

Introduction to the command line

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Command line

UNIX commands

Exercises



About
Usage
Run the Pipeline
View All Requests
Contact
Previous Runs / Views

NanoPipe

New Request

Previous Request

ID ?

New Request

Target ? Upload File

Target File ?

Query File ?

Minimum Sequence Length ? 100

Email ?

Title ?

Last Parameters

Substitution Matrix

Load

Init

?

A

C

G

T

Use Matrix or Match Score / Mismatch Cost

A

5

-3

-2

-14

C

-7

6

-6

-9

G

-4

-6

6

-14

T

-14

-9

-8

5

Gap Existence Cost (-a) ? 10

Gap Extension Cost (-b) ? 4

Insertion Existence Cost (-A) ? 17

Insertion Extension Cost (-B) ? 3

Score Matrix applies to Forward Strand (-S) ? 1

Initial Matches Position (-k) ?

Maximum Score Drop (-x) ?

Run

View Human Test Case

View Plasmodium Test Case

Set Default Parameters

Reset

Terminal

File Edit View Search Terminal Help

```
felixm@adminx-OptiPlex-5050:~$ nanopipe_calc.pl -q input.query -t input.target
```



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Query File ?

Minimum Sequence Length ? 100

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Last Parameters

Substitution Matrix Load Init ?

	A	C	G	T
A	5	-3	-2	-14
C	-7	6	-6	-9
G	-4	-6	6	-14
T	-14	-9	-8	5

Use Matrix or Match Score / Mismatch Cost

Gap Existence Cost (-a) ? 10

Gap Extension Cost (-b) ? 4

Insertion Existence Cost (-A) ? 17

Insertion Extension Cost (-B) ? 3

Score Matrix applies to Forward Strand (-S) ? 1

Initial Matches Position (-k) ?

Maximum Score Drop (-x) ?

