
aamaral- a.txt b.txt d.txt h.txt k.txt l.txt minishell t.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo ?
|
|'aamaral@42porto:~/CommonCore/minishell/minihell$ export | grep VAR
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | export VAR=42
aamaral@42porto:~/CommonCore/minishell/minihell$ echo ?
|
|'aamaral@42porto:~/CommonCore/minishell/minihell$ export | grep VAR
aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR=42
aamaral@42porto:~/CommonCore/minishell/minihell$ echo ?
|
|'aamaral@42porto:~/CommonCore/minishell/minihell$ export | grep VAR
declare -x VAR="42"
aamaral@42porto:~/CommonCore/minishell/minihell$ env | grep VAR
`VAR=42
aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR="novo valor"
aamaral@42porto:~/CommonCore/minishell/minihell$ echo ?
|
|'aamaral@42porto:~/CommonCore/minishell/minihell$ export | grep VAR
declare -x VAR="novo valor"
aamaral@42porto:~/CommonCore/minishell/minihell$ env | grep VAR
`VAR=novo valor
aamaral@42porto:~/CommonCore/minishell/minihell$ echo ?
```

Activities Terminal nov 16 18:33

```
aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR="this is | a > value < not input"
minishell> echo $?
0
minishell> env | grep VAR
VAR=this is | a > value < not input
minishell> export | grep VAR
declare -x VAR="this is | a > value < not input"
minishell> export VAR=
minishell> echo $?
0
minishell> export | grep VAR
declare -x VAR=""
minishell> env | grep VAR
VAR=
minishell> export VAR=$USER
minishell> echo $?
0
minishell> export | grep VAR
declare -x VAR="aamaral"
minishell> env | grep VAR
VAR=aamaral-
minishell> export VAR="teste de aspas"
minishell> export VAR=teste de aspas
minishell> echo $?
0
minishell> export -k VAR=42
minishell: export: -k: invalid option
export: usage: export[name=value] ...
minishell: export: -k: invalid option
export: usage: export[name=value] ...
minishell> echo $?
2
minishell>
```

Activities Terminal nov 16 18:33

```
aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR="this is | a < value < not input"
minishell> echo $?
0
minishell> env | grep VAR
VAR=this is | a < value < not input
minishell> export | grep VAR
declare -x VAR="this is | a < value < not input"
minishell> export VAR=
minishell> echo $?
0
minishell> export | grep VAR
declare -x VAR=""
minishell> env | grep VAR
VAR=
minishell> export VAR=$USER
minishell> echo $?
0
minishell> export | grep VAR
declare -x VAR="aamaral"
minishell> env | grep VAR
VAR=aamaral-
minishell> export VAR="teste de aspas"
minishell> export VAR=teste de aspas
minishell> echo $?
0
minishell> export -k VAR=42
bash: export: -k: invalid option
export: usage: export [-fn] [name[=value]] ...
minishell> export -k VAR=42
bash: export: -k: invalid option
export: usage: export [-fn] [name[=value]] ...
minishell> echo $?
2
minishell>
```

Activities Terminal nov 16 18:45

```
aamaral@42porto:~/CommonCore/minishell/minihell$ minishell> export a.42 | ls
minishell: export: 'a.42' not a valid identifier
'SUSER' ab b.txt c.txt f.txt libft minishell
aamaral bin d.txt include l.txt src
ab b.txt f.txt k.txt Makefile t.txt
minishell> echo $?
0
minishell> ls | export a.42
minishell: export: 'a.42' not a valid identifier
minishell> echo $?
1
minishell> export V/A/R=aamaral-
minishell: export: '/V/A/R=aamaral-' not a valid identifier
minishell: export: 'V/A/R=aamaral-' not a valid identifier
minishell> echo $?
1
minishell> export =aamaral-
minishell: export: '=aamaral-' not a valid identifier
minishell: export: '=aamaral-' not a valid identifier
minishell> echo $?
1
minishell> export VAR
minishell> echo $?
0
minishell> export VAR=user
minishell> echo $?
0
minishell> env | grep VAR
VAR=user
minishell> export | grep VAR
declare -x VAR="user"
minishell> echo $?
```

Activities Terminal nov 16 18:45

