Moodle tutorial

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[12.4.1 creating backup       88](https://docs.google.com/document/d/1Grztr82HtFWAv1o6t_ijMF5W35DaqTF3egyzUfI3zoo/edit#heading=h.uz9prltooc59)

[**13. Test  88**](https://docs.google.com/document/d/1Grztr82HtFWAv1o6t_ijMF5W35DaqTF3egyzUfI3zoo/edit#heading=h.e9jqpd1iwptj)

[13.1 Chapter A             89](https://docs.google.com/document/d/1Grztr82HtFWAv1o6t_ijMF5W35DaqTF3egyzUfI3zoo/edit#heading=h.o2nqyfynsceb)

# 1. Introduction

What is moodles

Moodle is an acronym for "Modular Object-Oriented Dynamic Learning Environment." It is a free and open-source learning management system written in PHP.

Objectives

-To provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environments.  
-To create high-quality courses and contribute original research to improve learning and transform higher education.  
  
What is an open learning initiative?  
Open Learning Initiative (OLI) is a grant-funded organization that offers innovative online courses and learning materials to anyone who wants to learn or teach.

For a video tutorial about Moodle see the following :

Test 1:  
https://youtu.be/hl74T-31tKI  
  
Test 2:  
<%001<https://youtu.be/hl74T-31tKI>%>

Test 4:  
<%001 <https://youtu.be/hl74T-31tKI> %>

# 2. Getting started

## 2.1 Moodle login

### 2.1.1 How to log in moodle

[https://education.nts.nl](http://77.61.38.204/moodle/)> Click on the link above and when the moodle page is opened,  
> Click on the login link at the top right of the moodle page  
> When the login page is loaded, enter the username and password to login

Geoffrey : Google extract  
Kennan: Video server  
Sander: Werkt aan training voor Salland

### 2.1.2 Login accounts

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **User** | **Email** | **username** | **password** |
| 1 | Kennan Obura |  | admin | wgnd8bWGND\*B |
| 2 | Kisuk |  |  |  |
| 3 | Winston (admin) |  | winston | Winston@12345 |
| 4 | Frank | frank@nts.nl | frank\_student | Frank@1234 |
| 5 | Margaret | margaret@nts.nl | margaret\_student | Margaret@1234 |
| 6 | David | david@nts.nl | david\_student | David@1234 |
| 7 | Kisuk student | kisuknts@gmail.com | kisuk\_student | Kisuk@1234 |
| 8 | Kevin | kevin@nts.nl | muranda | Kevin@1234 |
| 9 | Milene | milene@nts.nl | milene | Milene@1234 |
| 10 | Annah |  | annah | Annah@1234 |
| 11 | Kyalo |  | kyalo | Nic234@kyalo |
| 12 | ~~Dwayne~~ | ~~johndwayne@nts.nl~~ | ~~JohnDwayne~~ | ~~Dwayne@1234~~ |

## 2.2 Open learning login

### 2.2.1 How to log in open learning

> To login to open learning initiative, use the link given below:

<https://oli.cmu.edu/>

> Go to the top right corner and click on sign in button.

> Enter your account ID and passwords

<https://oli.cmu.edu/>account id: [kisuk@nts.nl](mailto:kisuk@nts.nl)password: Kisuk2010  
  
> Click on the sign in button to login and the page below will be shown.

### 2.2.2 Opening french courses

*How to find the french course in open learning*> To find french course on OLI, go to “My Courses” and you will find it listed at the top.

## 2.3 Adding students in moodle

### 2.3.1 When to add a student

- When a student enrolls for a course/when a student requests to be enrolled on a course.  
- When a student meets the requirements for doing an online courses.  
- When a student has submitted his/her details in the following table.

|  |  |
| --- | --- |
| **No** | **Details** |
| 1 | First name |
| 2 | Second name |
| 3 | Last name |
| 4 | Gender |
| 5 | Email address |
| 6 | Passport pic |
| 7 | Course to enroll |

### 2.3.2 How to add a student

> Login as admin  
> Select site administration

> Go to users tab and click on add a new user link under accounts

> Fill in the new user details and click on create user button at the bottom of the page

### 2.3.3 Uploading bulk students

To upload an excel list with student names go to   
<https://www.youtube.com/watch?v=b35BHKs6mGI>

## 2.3 Adding students in moodle

# 3. Make new course

## 3.1 Prerequisites

### 3.1.1 Making a course structure

Describe how to make a course structure in   
  
<https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=521106243>

## 3.2 Create a course

3.2.1 When to make a new course  
  
A course can be made:  
- When there is a new course to offer to students online  
- When the management agrees to offer a certain course  
- When there is need to train staff on some skills or some courses  
- When student make enquiries or requests on some courses to be offered  
- It can be made through learner analytics

### 3.2.2 How to make a new course

For you to add a new course in moodle  
> login as admin  
> Go to the top right and click on settings button.

Or: Creating a new course can also be done by clicking Site administration > Courses > Add a new course. Creating a new course by clicking a button in the right top of the screen did not work for me [=David] as there was no button to be seen.

>Click on turn on editing  
>The “Add an activity or resource” button will be enabled.

>Click on it.  
>A popup window will be loaded.

>Select the lesson option and click add

> Enter the course details and click on the save button.

How to make lesson chapters

>To create lesson chapters, select the course

> Tap the wheel button at the top right of the screen and click “Turn editing on”

>Click on the add an activity or resource button

>Select lesson and click on add button

>Fill in the required details on the loaded lesson page and click on save button.

## 3.3 Create lesson subchapters

### 3.3.1 When to make a lesson subchapter

Lesson subchapters are to be made when:  
1. When there is new content to be added to a lesson  
2. When creating a new lesson   
3. When there is a new course to be offered, it must have subchapters  
  
3.3.2 How to make lesson subchapters

> To add subchapters, login to moodle as admin/manager and select the course to add subchapters  
  
>Turn editing on   
  
>Go to the  chapter you want to add new subchapters  
> Click on the add an activity or resource button below the chapter you want to add subchapters

.