Run View Human Test Case View Plasmodium Test Case Set Default Parameters Reset

```
my $s_counter = 0;
my $align_start = 0;
my $align_end = 0;
my $chr = undef;
my $cwd = ${$_[0]};
my %hash = ();
my $prevM = "";

#Search for SNP positions in maf file
open(DATA, "<", $cwd."/calc.lastalign.maf") or die "Couldn't open maf file, $!";
while(<DATA>) {

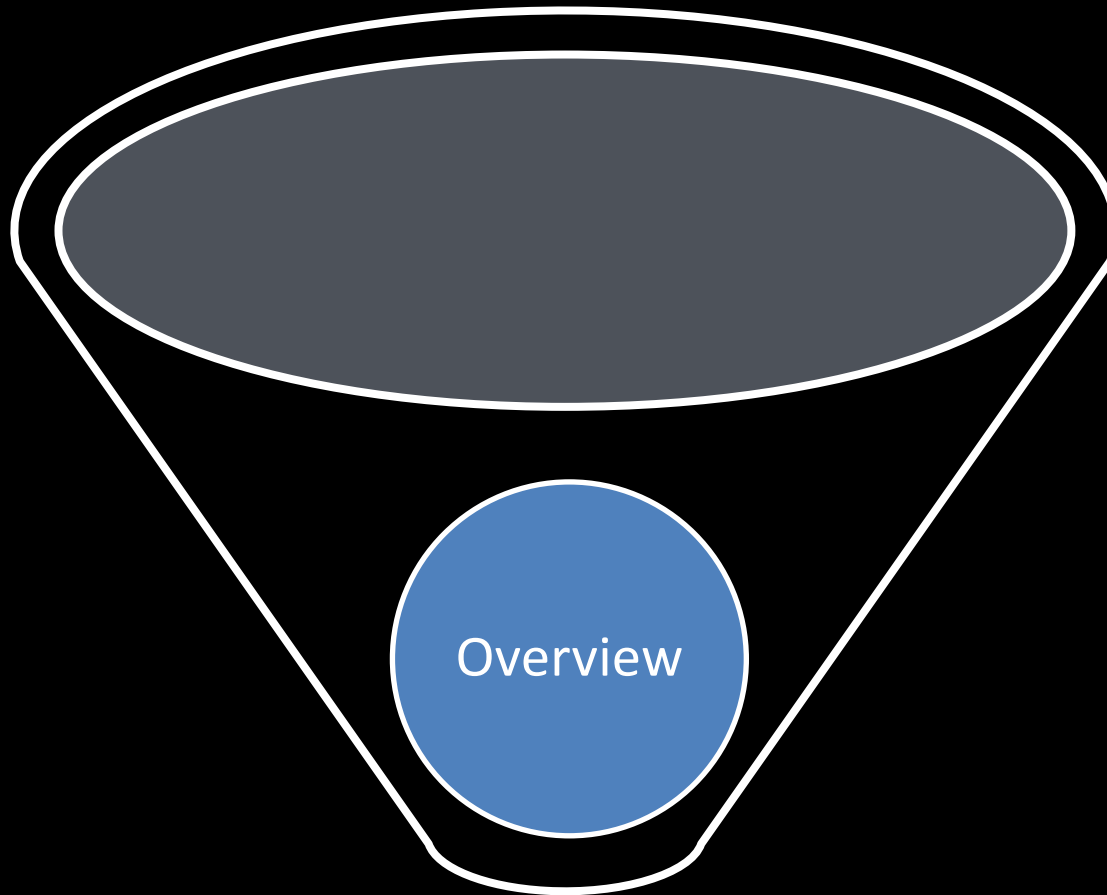
    # Skip comments
    if($_ !~m"^#") {

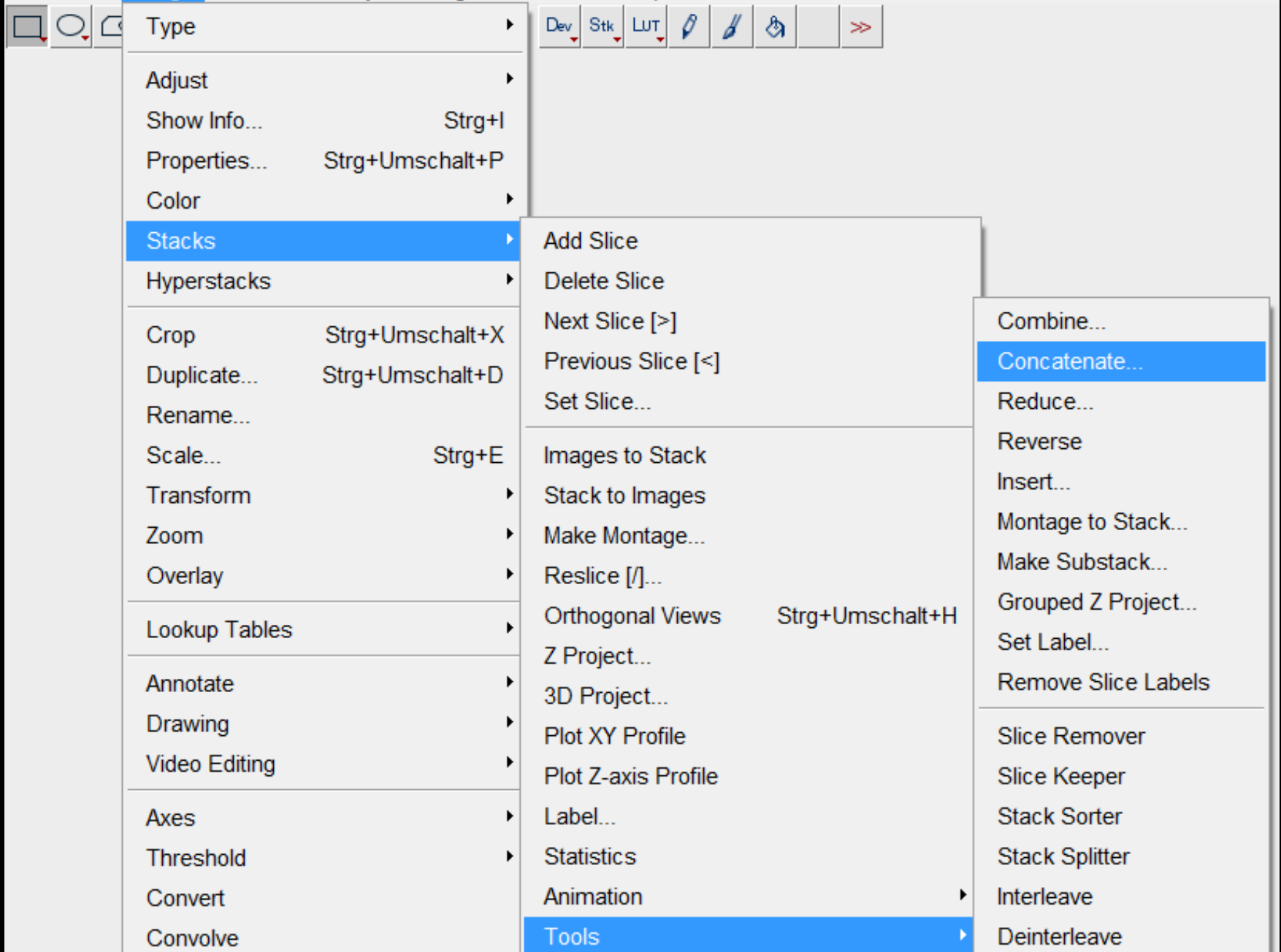
        # Choose lines starting with s...
        if($_ =~m"^s\s"){
            if ($s_counter== 0) {
                # Split by any number of white spaces
                my @line_data = split ' ', $_;
                my $align_len = length $line_data[-1];
                $chr = $line_data[1];
                $chr =~ s/^chr//;
                $align_start = $line_data[2];
                $align_end = $align_len + $align_start -1;
            }
            $s_counter += 1;
        }
        elsif($_ =~m"^p\s"){
            if ($s_counter == 2){
                $s_counter = 0;
                # Split by any number of white spaces
                my @quality_data = split ' ', $_;
                my $quality = $quality_data[-1];
                if (exists ($hash{$chr})) {
                    if (exists ($hash{$chr}{$align_start})) {
                        push(@{$hash{$chr}{$align_start}}, [$align_end, $quality]);
                    }
                    else {
                        $hash{$chr}{$align_start} = [[ $align_end, $quality]];
                    }
                }
            }
        }
    }
}
```

