



# C Bootcamp

Day 00

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*Summary: This document is the subject for Day00 of the C Bootcamp @ WeThinkCode\_.*

# Contents

<b>I</b>	<b>Instructions</b>	<b>2</b>
<b>II</b>	<b>Foreword</b>	<b>4</b>
<b>III</b>	<b>Introduction</b>	<b>6</b>
<b>IV</b>	<b>Exercise 00 : Pre-requisites</b>	<b>7</b>
<b>V</b>	<b>Exercise 01 : Email</b>	<b>8</b>
<b>VI</b>	<b>Exercise 02 : Community</b>	<b>9</b>
<b>VII</b>	<b>Exercise 03 : Registration</b>	<b>10</b>
<b>VIII</b>	<b>Exercise 04 : Kerberos</b>	<b>12</b>
<b>IX</b>	<b>Exercise 05 : Vogsphere</b>	<b>14</b>
<b>X</b>	<b>Exercise 06 : Hello!</b>	<b>16</b>
<b>XI</b>	<b>Exercise 07 : midLS</b>	<b>17</b>
<b>XII</b>	<b>Exercise 08 : Push !</b>	<b>18</b>
<b>XIII</b>	<b>Exercise 09 : Z</b>	<b>19</b>
<b>XIV</b>	<b>Exercise 10 : Push !</b>	<b>20</b>
<b>XV</b>	<b>Exercise 11 : diff</b>	<b>21</b>
<b>XVI</b>	<b>Exercise 12 : Push !</b>	<b>22</b>
<b>XVII</b>	<b>Exercise 13 : clean</b>	<b>23</b>
<b>XVIII</b>	<b>Exercise 14 : Push !</b>	<b>24</b>

# Chapter I

## Instructions

- Only this page will serve as reference; do not trust rumors.
- Watch out! This document could potentially change up to an hour before submission.
- These exercises are carefully laid out by order of difficulty - from easiest to hardest. We **will not** take into account a successfully completed harder exercise if an easier one is not perfectly functional.
- Make sure you have the appropriate permissions on your files and directories.
- You have to follow the submission procedures for every exercise.
- Your exercises will be checked and graded by your fellow classmates.
- On top of that, your exercises will be checked and graded by a program called Moulinette.
- Moulinette is very meticulous and strict in its evaluation of your work. It is entirely automated and there is no way to negotiate with it. So if you want to avoid bad surprises, be as thorough as possible.
- Exercises in Shell must be executable with `/bin/sh`.
- You cannot have any additional file in your directory than those specified in the subject.
- Got a question? Ask your peer on the right. Otherwise, try your peer on the left.
- Your reference guides are called `Google` / `man` / `the Internet` / ....
- Examine the examples thoroughly. They could very well call for details that are not explicitly mentioned in the subject...
- By Odin, by Thor! Use your brain!!!



The time and date displayed on the intra indicate the deadline for your submission. Past that deadline, you won't be able to submit anything anymore. These times and dates also indicate the start of the peer-evaluation period for the corresponding C-bootcamp date. This peer-evaluation period lasts exactly 72hrs. Once those 72hrs are up, your missing peer-grading will become 0s and you'll receive Moulinette's grade.

# Chapter II

## Foreword

Here are the lyrics for City Hunter's theme song "Moonlight Shadow":

The last time ever she saw him  
Carried away by a moonlight shadow  
He passed on worried and warning  
Carried away by a moonlight shadow.  
Lost in a riddle that Saturday night  
Far away on the other side.  
He was caught in the middle of a desperate fight  
And she couldn't find how to push through

The trees that whisper in the evening  
Carried away by a moonlight shadow  
Sing a song of sorrow and grieving  
Carried away by a moonlight shadow  
All she saw was a silhouette of a gun  
Far away on the other side.  
He was shot six times by a man on the run  
And she couldn't find how to push through

[Chorus]  
I stay, I pray  
See you in Heaven far away...  
I stay, I pray  
See you in Heaven one day.

Four A.M. in the morning  
Carried away by a moonlight shadow  
I watched your vision forming  
Carried away by a moonlight shadow  
A star was glowing in the silvery night  
Far away on the other side  
Will you come to talk to me this night  
But she couldn't find how to push through

[Chorus]

Far away on the other side.  
Caught in the middle of a hundred and five  
The night was heavy and the air was alive  
But she couldn't find how to push through  
Carried away by a moonlight shadow  
Carried away by a moonlight shadow  
Far away on the other side.

Unfortunately, this topic has nothing to do with City Hunter.

# Chapter III

## Introduction

Welcome to the bootcamp, you will have a little bit more than 3 weeks to show us that you can work through the WeThinkCode\_ system. Remember that there is no classes and no teachers you will have to find your way using the community and internet as a tool to learn and to teach yourself.