>To edit lesson appearance for subchapters  
>Click on edit icon at the right side of the subchapter  
  
>Select edit settings  
> From there you will be able to access subchapter features setting: Availability, Flow control,

Grade, Common module settings,Restrict access, Activity completion, Tags and Competencies

How to copy a page from open learning to moodle

> How to make the title  
> How to copy text  
> How to make the text-overs (showing english text on mouse over)  
> How to make a jump button  
> How to insert a new page  
> How to point the jump button to that page  
> When and how to use french characters (look up for an ascii table how to do with using the alt keys)   
  
How to copy video  
> When to download video  
> How to download the video from open learning, how to name, were to copy  
> How to upload the video in moodle  
> How to find the timepoints played in open learning (use google check element)  
> How to play video from a certain time point to another certain timepoint, how to set the timepoints in moodle (haven’t found out yet how to do)  
  
How to copy audio  
> When to download audio  
> How to download the audio from open learning, how to name, were to copy  
> How to upload the audio in moodle  
> How to align the audio showing to the left side (Haven’t found out yet)  
  
How to make a questionary  
> When to insert a questionary  
> How to give questionary a title  
> How and when to give answer  
> How to assign points  
> When to put audio with the answer

System settings  
> Where to set the side menu (for the pages)  
> How to turn on/off able to redo course  
> How to save point achieved by students

How to add the side menu

> To add a side menu, click on the content page/create content page.

> Add the content and  make sure you check the display menu checkbox

Note: created questions cannot be added to side menu because there is no option to when adding questions

**3.3.2 How to make lesson subchapters**

**4.  Make new course pages**

This chapter will cover how to make a new course page in moodle and how to add contents of any kind.

**4.1 Inserting and editing a page**

**4.1.1      When to make a new pages**

-A new page can be made when one wants to add content to a subchapter or when creating questions.  
-New pages are to be made for every new course

**4.1.2      How to make a new page.**

The following steps will show you how to make or add a new page.  
>Go to subchapter you want to add

>Go to the row you want to add a page  and on the right side of the existing page select add a new page from the dropdown menu option.

>If you want to add a page in between existing pages, select the add page option from the menu on the page you want to add another one just after it.

**4.1.3 How to revise a page**

How to revise page as manager

>To revise a page as admin,  select the course you want to verify that it was done correctly.  
  
>The course will be loaded as shown below.  
  
  
>Select the chapter you want to revise.  
>when the page is loaded, select yes to start a page from where you last left it or no to start from the beginning

> The  page will be loaded as shown below  
  
>To navigate to other pages you can click on the next button  
>To jump to a specific page, use the lesson menu at the right side of the page.

How to revise page as student  
>To revise a page as a student,  select the course you learn from the courses you are enrolled in.

>The course will be loaded as shown below.  
  
  
>Select the chapter you want to revise.  
>when the page is loaded, select yes to start a page from where you last left it or no to start from the beginning

>The  page will be loaded as shown below  
  
>To navigate to other pages you can click on the next button  
>To jump to a specific page, use the lesson menu at the right side of the page.

**4.2       Adding text content**

**where to get text content**  
Page text content can be obtained from:  
-Purchased online course  
-Prepare course by NTS/Tradestar employees

**How to add text content to a page**  
To add text content to a page, go to the source of your content. That could be an online purchased course or prepared course and copy the content.

>Go to the moodle page  you want to add or update text content and paste the content on the editor and save the changes.

How to format text content

To format text content, use the available text formatting options on the editor menu.

**4.2.1      How to add HTML Text**

How to add html text content to a page

>Html text can be added

When to use/add html text

**4.2.2      How to add a cell table**

**4.3       Adding video content**

**4.3.1      When to add video**

- A video/videos are to be added to the moodle course when the video content is a requirement in a given course or  lesson.

**4.3.2      How to download a video**

Use the following steps to download videos from OLI <https://oli.cmu.edu/>>Login to oli.  
>Go to the page where you want to download video from, example page 31 on oli.

>Right-click on a video and select **save video as…**

>Select the folder and save the video.  
**Note:** *Create a backup folder on your pc for the videos you will download from oli and name the folders orderly.*

**4.3.3      Where to upload the video**

All the videos downloaded from oli for  moodle courses are uploaded to the video server. [https://video.nts.nl/](https://video.nts.nl/home.php?eid=17372)  uder Moodle Videos directory.

**4.3.4      How to upload a video**

>Login to video server.  
>Go to Trainings tab.  
  
  
>Select Moodle videos directory  
  
  
  
>Select video cut tab  
  
  
>Drag and drop the video you want to upload on the upload window   
  
  
OR  
>Click on the  upload button.  
  
>Select the video folder and select the video to upload

**4.3.5      How to cut a video and upload**

>After selecting a video to upload, the File details window will load automatically.  
  
>Go to oli.edu,  on the page where you downloaded the video.  
>Right-click on the page and select  Inspect.  
  
  
>Go to inspect elements panel and click on highlight button  
>Highlight the video and click on it.  
  
>On the inspect elements panel, expand the highlighted js script and get the start and end time for the video clips.

>Enter the start time and end time  for the video to cut.  
  
>Use [00:04, 01:40] formats(end time must be greater than start time)  
>Click on the continue button to cut the video.  
>One the video is cut, the local library grid will refresh automatically and a newly generated link will appear at the top of the list with a bigger id value than the previous one.

**4.3.6      How to insert the video**

>Go to the page you want to insert a video moodle and  click on update page button  
  
  
-The edit content page will be opened.  
  
>Click on the insert or edit an audio/video file button  
>On the insert media window popup, paste the embedded url from video server and click on insert media button

**4.3.7 How to recut video**

When a video has already been uploaded and needs to be cut again but into a different begin and endtime you can do the following

>Select the video file that needs to be split

>Click on the split button shown below

 start time and end time option  will pop up.

>  Key in the Start time and end time desired as per the format below these fields. Then click the continue button .