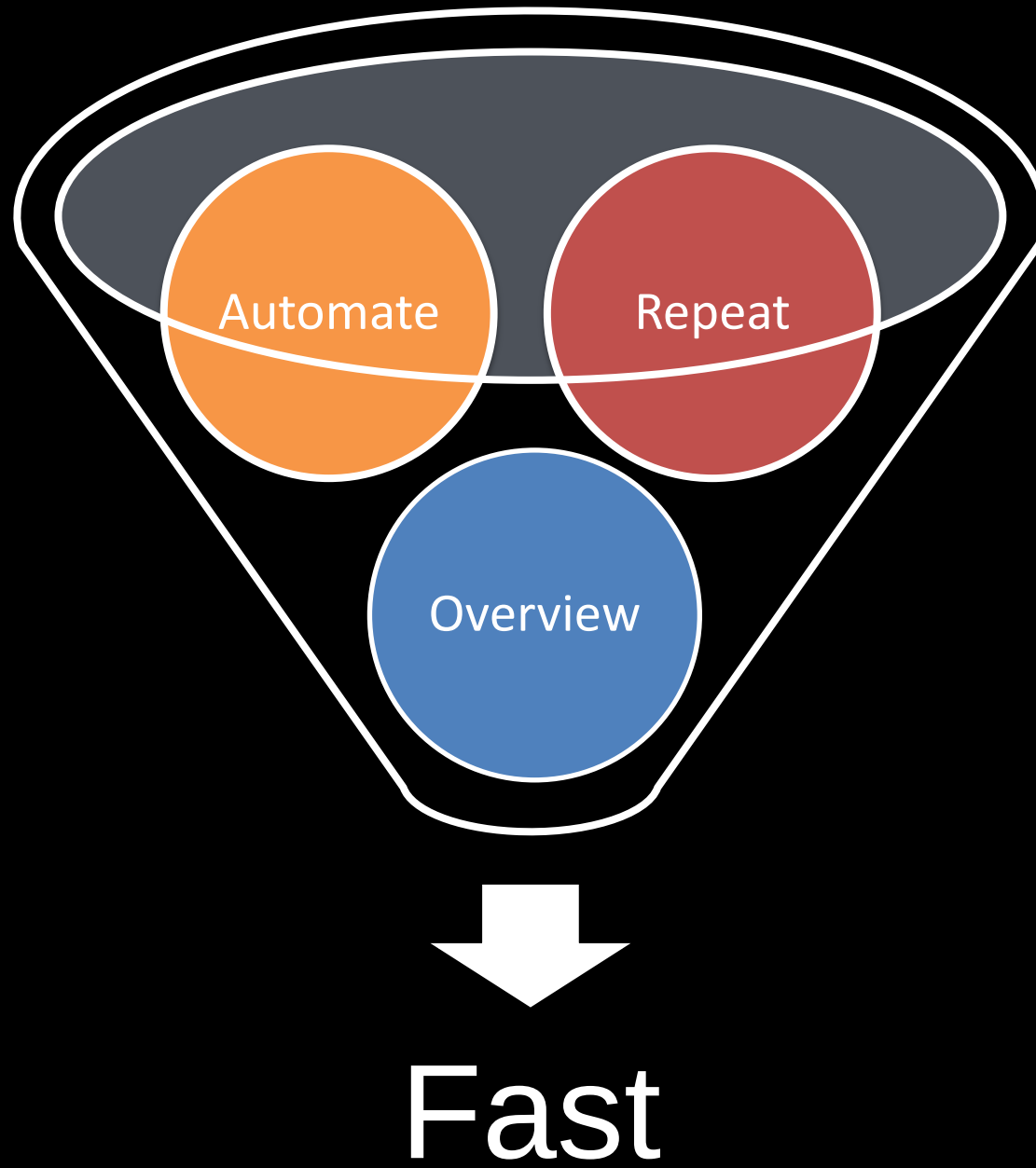
Terminal

File Edit View Search Terminal Help

felixm@adminx-OptiPlex-5050:~\$ nanopipe_calc.pl -q