Today and tomorrow will make you go through basic tools and concepts that you will not only use during the bootcamp but also during the 2 years of the program if you make it. Some of these concepts are simple but essential, make sure you understand them before moving on to the next exercise.

The coding per say will only start from day02.

May the code always be in your favour.

# Chapter IV

## Exercise 00 : Pre-requisites

	Exercise 00
Pre-requisites	
Turn-in directory : <i>ex00/</i>	
Files to turn in : <b>author file</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

You received an email with a password which is used for 2 different things:

- Connect to the computers, regardless of the floor.
- Connect to your newly created email, which is a gmail account.

Follow the below instructions:

- Once logged on a computer, change your password using the following command `kpasswd`.
- Log on your WeThinkCode\_\_ email by connecting on Gmail and reset your password.
- Connect to the [Intranet](#), using that same password again and reset this password as well. If the password doesn't for click on "Forgot your password?" type your username and follow the instructions.




Keep in mind that these 3 passwords are physically different as they are used by 3 different systems, the computers, Gmail and the Intranet.

It is up to you to decide if you want to make these 3 passwords the same to remember them easily or not.



# Chapter V

## Exercise 01 : Email

	Exercise 01
This is not a spam exercise	
Turn-in directory : <i>ex01/</i>	
Files to turn in : <b>email file</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

Now that you have access to your new email address, you will have to use it to send us something.

Write an e-mail to `shumaya@wethinkcode.co.za`.

- The subject of that email should be:

```
[Wena] [login] [show me your moves]
```




Evidently "login" will be YOUR username, the one you use on the computers and on the intranet.

- Write something nice in the email, using at least the following words:

```
42; WeThinkCode_; Lord Geff; handsome; eish; pap; braai;
```

# Chapter VI

## Exercise 02 : Community

	Exercise 02
How to communicate?	
Turn-in directory : <i>ex02/</i>	
Files to turn in : <b>slack file</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

To communicate easily with you guys we use a software called [slack](#). This is an messaging tool that can be used on computers and smartphones.

You received an invitation, to create an account. If you didn't already it is now time to do it.


- Click on the link in the slack invitation email.
- Create your password (yes it is yet another different password).



Your username must be the one provide to you, you are not allowed to change your slack username as it allows us to find you easily when we need to communicate.

# Chapter VII

## Exercise 03 : Registration

	Exercise 03
Did you register?	
Turn-in directory : <i>ex03/</i>	
Files to turn in : <b>registration file</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

To be able to work on the next days of the bootcamp you will have to register for them. Each day starts at 6.42am and ends the next day at 6.42pm. That means you technically have 36h to work on a day. One of the skill you will have to learn is time management.

Today is day00, you will be able to work on the exercises until tomorrow 6.42pm. Tomorrow morning day01 will start at 6.42am but for you to be able to access it you have to register for it.

- Connect on the intranet with your newly updated password.
- Go in the project page (the small atom looking icon on the left of the page).
- Click on **List project**.
- Click on **Day 01 project**.
- Register by clicking the green **Register** button.




This is something you will have to do everyday, for each and every projects. Registration opens 3 days before the project starts. You will not be able to register once the project has started. Take a look at all the projects in the list and see if you can register for anything else.



If you are doing a bootcamp for the second time, Register button will be a Retry button instead. Please contact a staff member if you see no button.

# Chapter VIII

## Exercise 04 : Kerberos

	Exercise 04
I swear officer I had my ticket moments ago	
Turn-in directory : <i>ex04/</i>	
Files to turn in : <b>kerberos file</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

At WeThinkCode\_ we use the [kerberos](#) protocol. This allow not only to know who you are but also to control access and make sure your documents are secured.

- The **klist** command allows you to see if you have a kerberos ticket currently active.
- The **kinit** command allows you to create a kerberos ticket using your credentials.
- The **kdestroy** command allows you to destroy the kerberos ticket currently active.

At this stage the Kerberos server for your repositories is located in France. Therefore you need to specify you want to create a ticket using the French server and not the local one here in SA.

For this to be done when you use the **kinit** command you will have to add **@42.FR** to request access to the French server and use the password from the Intranet. If you do it correctly you should see something around these lines:

```
e4r6p7# kdestroy
e4r6p7# klist
klist: krb5_cc_get_principal: No credentials cache file found
e4r6p7# kinit jrandom@42.FR
jrandom@42.FR's password:
e4r6p7# klist
Credentials cache: API:4493C990-687C-4396-BA6A-EDBBFA835BEE
Principal: jrandom@42.FR

Issued                Expires                Principal
Jan  8 14:54:10 2019   Jan 15 14:54:05 2019   krbtgt/42.FR@42.FR
e4r6p7#
```



Obviously you will have to use your own login and not jrandom.




@42.FR has uppercase FR and it is very important.



The password linked to french kerberos server that you will need to provide for this exercise is the one you use to connect on the Intranet.