Once continue button has been clicked a child script will appear underneath the parent script as shown below  
  
At  this point the child script can be copied and uploaded on moodle .

**4.5       Adding dragging answers**

**4.6 Adding blocks**

Blocks are displayed at the course overview screen. Before adding blocks, think about the purpose of the block you are adding, as if the device on which Moodle is used has a small screen, blocks will be displayed underneath each other and will hence be less visible.

You can add a block by turning on the editing settings (click the editing wheel in the right top of your screen) and by then selecting “Add block” in the left navigation panel. Now a selection menu will appear, from which you can choose the type of block you want.

**4.7 Adding a forum**

In the editing settings, click “add an activity or resource”, and select “Forum”. You can then give the forum a name, add a description, and select the type of forum (e.g. “single simple discussion”, “Q & A forum”, etc.).

**4.8 Adding bulk courses**

If you have created courses offline, such as in Excel or Notepad (save the course as a .csv file), you can upload these to Moodle. (See also Moodle Admin Basics course on more details.)

Click “Site administration” and then select “Upload courses”. Then upload the course file and make sure you check the way the .csv file is delimited. You can then set default course values. Select “Upload courses” and your courses will be uploaded.

**4.9 Adding badges**

To add badges, go to “Site administration” > “Badges”. Then click “Add a new badge”. You can now add a badge description and select a badge image.

**5.        Adding sound**

**5.1 Recording**

 > Go to Adobe audition or any other audio recording application.

> Click record

>Go to the page in Oli website which has the audio file to be recorded.

> Click on the audio file in Oli website for the sound to captured with the recording app  
> Stop recording once the audio file in oli  website stops playing   
>Go to and click on file for the drop down options

> Scroll down and click on the  export option as shown above

> Edit the name of the file  and  set the  audio format to mp3

> Click on ok button

**5.2 Copying**

>After exporting the audio from adobe audition/audio recording software, put them in a well named folder. Example “Audios page 20”, “ Audions Page 21” and so on.  
>Or, rename them and export them to the named folder.

**5.3 Uploading**

 > Hover cursor on projects and click on projects when drop down options are displayed

 > Click on the highlighted square which is the trainings folder as shown below

 Once the subfolders have been displayed  
>  click on Moodle French Audio 2 as shown below

> Click on Tab Videos as highlighted below

> Click on moodle videos as shown below

> Drag and drop  files or click on the upload button as highlighted below  
  
Once the upload is completed  
> select and copy the audio link that you have uploaded which will appear at the top as highlighted below  
  
> Paste the copied link on a notepad like shown below  
  
  
> Have the script below also added to a notepad   
  
  
> Replace the link bordered with open quotation mark and  closing quotation mark  in the script with  the link previously copied on the notepad. The link to be replaced is highlighted below  
  
Image below show the script after replacement with the new link  
  
> Copy the script that has the new link

> Go to the page you want to upload audio moodle and click on update page icon which is  highlighted below  
The edit content page will be opened displaying editing tools  
> click on Show/hide advanced button icon highlighted below  
  
> Once the hidden editing options are displayed click on the HTML icon highlighted below  
  
>  Paste the script inside the blank page as shown below  
  
  
> scroll down to the bottom of the page and click on the save page button  which is shown below.

**5.4 Splitting**

When an audio has already been uploaded and needs to be cut again but into a different begin and end time you can do the following

> Select the audio file that needs to be split

> Click on the split button shown below

 Start time and end time option  will pop up.

>  Key in the Start time and end time desired as per the format below these fields. Then click the continue button .

Once continue button has been clicked a child link will appear underneath the parent link as shown below

At  this point the child link can be copied and uploaded on moodle .

**5.5       Connecting**

For all the below cases audio files are not playing. It keeps a loop of loading  shown in the image below.

|  |  |  |
| --- | --- | --- |
|  | Sample of pages with audio not working | Propose solution |
| 1 | [14/20] Bonjour | To have all audio files uploaded to video server then get embedded link to be used in moodle |
| 2 | [[16/20] Salut](http://education.nts.nl/mod/lesson/view.php?id=3&pageid=213) |  |
| 3 | [[20/20] Épeler](http://education.nts.nl/mod/lesson/view.php?id=3&pageid=217) |  |
| 4 | [35/50] Formality |  |

>After downloading an audio file from oLI and saved it in a specified folder on your PC  
>On the page contents, click on the insert or edit an audio/video file button  
>On the insert media window popup, select the audio tab.  
  
> Click on the browse repositories button and choose the audio file you had saved to upload  
  
  
>Select the file to upload.  
>Click on insert media button

**5.6 Speech to text**

**6. Adding questions to a page**

**6.1 When to add a question**

The purpose of asking questions is to repeat the course content and make memorising easier on the one hand, while on the other hand it enables both the teacher and the student to keep track of a student’s progress and what language aspects are still particularly difficult.

Questions can be added at the start of a lesson (to test prior knowledge) or after certain topics have been covered (in order to repeat the material and test a student’s comprehension).

What is the purpose of questions?  
When should a question be added?

**6.2 Different type of questions**

To add a question, click “Import questions” or “Add a question page” (see image below).

You can then select the type of question you want to ask.

Generally speaking, open questions are the best way to test a student’s comprehension of the material, as they don’t allow a student to guess an answer. They are thus the best type of questions for exams. If you ask questions with the purpose of repeating the material or doing a short knowledge check, however, multiple choice questions, true/false questions, or matching questions may be more convenient.

Formulate the question in a clear and concise way, so that there is no ambiguity about what the question is. When creating multiple choice questions, make sure the answer options are no synonyms of each other - there should only be 1 correct answer.   
Before the question and answer is entered it should be first added to the excel  
<https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=869219710>Column K, L, M

**6.2.1 Open questions**

To add an open question, select the “Essay” question type (see image below).

Next, you can give the question a title (“Page title”) and ask the question in the “Page contents” box (see image below). Assign a score to the question.