input.query -t input.target



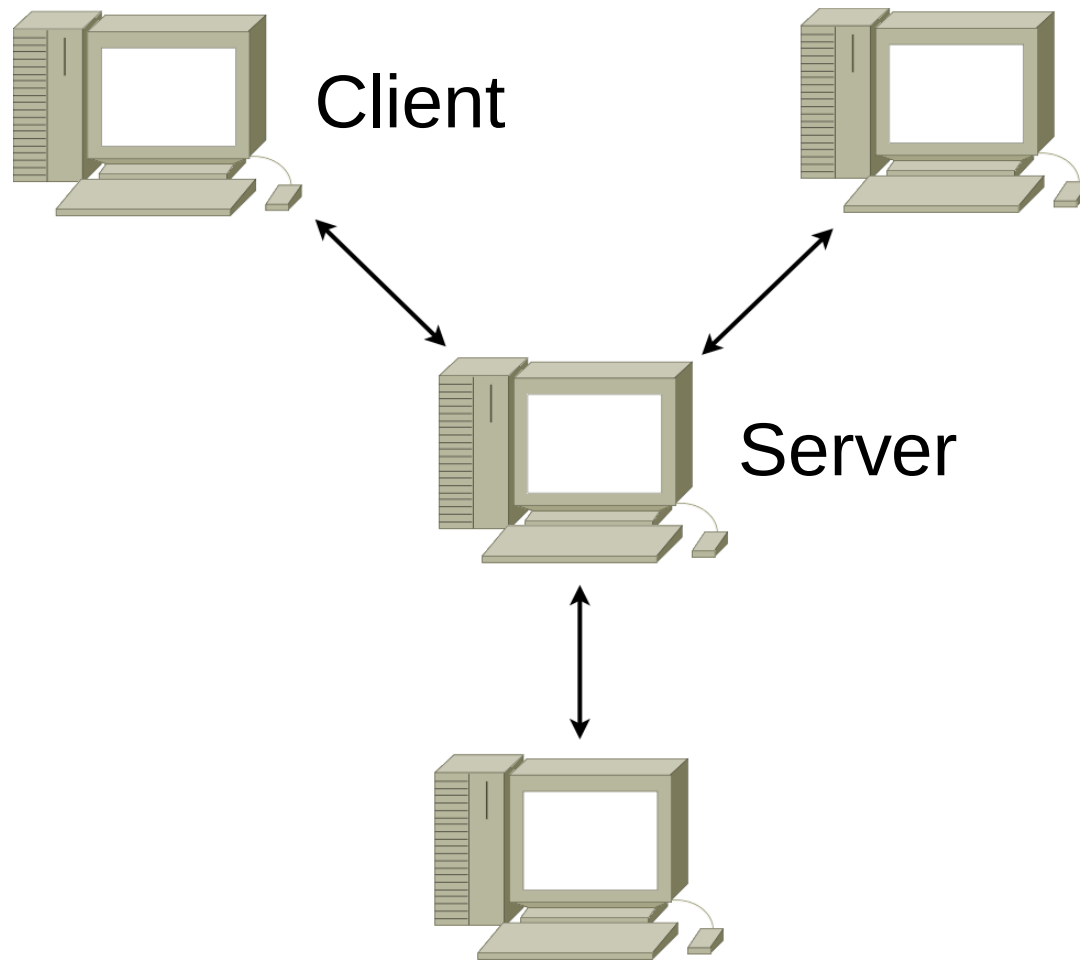




Exercises



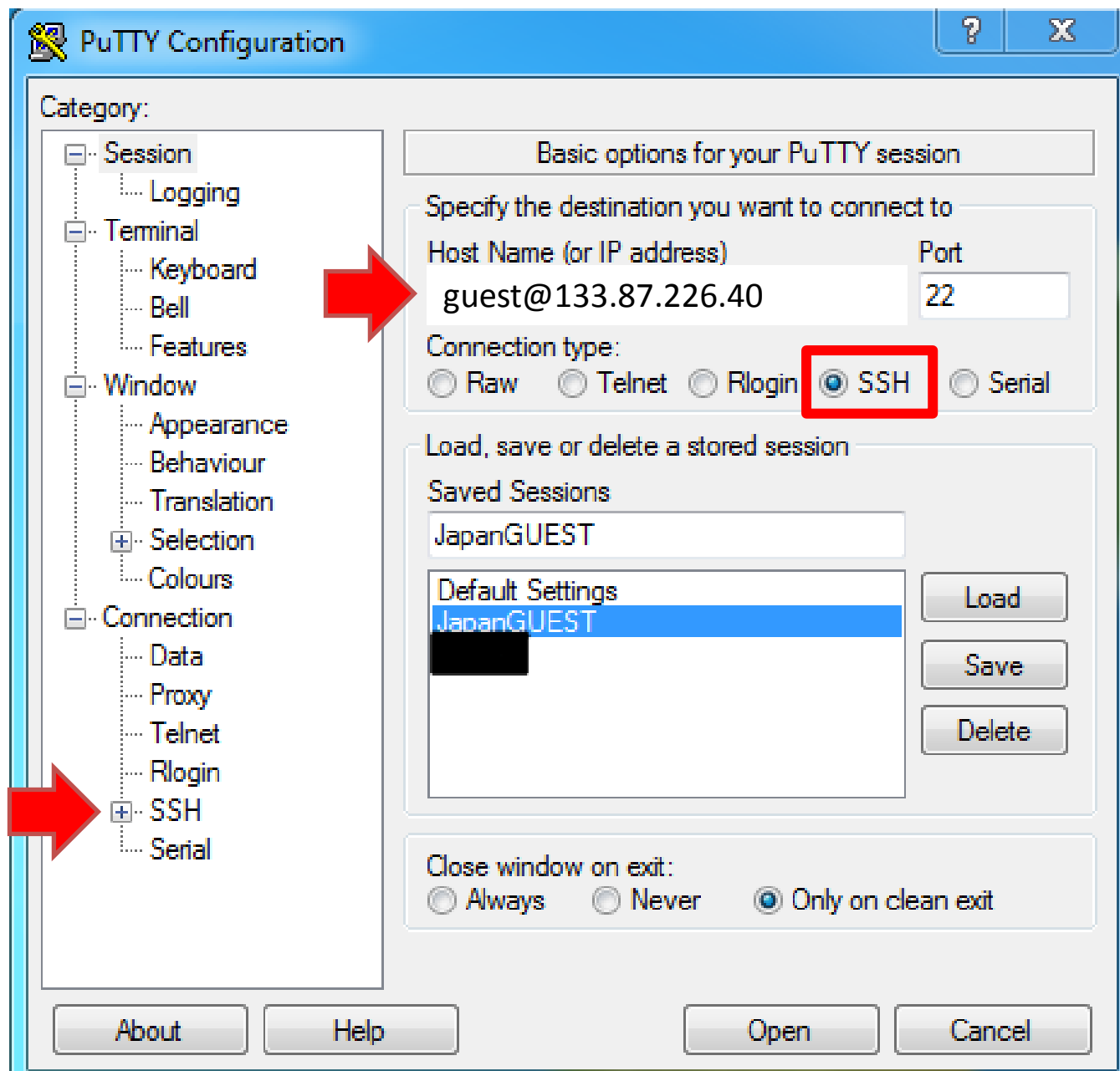
What is a server?

