16S rRNA Intermediate Bioinformatics online course: Int_BT_2019

Practical assignment

Module topic: Introduction to the command line and R
Contact session title: Introduction to the command line
Trainer: Gerrit Botha
Participant: *<write your name here>*
Date: *<write today's date here>*

Software Carpentry Shell Novices tutorial

Introduction

To be able to navigate a Unix environment and process data we need to be able to operate the Unix shell. In this practical we will look at some aspects of the Unix shell that will enable us to do just that. We will be introduced to the shell, navigate files and directories, work with files and directories and look into using pipes and filters.

Tools used in this session

1. *The assignment will focus on the Unix Shell tutorial from the Software Carpentries that can be accessed [here](#).*
2. *Users would need access to a terminal and preferably a BASH shell.*

Please note

● **Hand-in information** please upload your completed assignment to the Vula 'Assignments' tab. Take note of the final hand-in date for each assignment, which will be indicated on Vula.

Task 1: Introducing the shell

Task 1: instructions

Please go through section [Introducing the Shell](#).

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1) What is the advantage of the shell
2) What is the disadvantage of the shell
3) What is the main purpose of the shell

Task 1: participant's answer
<start typing your answer here>

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Task 2: Navigating files and directories

Task 2: instructions

Please go through section [Navigating files and directories](#).

1) What command prints the current working directory?
2) What command can be used to change directories?
3) What is the difference between an absolute and relative path?
4) What does the ~ mean in terms of changing paths?
5) Man pages provide command help, by what other means can you get more information on using a command?

Task 2: participant's answer
<start typing your answer here>

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Task 3: Moving files and directories

Task 3: instructions

Please go through section [Working with files and directories](#).

1) What characters are most appropriate for using in file and directory naming?
2) Give two ways in which a file can be created?
3) What is the reason for having a file extension?
4) When renaming an existing file with the mv command what is it you should be aware of?
5) What flag do you specify to copy a directory?

6) What flag in the rm command will prompt you before deleting a file?
7) What does the wild cards * and ? match in terms of characters?

Task 3: participant's answer
<start typing your answer here>

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Task 4: Pipes and filters

Task 4: instructions

Please go through section Pipes and filters.

1) What is the shells most powerful feature?
2) How can you escape out of an unresponsive shell state?
3) What does the symbols > and >> means command construction?
4) What does the symbols | mean command construction?
5) What is an alternative to the cat command if the output or file is more than a few pages?
6) What flag in the sort command allows you to sort numerically?
7) What is the purpose of the commands head and tail?
8) What is the best way to use the command shell in terms of command construction?

Task 4: participant's answer
<start typing your answer here>

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