**6.2.2 Multiple choice**

To create a multiple choice question, select “Multichoice” from the question options menu.

*Add sound for each multiple choice answer*

Add a question title and question contents under “Page title” and “Page contents”. You can then add several answer options by entering them in “Answer 1”, “Answer 2”, etc. (see image below). In the answer and response boxes, you can also add audio and video by clicking the camera-on-a-sheet symbol (to add audio/video) or by clicking the microphone or camera symbol to record audio/video. Next, select the score you want to give a question.

**6.2.3 Yes/No questions**

To add true/false questions, click “True/false” in the option type menu (see below).

You can now create a true/false question. Enter the question under “Create a True/false question page”. Enter the correct answer under “Correct response” and the wrong answer under “Wrong response”. Here, too, you can assign points to answers given.

**6.3 Adding scores**

When adding a new lesson, click “Grade”. You can choose the type of score you want, such as “None” (meaning no scores are given), “Scale”, and “Point”.

If you select “Scale”, you will be asked to define the scoring scale and enter a grade to pass. Furthermore, you can choose whether you want to allow practice lessons or retakes.

If you choose “Point”, you select the maximum grade you want to allow for the lesson you are working on (see image below). You add a grade to pass and choose whether you want to allow practice lessons or retakes.

Once you have designed the course and thought about the questions you will ask, you need to start thinking of how many points you will be giving in total, and then assign a number of points to each question. For example, as open questions are generally perceived to be harder than multiple-choice questions, you could assign more points to open-ended questions than to multiple-choice questions.   
How to calculate how many point should be given for the correct answer(s)?  
When should points be given for more than one answer?  
  
6.4 Importing questions

First, hit the editing wheel in the top right of your screen. Under “Question bank”, select “Categories”. If you scroll down, you can create a new question category or add questions to an existing category.

To add questions to the “Importing questions German quiz” category, click the question category (see screenshot above).

Next, click on the “Import” tab (see image below).

Select the Aiken format if you have multiple choice questions only. Then expand the “General” tab and deselect “get context from file” and “get category from file”. Then choose a file you want to import. The file type should be plain text (.txt). Please do not include any question numbers in the file. Multiple choice answer options should be indicated with capital letters A, B, C, D, etc. In your .txt file, also indicate the correct answer by typing the answer directly underneath the question options (written as ANSWER: B, if the answer is B). Once you have uploaded your file, click “Import”.

Go back to the course and select “edit quiz”. To add questions, click “Add”. Select the option “From question bank”. Then click “Save”.

**6.4 Import a quiz**

For importing a quiz by MsWord file see the following video:  
  
<https://youtu.be/iLPVsqJYjzk>

**7. Navigation**

**7.1 Mainmenu**

**7.2 Right side menu**

**7.3 Next page**

**Questions**

1. **How can I add drag questions/answers like  the one in oli Page 14.  
   and**
2. **Challenges/problems**

-what to do when he doesn't have internet

-what to do when the internet speed is slow

-what to do when people don't meet the target

-when to check

-what to check

How to analyse problems(look into data -- you have possibly 3 types of data (at least)

1. the skype history with him

2. the telephone calls if these are recorded

3. your memory

Then you pull up criteria for the problem measuring in time lost

to keep it simple:

1. Much time lost

2. medium

3. minor time lost

-Rank in solvability

1. Easy to solve

2. medium to solve

3. hard to solve

-you want to address issues first which is much time lost/easy to solve

-List all of those problems in google excel together with a chapter id where to write the solution/rule (For winston and Abdallah) and it has to be done this day in day out that's how you solve things that's how you get things to communicate

**Moodle page directory**[**https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=521106243**](https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=521106243)

**Research questions/ Todo’s**  
- Put moodle document into moodle as curriculum  
- Where to get the questions from? Is there a database for specific topis (e.g. german, french)  
- How does Scorm works in moodle and what can be done with it?  
E.g. <https://archive.moodle.net/mod/data/view.php?d=10&rid=850>- Uses of quizzes  
  
  
**Other notes**  
https://www.esleschool.com/courses/my/

<iframe src="https://quizlet.com/201070008/flashcards/embed" style="border:0" width="100%" height="410"></iframe>

<iframe src="http://www.esleschool.com/CEquiz/FCE/FCE\_UOE\_P1\_B.html" style="border:1px #ffffff none;" name="myiFrame" scrolling="yes" marginheight="0px" marginwidth="0px" allowfullscreen="" width="100%" height="800px" frameborder="1"></iframe>

https://moodle.org/plugins

https://moodle.org/plugins/mod\_hvp

https://moodle.org/plugins/mod\_bigbluebuttonbn

install level up plugin

custom certificate plugin

office 365 teams theme  
**28/05/2020- HP 1000G2**

Tests to carry out

1. test moodle app with the tablets we have over there hp 900  
Findings  
-Tablet works perfectly well  
-It loads the course well on browser  
-Moodle is not responsive, the pages and fonts doesn't resize according to the size of screen

-HP-1000g2 can be used in the course

2. test with the internet version for the English course (I downloaded an English course in moodle)  
there are plugin there using the shuffle and quizzcards(done with an iframe)

3. test Typing club

Typing club  
Findings  
- Tablet is very fast while loading  
-HP-1000g2 can be used in the course  
-It is possible to use the tablet for typing club

-Tablet mode keyboard working  Well when typing  so there is no need to enable  On-screen keyboard is used

27/05/2020  Hp-900

Tests to carry out

1. test moodle app with the tablets we have over there hp 900  
Findings  
- It is slow when loading the moodle course takes upto 2 mins loading  
-It loads the course well on browser  
-Moodle is not responsive, the pages and fonts doesn't resize according to the size of screen

-Tablet is a bit slow (has specs. 2gb RAM, 32bit system 1.80ghz

2. test with the internet version for the English course (I downloaded an English course in moodle)  
there are plugin there using the shuffle and quizzcards(done with an iframe)

3. test and do this test first

Typing club  
Findings  
- Tablet is very slow while loading  
-It flickers for like a minute continuously while loading each page apart from home page  
-It is not possible to use the tablet for typing club

-Tablet mode keyboard not working when you want to type unless On-screen keyboard is used

Use of Iframe  
  
  
**Moodle h5p support on mobile phone**  
Problem description: H5P page shows on windows pc but not in moodle app  
Possible solution:  
  
<https://moodle.org/mod/forum/discuss.php?d=396101>

Prerequisites: Moodle mobile app version - 3.8

Step 1: Enable web services in moodle at Administration->Advanced features->enable web services

Step 2: Enable frame embedding at Administration->Security->HTTP Security->allow frame embedding

Step 3: Comment X-Frame-Options in your "httpd.conf file". Follow this procedure to do that.