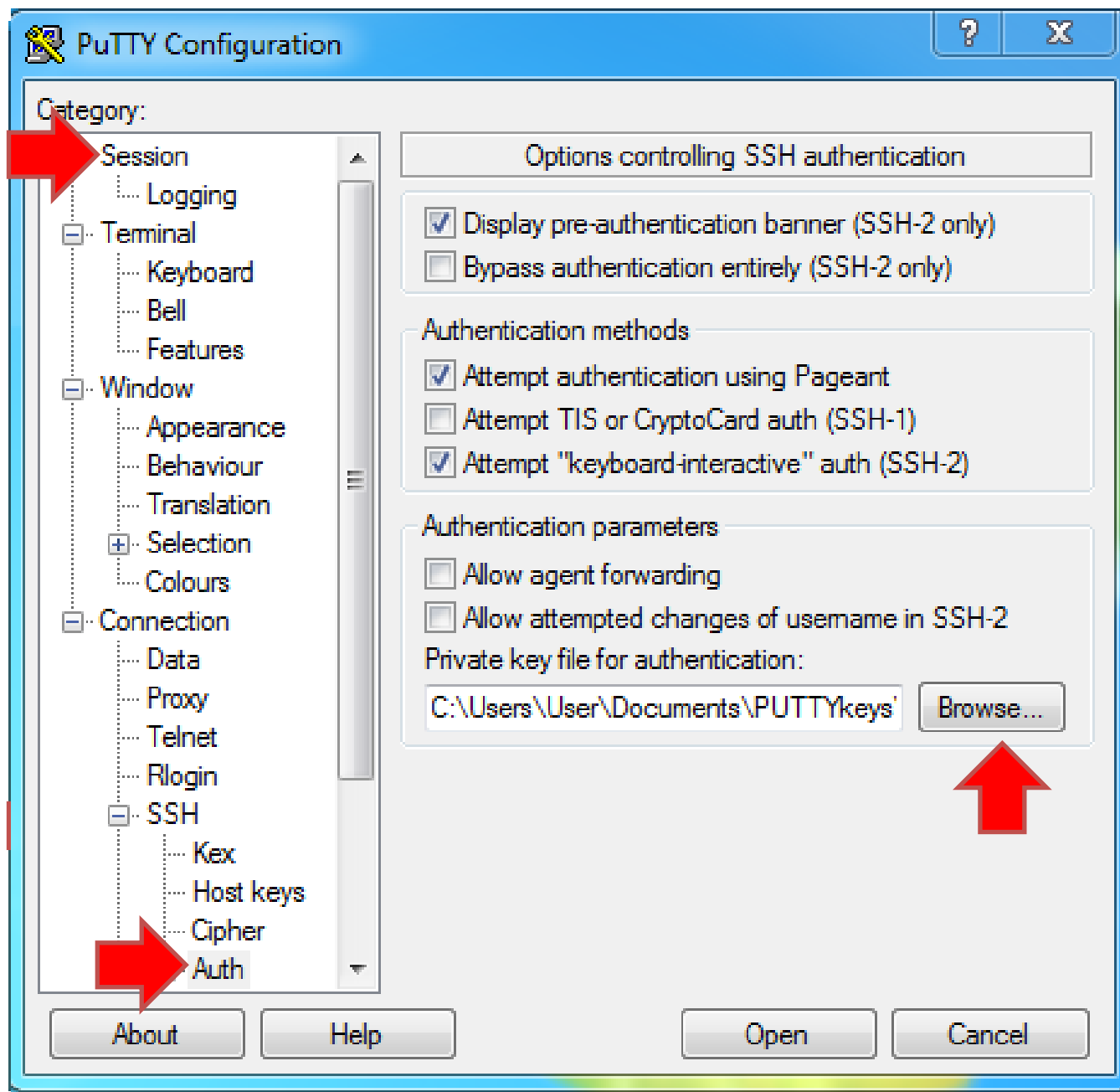


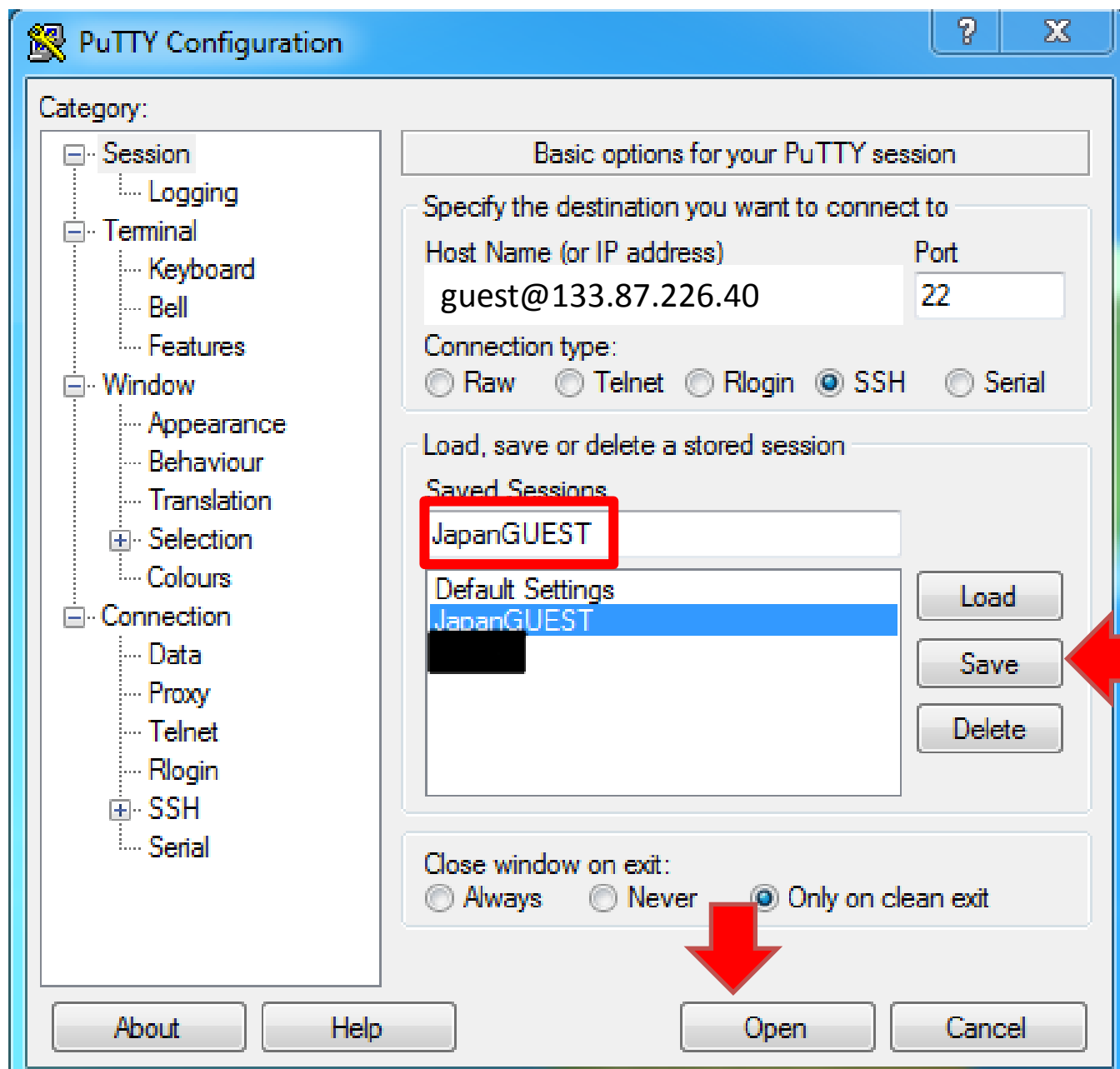
Windows



- Download and install PuTTY from:
www.chiark.greenend.org.uk/~sgtatham/putty/latest.html
- Save ubuntu_guset_2019_rsa.ppk key file (mail)







Unix/Mac

- save ubuntu_guset_2019_rsa key file (mail)
- Terminal

```
cd ~/Downloads/
```

```
mv ubuntu_guset_2019_rsa ~/.ssh/japan
```

```
chmod 0600 ~/.ssh/japan
```

```
ssh -i ~/.ssh/japan guest@133.87.226.40
```