```
aamaral@42porto:~/CommonCore/minishell/minihell$ aamaral@42porto:~/CommonCore/minishell/minihell$ export a.42 | ls
bash: export: 'a.42' not a valid identifier
'SUSER' ab b.txt c.txt f.txt libft Makefile src
aamaral bin d.txt include l.txt k.txt minishell t.txt
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ls | export a.42
bash: export: 'a.42': not a valid identifier
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ export V/A/R=aamaral-
bash: export: '/V/A/R=aamaral-': not a valid identifier
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ export =aamaral-
bash: export: '=aamaral-' not a valid identifier
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ export VAR=user
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ export | grep VAR
declare -x VAR="user"
aamaral@42porto:~/CommonCore/minishell/minihell$ env | grep VAR
VAR=user
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
```

Activities Terminal nov 16 18:56

```
aamaral@42porto:~/CommonCore/minishell/minihell$ minishell> export XVAR YVAR=aamaral-
minishell> echo $?
0
minishell> env | grep VAR
YVAR=aamaral-
minishell> export | grep VAR
declare -x VAR="user"
declare -x XVAR
declare -x YVAR="aamaral"
minishell> export =
minishell: export: '=' not a valid identifier
minishell: export: '=' not a valid identifier
minishell> echo $?
1
minishell> export IVAR=teste
minishell: export: 'IVAR=teste' not a valid identifier
minishell> echo $?
1
minishell> export VAR1=teste
minishell> echo $?
0
minishell> env | grep VAR
VAR1=teste
minishell> export YVAR=aamaral-
minishell> export VAR1=teste
minishell> export TESTE=ABCD
minishell> echo $?
0
minishell> export $TESTE=12345
minishell> echo $?
0
minishell> env | grep ABCD
TESTE=ABCD
minishell> export ABCD=12345
minishell> echo $?
0
minishell> env | grep ABCD
TESTE=ABCD
aamaral@42porto:~/CommonCore/minishell/minihell$
```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:10
aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:10
minshl: > export $ABCD=more
minshl: export: `12345=more' not a valid identifier
minshl: > echo $?
1
minshl: > export testandoa testandob
minshl: > echo $?
0
minshl: > export | grep testando
declare -x testandoa
declare -x testandob
minshl: > env | grep testando
minshl: > export testandoa=24 testando=42
minshl: > echo $?
0
minshl: > export | grep testando
declare -x testando=42
declare -x testandoa=24
declare -x testandob
minshl: > export | grep testando
minshl: > export testandoa=24 testandoa=42
minshl: > export | grep testando
declare -x testando=42
declare -x testandoa=42
declare -x testandob
minshl: > export b=42 <=42
minshl: > echo $?
0
minshl: > export | grep {b,c}
minshl: > export | grep b
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus,guid=af177829
6914ed6e3ba657265562be"
declare -x DBUS_STARTER_ADDRESS="unix:path=/run/user/1000/bus,guid=af1778296914
ed6e3ba657265562be"
declare -x DESKTOP_SESSION="ubuntu"
declare -x GDMSESSION="ubuntu"