Open your httpd.conf file which can be found in your apache folder at "/apache2/conf/httpd.conf". On my Bitnami installation, it is available at "/opt/bitnami/apache2/conf/httpd.conf". Based on your installation it can be found in the apache2 folder.

Open the file using Vim. Find ( approx. line no. 528) and comment the line "header always setifempty X-Frame-Options SAMEORIGIN". Do not alter any other lines.

Step 4: Restart the apache server.

Now you should be able to access any H5P content created using the H5P activity.

**8. H5P and French course**

Interactive video  
  
How to make a video course page for the French course?  
  
1. Use “column” widget from H5P and start with adding a content type “Text”  
> Put the (HTML) text in the Text field  
  
  
  
2. After that add a content type “Video”  
  
> Under video sources add the video from the video server  
  
3. Continue with adding a content type “Audio” for each audio answer (if audio answers are part of the questionary). Note that there is currently no option to make a quiz with audio or images straight in the answers/  
  
  
  
> Add the audio file from the video server under each audio which can be played.  
  
4. Add a multiple choice question so that the user can select the correct answer (1,2,3,4).  
  
  
  
> Select which one is the correct one  
> Set behavioural settings

5. Press save and return  
  
  
  
After the video and question is shown the next video and question can be inserted the same way, however this will result in a lot of scrolling. The forum says future versions of the column widget will allow pagination. It is unclear if this will be a new widget or a new option in the column widget.  
  
<https://h5p.org/column#example=34129>It is also suggested that a developer can do this themselves:  
Hi, it is currently not possible to do this through the Column authoring tool.

However if you have developer resources at hand, you can make something custom by listening to xAPI events. See the [H5P and xAPI guide](https://h5p.org/documentation/x-api) for more information.

**Questions for Kennan:**  
- How to remove the reuse/embed H5P footer?  
- How to prevent user from not retrying before submitting their scores? (how to automatically send score the education site after an answer has been selected)?  
- Currently the widget “speak the words” only works in Chrome, how can the moodle app work in Chrome to enable the microphone?  
- How to get widget “Audio recorder” working in moodle app, see <https://h5p.org/audio-recorder>(same kind of problem as the “speak the words” widget).  
  
**Questions for Geoffrey:**  
- How can the H5P files be played on the nts website (maybe with an iframe to the moodle website?) for example to show timeframe widget for NTS history and to make customer questionaries.  
  
  
**Questions for Winston**  
- How can the widget “drag the words” be used to give the correct order of audio fragments with the french course. See <https://h5p.org/drag-the-words>.

Make a sample page using the column widget.  
- How to jump to the next course page after the answer has been submitted?  
- How to put a number behind the audio file so that the user knows which number to give for the selection?  
  
   
  
 How to display H5P files(timeline and Questionaries)  on nts website.

Adding Timeframe

* open the course in which you want to add the audio recorder component eg H5P course.
* - click on "Add an activity or resource"  at the bottom right of the topic
* - On the widget that pops up, select interactive content as shown    
  - Add H5P column in the search bar  
  - under the List of column content, select the timeline on the dropdown me
* Enter the title,Headline Body text dates etc.
* You can add other items such as background, assets(media credit, caption)
* save and display to view the timelines

**8.1 Setting auto login(login as a guest) in moodle**

On moodle, your H5P content will not be publicly available if the course it is to be found in is not publicly available. That's not a restriction that H5P is imposing, but moodle does.

If you want H5P contents to be publicly accessible/embeddable, you will have to

1.       enable guest access for that course (Participants->Settings Cog->Enrolment methods). This will allow people to login as a guest without any credentials.

2.    enable auto-login for guests (Site Administration->Users->Permissions->User Policies->Auto-login guests). This will remove the need to click the login button and make all contents of that course embeddable.

Please note that these settings may interfere with how the rest of the site is intended to be used.

**8.2 Removing embed/reuse   footer**

This can be achieved by unchecking the download and embed options under "Display options". Usually this is located on the bottom of H5P  when you are creating the content.

**9. Comparison with Microsoft Teams**

Microsoft Teams is an online collaboration tool that is used in both corporate and educational environments. Users download the programme to their desktops or mobile devices, and most of the programme’s features can only be used with an active internet connection.

Microsoft Teams offers a calendar functionality. Besides, it is possible to create “teams” in which to chat and have video calls with team members. Another collaboration functionality is to share documents from the Microsoft ecosystem. Furthermore, Teams offers the opportunity to expand its tools by adding additional features, both Microsoft’s own features and external applications.

The programme is also used in remote teaching. Teachers can schedule online class meetings, presentations, and discussion groups. Besides, teachers can create “classes” and create assignments for them, as well as keep gradebooks. For a more elaborate explanation of how assignments are created in Teams, click [here](https://support.microsoft.com/en-us/office/create-an-assignment-in-microsoft-teams-23c128d0-ec34-4691-9511-661fba8599be).

One of the major differences with Moodle is that Teams offers more elaborate functionalities than Moodle. While Moodle focuses exclusively on course material and any communication that may come with it. Teams, however, is primarily set up to enable communication rather than elearning. You can communicate with your classes, but also with individual students, subgroups of students, or colleagues, by chat or (video) call.