Home folder



list all items

ls

ls -l

put empty file

touch calender.txt

view one item

less calender.txt

print working directory

pwd



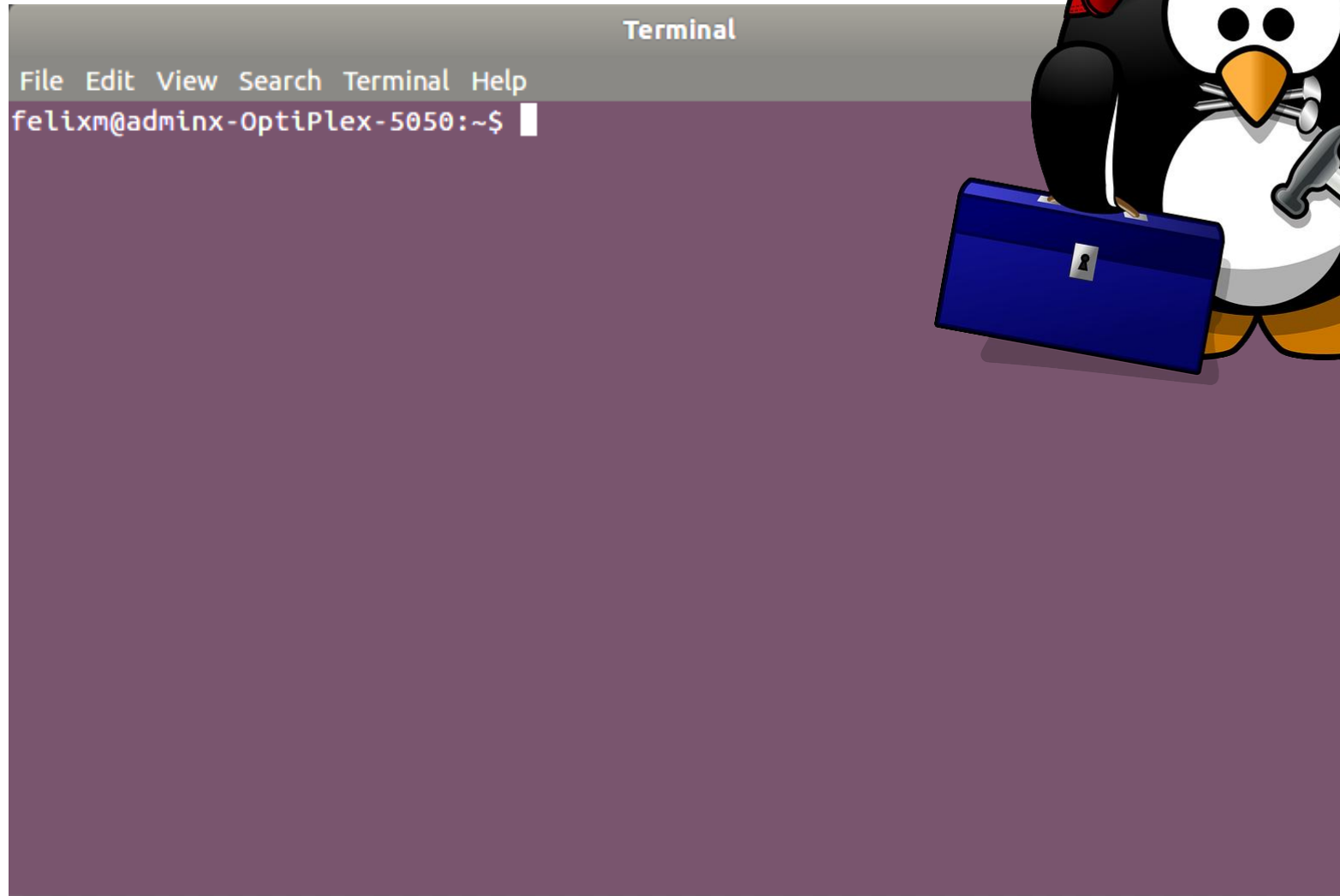
↓↑ browse history

↔ auto complete

ls ≠ LS ≠ Ls

man [command] for help

ctrl + c abort



Absolute path

/building/top/hallway/1stLeft

Boss

Relative path

../../../../top/hallway/1stLeft

You

/building/18th/hallway/home



change directory

cd /building/top/hallway/1stLeft

cd ../../../topFloor/hallway/1stLeft

change directory

cd /building/18th/hallway/home

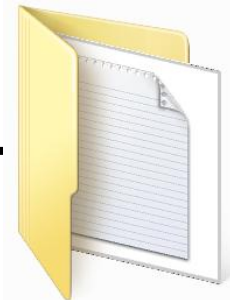
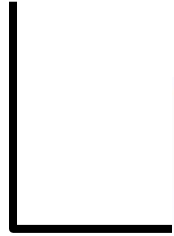
cd ../../../18th/hallway/home

cd -

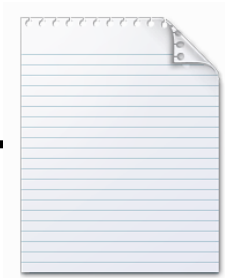
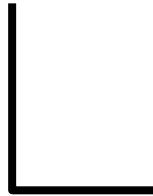
cd



Documents



Japan



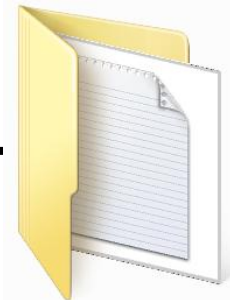
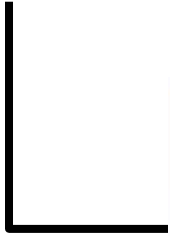
Tickets.txt

You are in the “Documents” folder.
How do you enter the “Japan” folder?

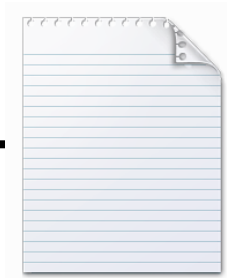
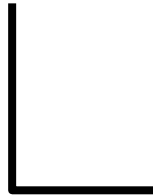
- A: pwd
- B: cd ..
- C: cd Japan ✓
- D: less Japan



Documents



Japan



Tickets.txt

You are in the “Japan” folder.