```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:25
aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:25
minshl: > export "VAR= 42"
minshl: > echo $?
0
minshl: > env | grep VAR
VAR= 42
YVAR=aamaral-
VAR1=teste
minshl: > export "VAR =42"
minshl: > echo $?
0
minshl: > export ""
minshl: export: ` ' not a valid identifier
minshl: export: ` ' not a valid identifier
minshl: > echo $?
1
minshl: > export TEST1="expand SUSER test"
minshl: > echo $?
0
minshl: > export | grep TEST1
declare -x TEST1="expand aamaral- test"
minshl: > export TEST2='wth single quotes $PATH'
minshl: > echo $?
0
minshl: > export | grep TEST2
declare -x TEST2="wth single quotes $PATH"
minshl: > export TEST3=too=many>equals
minshl: > echo $?
0
minshl: > export | grep TEST3
declare -x TEST3="too=many>equals"
minshl: > export TEST.12=TEST14/
minshl: export: `TEST.12' not a valid identifier
minshl: export: `TEST14/' not a valid identifier
minshl: export: `TEST.12' not a valid identifier
minshl: export: `TEST14/' not a valid identifier

```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:31
aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:31
minshl> unset
minshl> echo $?
0
minshl> unset a b c
minshl> echo $?
0
minshl> unset -k
minshl: unset: -k: invalid option
unset: usage: unset[name ...]
minshl: unset: -k: invalid option
unset: usage: unset[name ...]
minshl> echo $?
2
minshl> unset | ls
'SUSER'  a.txt  c.txt  h.txt  libft  minishell
aamaral-  bin   d.txt  include l.txt  src
ab      b.txt  f.txt  k.txt  Makefile t.txt
minshl> echo $?
0
minshl> ls | unset
minshl> echo $?
0
minshl> unset -k | ls
minshl: unset: -k: invalid option
unset: usage: unset[name ...]
'SUSER'  a.txt  c.txt  h.txt  libft  minishell
aamaral-  bin   d.txt  include l.txt  src
ab      b.txt  f.txt  k.txt  Makefile t.txt
minshl> echo $?
0
minshl> unset -k | ls
minshl: unset: -k: invalid option
unset: usage: unset[name ...]
'SUSER'  a.txt  c.txt  h.txt  libft  minishell
aamaral-  bin   d.txt  include l.txt  src

```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:40
minishell> ls | unset -k
minishell: unset: -k: invalid option
unset: usage: unset[name ...]
minishell> echo $?
2
minishell> unset > r.txt
minishell> echo $?
0
minishell> ls
'SUSER' a.txt c.txt h.txt libft minishell t.txt
aamaral- bin d.txt include l.txt r.txt
ab b.txt f.txt k.txt Makefile src
minishell> unset < r.txt
minishell> echo $?
0
minishell> unset < naoexiste
naoexiste: No such file or directory
minishell> echo $?
1
minishell> unset <> a
heredoc> nada
heredoc> a
minishell> echo $?
0
minishell> export VAR=42
minishell> export | grep VAR
declare -x VAR
declare -x VAR1="teste"
declare -x VAR="42"
declare -x XVAR
declare -x YVAR="aamaral-"
minishell> unset VAR | ls
'SUSER' a.txt c.txt h.txt libft minishell t.txt
aamaral- bin d.txt include l.txt r.txt
ab b.txt f.txt k.txt Makefile src

```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:47
minishell> unset VAR | ls
'SUSER' a.txt c.txt h.txt libft minishell t.txt
aamaral- bin d.txt include l.txt r.txt
ab b.txt f.txt k.txt Makefile src
minishell> echo $?
0
minishell> export | grep VAR
declare -x VAR
declare -x VAR1="teste"
declare -x VAR="42"
declare -x XVAR
declare -x YVAR="aamaral-"
minishell> ls | unset VAR
minishell> echo $?
0
minishell> export | grep VAR
declare -x VAR
declare -x VAR1="teste"
declare -x VAR="42"
declare -x XVAR
declare -x YVAR="aamaral-"
minishell> unset VAR=42
minishell> echo $?
0
minishell> export | grep VAR
declare -x VAR
declare -x VAR1="teste"
declare -x VAR="42"
declare -x XVAR
declare -x YVAR="aamaral-"
minishell> []