An advantage of Moodle over Teams is that Moodle offers the opportunity to set up online courses from scratch, and letting you add text, video and audio material, and tests. Teams does not offer such possibilities, although there are options for creating assignments and gradebooks.

This means that all in all, if a school is looking for ways in which to have all its communication in one place and teach students by video calling and letting them hand in assignments, Teams is a good option. However, if students want to decide themselves at which pace they attend and finish a course, or if a course is online-only (with no teachers involved), Moodle may be a better choice.

**10. Network**

**10.1 Install moodle on server laptop**

It is a good idea to write down the passwords (and usernames) you will need to use for Ubuntu and Moodle:

* The Ubuntu root password
* The MySQL username and password that Moodle will use
* The Moodle main admin username and password
* An additional admin Moodle username and password

Step 1: Install Ubuntu

Procedure

* You can use either VI (lightweight editor) or VIM (heavyweight editor), however, if you wish to use VIM you will need to install it

sudo apt-get install vim

* VI or VIM Commands

To edit a file press "Insert" Key

To finish editing press "Esc" Key

To write the file press ":w"

To Exit the editor press ":q"

You can also write and quit ":wq"

Step 2: Install Apache/MySQL/PHP

Note: Moodle 3.0.1 [introduced support for PHP 7.0 and we will be using PHP 7.2 in this tutorial](https://docs.moodle.org/dev/Moodle_3.0.1_release_notes)

Open up Terminal and install the following;

sudo apt install apache2 mysql-client mysql-server php libapache2-mod-php

Run 'sudo mysql\_secure\_installation' to set the root password for mysql - please, please my dear friends, WRITE IT DOWN and spare yourself some grief, you will need it in step 6.

Step 3: Install Additional Software

sudo apt install graphviz aspell ghostscript clamav php7.4-pspell php7.4-curl php7.4-gd php7.4-intl php7.4-mysql php7.4-xml php7.4-xmlrpc php7.4-ldap php7.4-zip php7.4-soap php7.4-mbstring

Restart Apache so that the modules are loaded correctly

sudo service apache2 restart

We will be using [Git](https://docs.moodle.org/39/en/Git) to install/update the Moodle Core Application

sudo apt install git

Step 4: Download Moodle

Setup your local repository and download Moodle, We will use /opt for this installation.

cd /opt

Download the Moodle Code and Index

sudo git clone git://git.moodle.org/moodle.git

Change directory into the downloaded Moodle folder

cd moodle

Retrieve a list of each branch available

sudo git branch -a

Tell [git](https://docs.moodle.org/39/en/Git) which branch to track or use

sudo git branch --track MOODLE\_39\_STABLE origin/MOODLE\_39\_STABLE

Finally, Check out the Moodle version specified

sudo git checkout MOODLE\_39\_STABLE

Step 5: Copy local repository to /var/www/html/

sudo cp -R /opt/moodle /var/www/html/

sudo mkdir /var/moodledata

sudo chown -R www-data /var/moodledata

sudo chmod -R 777 /var/moodledata

sudo chmod -R 0755 /var/www/html/moodle

**Step 6: Setup MySQL Server**

First we need to change the default storage engine to innodb and change the default file format to Barracuda, this is a new setting compared to previous versions. You also need to set innodb\_file\_per\_table in order for Barracuda to work properly. Ref:<https://dev.mysql.com/doc/refman/5.7/en/innodb-compression-usage.html>

* You should not need to make innodb the default storage engine anymore, the latest version of Moodle will select it automatically during install. It is always a good idea to make it default anyway. You do however need to set the default file format!
* If you chose to use VIM instead please substitute vi for vim

sudo vi /etc/mysql/mysql.conf.d/mysqld.cnf

Scroll down to the [mysqld] section and under Basic Settings add the following line under the last statement. if you want to add you have to press the "insert" button on your keyboard. this is usually above the "delete" button. this allows you to add some text.

default\_storage\_engine = innodb

innodb\_file\_per\_table = 1

innodb\_file\_format = Barracuda

Note: If you use newer versions of MariaDB in Ubuntu 20.04 these changes in config file would arise and error (mysql unknown variable 'innodb\_file\_format=barracuda'), so comment or dont make these changes , these values are get by default.innodb\_file\_format was deprecated in MariaDB 10.2 and removed in MariaDB.

In order to save my.cnf using the editor, press the Esc (Escape) key, type the following in sequence which will save :w then close the editor :q

:w

:q

Restart MySQL Server for changes to take affect

sudo service mysql restart

Now we need to create the Moodle database and the Moodle MySQL User with the correct permissions

Use the password you created in step 1

sudo mysql -u root -p

mysql>

CREATE DATABASE moodle DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci;

**Note:** Use 'utf8mb4' for full range (4-byte) support of UTF-8, including Emoji ('utf8' only supports 3-byte). You will be compliant by Moodle admin page if you don't use 'utf8mb4' here.

Where it says "moodledude" and "passwordformoodledude" you should change to the username and password of your choosing.

mysql>

create user 'moodledude'@'localhost' IDENTIFIED BY 'passwordformoodledude';

mysql>

GRANT SELECT,INSERT,UPDATE,DELETE,CREATE,CREATE TEMPORARY TABLES,DROP,INDEX,ALTER ON moodle.\* TO 'moodledude'@'localhost';

mysql>

quit;

Note - If you are using MySQL 5.6+ and when you issue the create user and get an error about the password hash you need to adjust the password to use the hash value

You can get this by following the below

mysql>

SELECT password('passwordformoodledude');

This will print the hash of the password like \*AD51BAFB2GD003D3480BCED0DH81AB0BG1712535, you will want to use this in the IDENTIFIED BY ' part

**Step 7: Complete Setup**

* Note - If you are not comfortable using terminal to create the config.php file that needs to be created when going through the installer, you should temporarily make the webroot writable by doing the following:

sudo chmod -R 777 /var/www/html/moodle

After you have ran the installer and you have moodle setup, you NEED to revert permissions so that it is no longer writable using the below command.

sudo chmod -R 0755 /var/www/html/moodle

Open your browser and go to [http://IP.ADDRESS.OF.SERVER/moodle](http://ip.address.of.server/moodle)

Follow the prompts:

**Change the path for moodledata**

/var/moodledata

**Database Type**

Choose: mysqli

**Database Settings**

Host server: localhost

Database: moodle

User: moodledude (the user you created when setting up the database)

Password: passwordformoodledude (the password for the user you created)

Tables Prefix: mdl\_

**Environment Checks**

This will indicate if any elements required to run moodle haven't been installed.