# Chapter IX

## Exercise 05 : Vogsphere

	Exercise 05
So long and thanks for all the fish	
Turn-in directory : <i>ex05/</i>	
Files to turn in : <b>vogsphere</b> file	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

Now that you have access to everything, you are ready to learn something new. Let's start with the Vogsphere, and more precisely the concept of version-control system, in our case, Git.

To learn about Git, first check the following [content](#) on the Intranet.

Let's now practice around the vogsphere. You might have noticed that each exercise has a turn-in folder and a list of files to turn in. But before you start and to get an idea about the basic commands of a shell take a look at these [videos](#) as well as these [videos](#) on the Intranet.

Now that you have a better understanding of how to do things, let's go back to the previous exercises and push the relevant files. You will have to create the following folders:

- ex00
- ex01
- ex02
- ex03
- ex04
- ex05

In these folders you will have to put the relevant files requested by each exercises.

- author -> Create a file named author, write your username in this file.
- email -> Create a file named email, write your student email address in this file.
- slack -> Create a file named slack, write your slack username in this file.
- registration -> Create a file named registration, write the list of all the projects you did register for in this file, separated by commas.
- kerberos -> Create a file named kerberos, write the expiration date of your kerberos tiket in this file.

Commit and push these 5 files in their respective folders. When you are done create a file named vogsphere in which you will put the hash of the commit or of all the commits you just did to push the 5 previous files seperated by commas. Don't forget to commit and to push this file in its appropriate folder.




`man git log`



# Chapter X

## Exercise 06 : Hello!

	Exercise : 06
Phone number	
Notes : n/a	

Time to share your phone number to facilitate communication and peer-2-peer correction at a later stage.

- Connect on the intranet and click on the small pen under your username and edit your phone number.




Don't hesitate to fill in other fields if you're up for it.)



You might have noticed that this exercise doesn't require you to submit anything on the vogsphere.

# Chapter XI

## Exercise 07 : midLS

	Exercise 07
midLS	
Turn-in directory : <i>ex07/</i>	
Files to turn in : <b>midLS</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

- In a **midLS** file, place the command line that will list all files and directories in your current directory (except for hidden files or any file that starts by a dot - yes, that includes double-dots), separated by a comma, by order of creation date. Make sure directories' names are followed by a slash character.




What has not been asked for should not be done!



`man ls`

# Chapter XII

## Exercise 08 : Push !


	Exercise : 08
Push !	
Notes : n/a	



Ensure that you did commit and push the file of the previous exercise before moving to the next. This will be checked during peer-2-peer.

# Chapter XIII

## Exercise 09 : Z


	Exercise 09
Only the best know how to display Z	
Turn-in directory : <i>ex09/</i>	
Files to turn in : <b>z</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

- Create a file called **z** that returns "Z", followed by a new line, whenever the command **cat** is used on it.

```
?>cat z
Z
?>
```

# Chapter XIV

## Exercise 10 : Push !


	Exercise : 10
Push !	
Notes : n/a	



Ensure that you did commit and push the file of the previous exercise before moving to the next. This will be checked during peer-2-peer.

# Chapter XV

## Exercise 11 : diff

	Exercise 11
Turn-in directory : <i>ex11/</i>	
Files to turn in : <b>b</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

- Create a file **b**, so that :

```
%>cat -e a
STARWARS$
Episode IV, A NEW HOPE It is a period of civil war.$
$
Rebel spaceships, striking from a hidden base, have won their first victory against the evil
Galactic Empire.$
During the battle, Rebel spies managed to steal secret plans to the Empire's ultimate weapon, the
DEATH STAR,$
an armored space station with enough power to destroy an entire planet.$
$
Pursued by the Empire's sinister agents, Princess Leia races home aboard her starship, custodian of
the stolen plans that can save her people and restore freedom to the galaxy...$
$


%>diff a b > sw.diff
```



man patch

# Chapter XVI

## Exercise 12 : Push !


	Exercise : 12
Push !	
Notes : n/a	



Ensure that you did commit and push the file of the previous exercise before moving to the next. This will be checked during peer-2-peer.

# Chapter XVII

## Exercise 13 : clean

	Exercise 13
Turn-in directory : <i>ex13/</i>	
Files to turn in : <b>clean</b>	
Allowed functions : <b>None</b>	
Notes : <b>n/a</b>	

- In a file called **clean** place the command line that will search for all files - in the current directory as well as in its sub-directories - ending by ~, and/or all files that start or end by #
- The command line will show and erase all files found.
- Only one command is allowed: no ';' or '&&' or other shenanigans.




man find



# Chapter XVIII

## Exercise 14 : Push !

	Exercise : 14
Push !	
Notes : n/a	



Ensure that you did commit and push the file of the previous exercise before moving to the next. This will be checked during peer-2-peer.