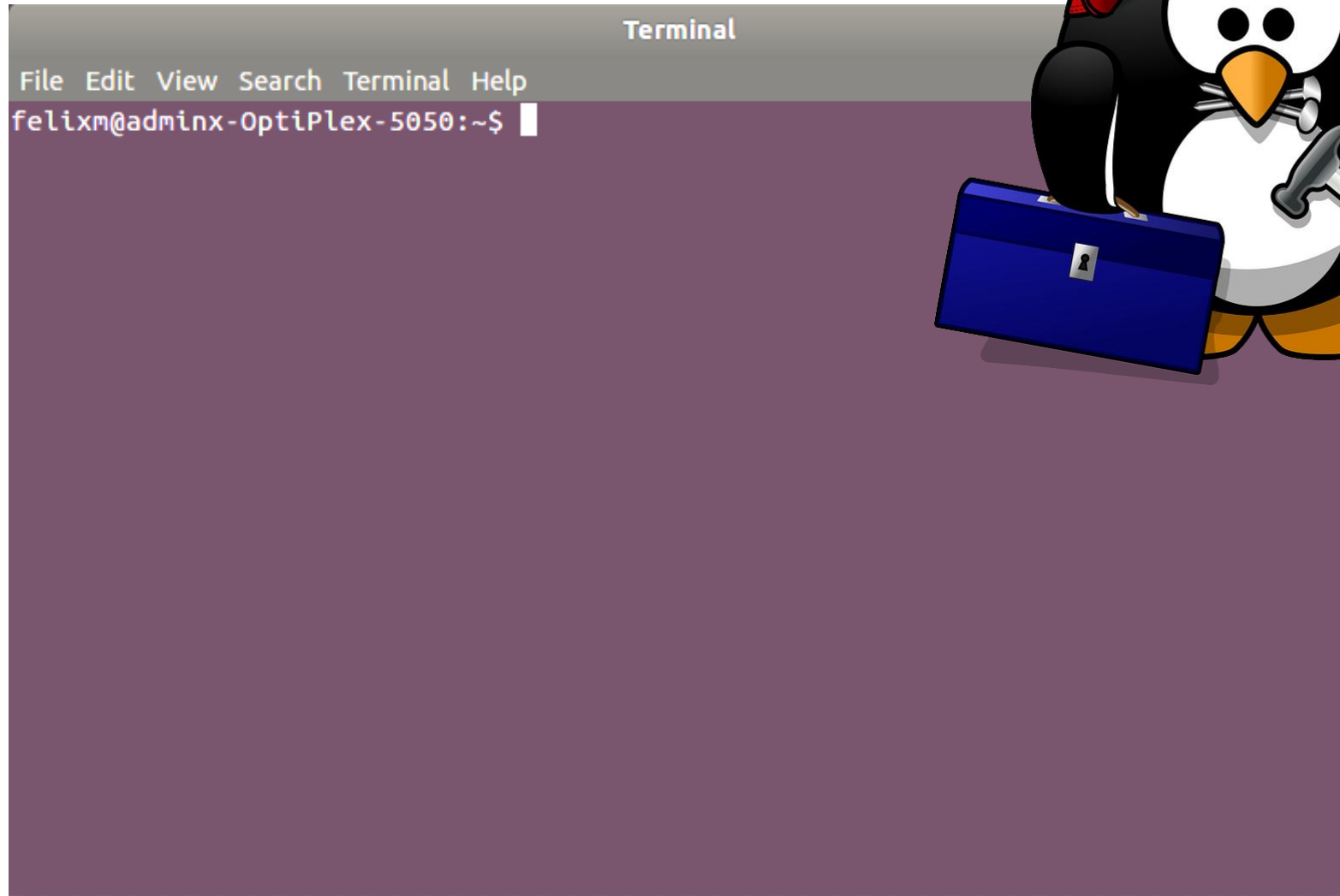
How do you view the “Tickets.txt” file?

A: less Tickets.txt



B: cd Tickets.txt

C: pwd





move contents of document place/name

mv report ../Coworker/

mv report FelixReport

mv FelixReport ../Coworker/

copy contents of document

cp report ../Coworker/

cp report ../Coworker/FelixReport



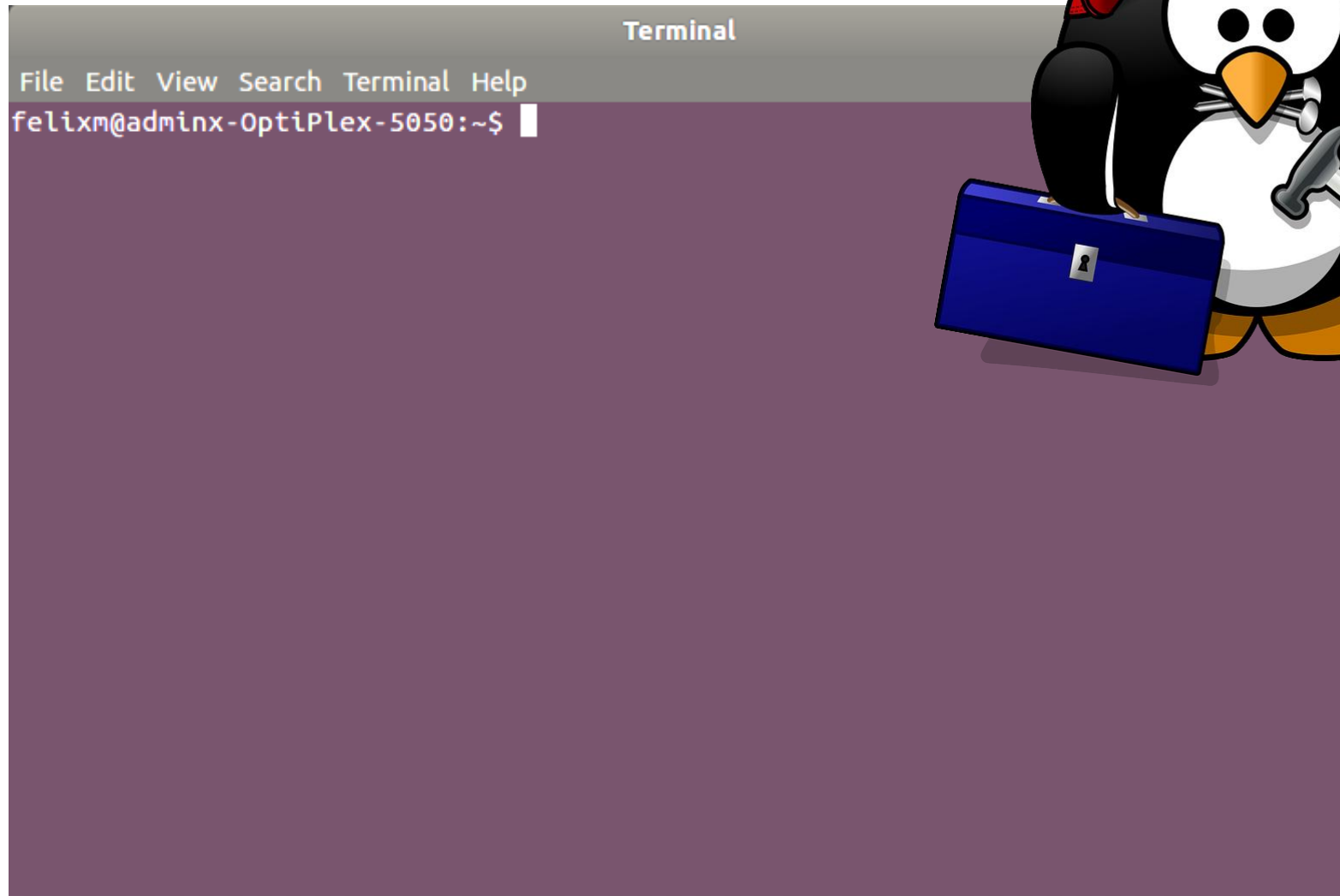
put into archive (compress):
zip letter.zip report document