**Next next next...**

follow prompts and confirm installation

**Create a Site Administrator Account**

Create your moodle user account which will have site administrator permissions.

The password you select has to meet certain security requirements.

**Installation Complete**

Congrats! You can now start using Moodle!

**Don't Forget**

If you made the webroot writable, revert permissions

sudo chmod -R 0755 /var/www/html/moodle

**System Paths After Install**

After installing Moodle you should set the system paths, this will provide better performance VS not setting them. Each entry in Moodle will have it's explanation.

Navigate, on the moodle webpage, to Site Administration > Server > System Paths

Input the following;

Path to du: /usr/bin/du

Path to apsell: /usr/bin/aspell

Path to dot: /usr/bin/dot

Save Changes

* Optional if you do not already have an AntiVirus Solution

We also installed ClamAV in Step 3 so we need to set the path in Moodle

1st Create the Quarantine Directory

sudo mkdir /var/quarantine

Change Ownership

sudo chown -R www-data /var/quarantine

Navigate to Site Administration > Plugins > Antivirus plugins > Manage antivirus plugins

Enable ClamAV antivirus

Click on Settings

Set the proper settings

Save changes

In previous Moodle branches: Check "Use ClamAV on uploaded files" ClamAV Path : /usr/bin/clamscan Quarantine Directory : /var/quarantine

Save Changes

**Suggestions: Enable Zend OpCache/Change Document Root**

* Since we have installed Ubuntu Server 20.04LTS, we can use the built-in PHP OPcache,<https://docs.moodle.org/26/en/OPcache>

Within the link above,<https://docs.moodle.org/26/en/OPcache> add the recommended settings to your 05-opcache.ini file. Again, substitute vi with vim and remember to use the correct key sequences from the introduction.

sudo vi /etc/php7/apache2/conf.d/05-opcache.ini

NOTE: In Ubuntu 16.04 opcache.ini is located in:

/etc/php/7.0/mods-available/opcache.ini

Restart Apache for changes to take affect.

sudo service apache2 restart

That's it for the Zend OpCache!

You can also install a GUI to view the status of your Zend OpCache, not recommended on production servers.

cd /var/www/html/moodle/

Download the PHP Script to your Moodle directory, you should also add this file to /opt/moodle/.git/info/exclude file so it does not get removed when upgrading your installation.

sudo wget https://github.com/rlerdorf/opcache-status/blob/master/opcache.php

Visit<http://ip.address.of.server/moodle/opcache.php>

If you do not want your end users to type<http://yourserver/moodle> and just want them to navigate to<http://youserver> you will need to edit the site configuration for Apache which will tell Apache to use the /var/www/html/moodle as the root directory and not /var/www/html

Open up the Apache sites config and change the document root

sudo vi /etc/apache2/sites-available/000-default.conf

On the line where DocumentRoot is;

Change From: DocumentRoot /var/www/html

Change To: DocumentRoot /var/www/html/moodle

:w

:q

Restart Apache for changes to take affect.

sudo service apache2 restart

**10.3 Build moodle and video server as image for server laptop**

Describe minimum config of the server laptop (minimum speed, memory, harddrive size, screen resolution and so on).   
List all programs to be installed (table).  
Put all these programs on usb stick directory  
Make a script how to install these programs with a single command from usb stick. If the harddrive of the laptop requires formatting first in a specific way document how to do this also.  
If final settings are required make a manual how to enter those final settings

**Operating System**

* Linux - Ubuntu 18.04 or latest

**Hardware Requirement**

* Disk space: 600MB for the Moodle/Video server/ProjectProgram codes, plus as much as you need to store content. 250GB is probably a realistic minimum.
* Processor: 1GHz (min), 2GHz dual core or more recommended.
* Memory: 512MB (min), 1GB or more is recommended. 8GB plus is likely on a large production server

Steps

**10.3.1 Ubuntu Installation**

**10.3.1.1 Make Ubuntu Bootable USB with Etcher**

Basically, you only need three things to make a Ubuntu bootable USB flash drive:

1. [Etcher](https://etcher.download/) – the software that we are going to use to create a bootable USB flash drive
2. Ubuntu – an operating system that we are going to write on your USB flash drive
3. USB flash drive – well, I am just stating the obvious

Etcher, or balenaEtcher, is primarily used to write image files like .img and .iso files to create a bootable USB flash drive.

Here is how to make a Ubuntu Bootable USB flash drive with Etcher (balenaEtcher)

Step 1: Download the latest Ubuntu ISO file

* To download the Ubuntu ISO file, you can get it here: <https://www.ubuntu.com/download/desktop>
* Go ahead and copy and paste the link above to a browser
* Look for the version of Ubuntu 18.04 LTS and go ahead and click Download.

As per Ubuntu’s website, please take note of the recommended system requirements:

* 2GHz dual core processor or higher
* 4GB system memory
* 25 GB of free hard drive space
* USB port for the installer media
* Preferably with internet access

Step 2: Download the latest Etcher

* If you do not have the Etcher yet, you can get it here: <https://www.balena.io/etcher/>
* Click Download
* Once the download has finished, double click on the file
* The Installation Wizard will be launched, just follow the steps accordingly.

Step 4: Plug in your USB flash drive to your laptop or computer’s USB port

* Go ahead and plug the USB flash drive to your laptop and computer’s USB port
* Make sure that the USB flash drive has 2GB of storage or larger

P.S.