```

```

Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 19:58
minis> unset VAR=
minis> echo $?
0
minis> export | grep VAR
declare -x VAR
declare -x VAR1="teste"
declare -x VAR="42"
declare -x XVAR
declare -x YVAR="aamaral-"
minis> unset 42
minishell: unset: '42' not a valid identifier
minishell: unset: '42' not a valid identifier
minis> echo $?
1
minis> unset VA/R
minishell: unset: 'VA/R' not a valid identifier
minishell: unset: 'VA/R' not a valid identifier
minis> echo $?
1
minis> unset =
minishell: unset: '=' not a valid identifier
minishell: unset: '=' not a valid identifier
minis> echo $?
1
minis> unset VAR
minis> echo $?
0
minis> export | grep VAR
declare -x VAR
declare -x VAR1="teste"
declare -x XVAR
declare -x YVAR="aamaral-"
minis>

```

Activities Terminal aamaral@42porto: ~/CommonCore/minishell/minihell nov 16 20:03

```
1 minis > unset $USER
minishell: unset: 'aamaral-' not a valid identifier
minis > echo $?
1
minis > unset PATH
minis > echo $?
0
minis > ls
ls: command not found
minis > echo $?
127
minis > env
SHELL=/bin/bash
SESSION_MANAGER=local/42porto:@/tmp/.ICE-unix/1616,unix/42porto:/tmp/.ICE-unx/
1616
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_DESKTOP_SESSION_ID=this-is-deprecated
LC_ADDRESS=pt_PT.UTF-8
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_PT.UTF-8
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
XMODIFIERS=@im=ibus
DESKTOP_SESSION=ubuntu
LC_MONETARY=pt_PT.UTF-8
GTK_MODULES=gallatk-bridge
DBUS_STARTER_BUS_TYPE=session
PID=/home/aamaral-/CommonCore/minishell/minihell
LOGNAME=aamaral-
XDG_SESSION_DESKTOP=ubuntu
```

Activities Terminal aamaral@42porto: ~/CommonCore/minishell/minihell nov 16 20:07

```
minishell> unset HOME
minishell> echo $?
0
minishell> pwd
/home/aamaral-/CommonCore/minishell/minihell
minishell> echo $HOME
minishell> echo $?
0
minishell> cd
minishell: cd: HOME not set
minishell> echo $?
1
minishell>
```

Activities Terminal aamaral@42porto: ~/CommonCore/minishell/minihell nov 16 20:13

```
minis > exit 0 | exit 1
minis > sleep 5 | exit
minis > exit 1 2
exit
bash: exit: too many arguments
aamaral@42porto: ~/CommonCore/minishell/minihell$ echo $?
1
aamaral@42porto: ~/CommonCore/minishell/minihell$
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 20:22
minis > exit 0 | exit 1
minis > sleep 5 | exit
minis > exit 1 2
exit
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minis > exit a
exit
minis: exit: a: numeric argument required
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minis > exit a 2
exit
minis: exit: a: numeric argument required
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minis > exit 1 a
exit
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minis > exit /
exit
minis: exit: /: numeric argument required
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minis >
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 20:28
minis > "exit 1"
exit 1: command not found
minis > echo $?
127
minis > exit -5
exit
minis: exit: -5: numeric argument required
aamaral@42porto:~/CommonCore/minishell/minihell$ echo $?
0
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minis > exit > a.txt
minis > echo $?
0
minis > exit < a
a: No such file or directory
minis > echo $?
1
minis > exit << a
heredoc> nada
heredoc> a
minis > echo $?
```

```
Activities Terminal aamaral@42porto:~/CommonCore/minishell/minihell nov 16 20:40
minis> cat^C
minis> echo $?
0
minis> cat | cat^C
minis> echo $?
0
minis>
exit
aamaral@42porto:~/CommonCore/minishell/minihell$ ./minishell
minis> cat << a^C
minis> echo $?
S
minis> echo $?
0
minis> cat << a^C
minis> ./minishell
minis>
minis> ^C
minis> echo $?
0
minis>
exit
minis> echo $?
0
minis> ./minishell
minis>
minis> ^C
minis> echo $?
0
minis>
```