extract from archive (decompress):
unzip letter.zip

remove files

rm coverLetter_2



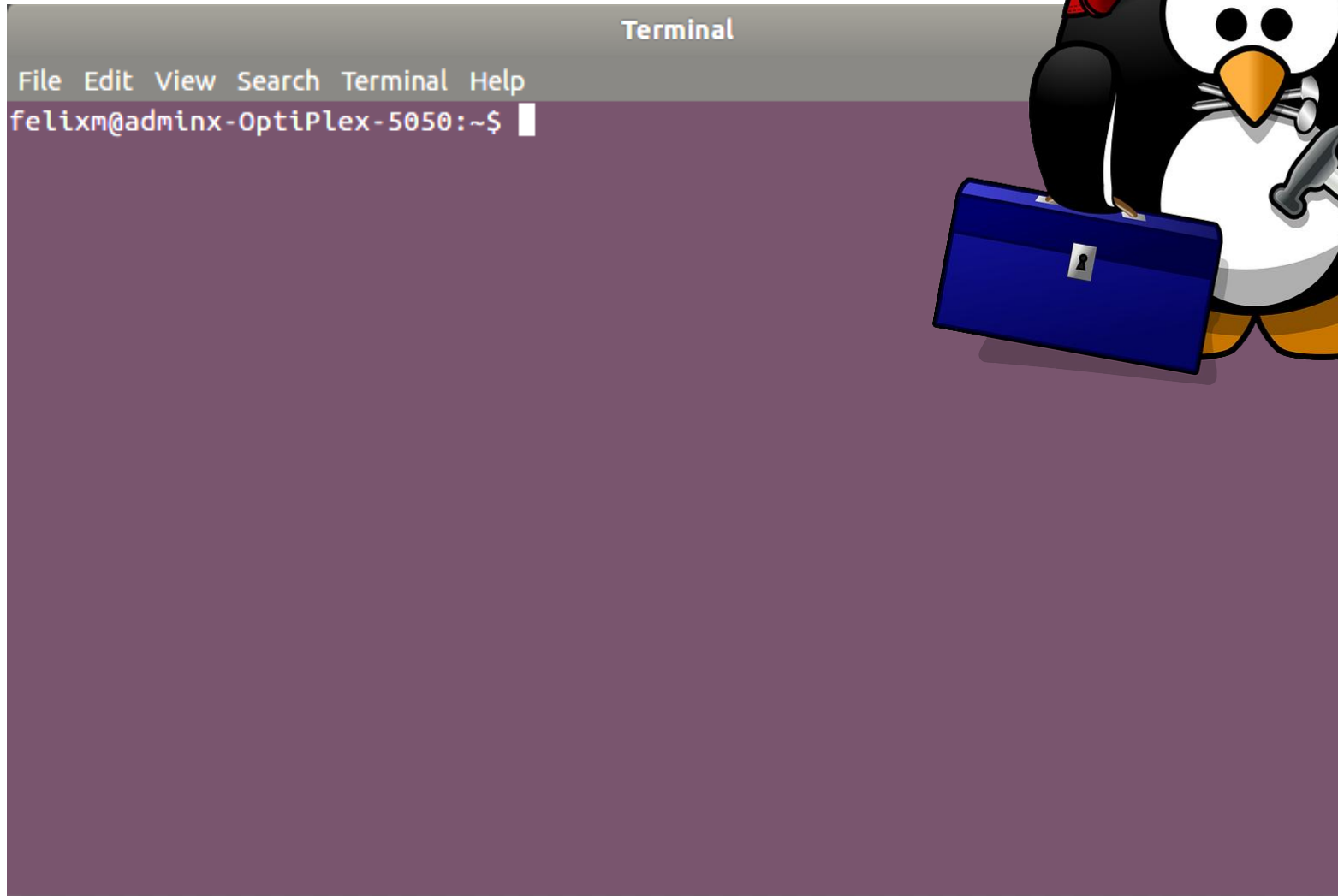




make directory
mkdir ../NEWoffice

remove directory -r
rm -r ../officePensioner





E.g.:

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[ryanstutorials.net
/linuxtutorial
/navigation.php](http://ryanstutorials.net/linuxtutorial/navigation.php)



[computerhope.com
/unix.htm](http://computerhope.com/unix.htm)

THANK YOU!