To avoid confusion, make sure to only plug in the USB flash drive that you are going to use to create a bootable USB flash drive. And since we are going to write on your USB flash drive, do not forget to back it up otherwise the content will be deleted.

Step 5: Select the Ubuntu ISO file

* Once you have launched Etcher, click on “Select image”
* Go ahead and locate the Ubuntu ISO file that you have downloaded earlier (usually this is saved on your Downloads folder not unless you have saved the file on a different location)

Step 6: Select the Drive

* Go ahead and click “Select Drive”
* Choose the USB flash drive that you are going to use to create a bootable USB

P.S.

If you have multiple USB flash drives plugged into your laptop or computer, make sure that you have checked the name of the drive where the USB flash drive is plugged into. You do not want to choose the incorrect one. Remember, all files will be deleted.

If you only have one USB flash drive plugged into your laptop or computer, Etcher will automatically detect and have the device pre-selected.

Step 7: Double check your selection

* Before we proceed with the flashing process, go ahead and double check first that you have selected the correct Ubuntu ISO file
* And then also double check that you have selected the correct device

Step 8: The Flashing Process

* Once you are sure that you have all the correct selection, go ahead and click the flash image
* The flashing process will now then start and a progress bar will be shown directly below the flash image
* Once the flashing process is completed, it will let you know that the flash is complete

So, there you have it. You have successfully made a Ubuntu bootable USB with Etcher!

**10.3.1.2 Selecting Manual partition scheme**

So at the very first step, we have to create a bootable DVD/USB media from which we can start our installation.

If you don’t know how to create a bootable DVD or USB drive then you should go through chapter 10.3.1.1 above.

Select a USB drive from the boot menu, and wait for Ubuntu to load.

Step 1: Choose your language

And this is the first screen you see when Ubuntu is loaded. Here you are selecting a language, and whether you want to try Ubuntu first or go to the installation.

You can start installing by clicking the Install Ubuntu button:

Step2: Choose your keyboard layout

Here you need to select the keyboard that will be used. It is recommended that you select the starting point as shown in the picture below (choose your own language and keyboard):

Step 3: Minimal installation

Note the first option for a minimal installation. If you choose this option, you will get Ubuntu that only has an Internet browser and basic programs. We will be using this option

Step 4: Partitioning

Since this instruction refers to an installation with an explanation for creating partitions, we select the option Something else.

Step 5:

Since you have an empty hard disk on your computer, it will be displayed right under the name /dev/sda. You need to create a new partition table by clicking New Partition Table …

Step 6:

You will see a warning saying that if you continue any existing partitions (if any) you will be deleted. If you have an empty new hard drive then everything is fine. It’s OK if you have a hard disk with data that you no longer need. It’s not OK if you have a hard disk with the information you need. Think before you click Continue.

Step 7

This looks like a new partition table. You have a device called /dev/sda and an empty space within that device that is marked as free space for now.

Step 8:   Root partition

We now add the Root partition. We can do this by clicking the + sign below the disk space and partition table. The window will open like in the picture below where the following should be entered:

•              Size: Enter the size for this partition in MB. Do not go below 12 GB.

•              Type for the new partition: Primary

•              Location for the new partition: Beginning of this space

•              Use as: Ext4 journaling file system

•              Mount point: /

To save the partition, click OK.

Step 9: Swap partition

Click the + button to add a new partition.

In the window that opens, enter the following:

•              Size: Enter the size of this partition in MB. Usually, the amount twice as your RAM is.

•              Type for the new partition: Logical

•              Location for the new partition: Beginning of this space

•              Use as: swap area

To save the partition, click OK.

Step 10 – home partition

Click + to add a new partition to the remaining empty space.

You need to enter the following details to create a new partition:

•              Size: Enter the size for this partition in MB. You can assign all the remaining disk space.

•              Type for the new partition: Logical

•              Location for the new partition: Beginning of this space

•              Use as: Ext4 journaling file system

•              Mount point: /home

To save the partition, click OK.

Step 11

This is how our partition table now looks like with all three partitions we need to work. To continue the installation, click the Install Now button.

If you have set up a too small root partition, you will receive this notification. Read what it says and correct the mistakes, or if you know what you are doing, click on the Continue button.

Here in the next screen you will have a note on what will happen to the partitions. You can read it to get to know the installation process a little bit and learn something new.

Step 14

Select the location where you are.

Step 15

Enter information, such as your name, the computer name you selected, your username and password. Remember a good username and password because you will need it when working with Ubuntu.

Also, here you choose whether the password will be required when the system is turned on or the user will be turned on automatically when someone comes in and turns on the computer.

Step 16

And that is that. It’s not difficult, and you can learn a bit about the partitions on the hard disk and the basics of installing a single operating system based on Linux.

**10.3.2 Cloning Ubuntu partition as an Image**

**Step 1**

The first step is to download the [ISO image from the Clonezilla Web site](http://clonezilla.org/download/sourceforge/).

Make sure you download a stable version of this tool. Once you have the file downloaded, you need to burn it onto a disk. You can follow same instruction as 10.3.1.1 Make **Ubuntu Bootable USB with Etcher**

**Step 2**

Attach the external drive (or, if you are using a USB, insert a burnable CD/DVD) and then insert your Clonezilla media.

**Step 3**

Reboot. You have to boot from the Clonezilla media for this to work. You will have to change to  boot mode using the F9 key, if you are using hp notebook.

What you will see is the Clonezilla boot screen (**Figure A**). For the task of creating an image, you will want to select Clonzezilla Live (Default settings) and press Enter. You will now see a Debian boot sequence appear.

**Figure A**

**You can select a resolution to better suit your monitor from this menu.**

**Step 4**

Choose your language. From the language screen, you need to select the language you want to use for the process. This step should be fairly self-explanatory.

**Step 5**

Choose your keyboard layout. You have four options:

·                      Select Keyboard from arch list

·                      Don't touch my keymap

·                      Keep kernel keymap

·                      Select keymap from full list

Most likely the Don't Touch My Keymap setting will work just fine

**Step 6**

Start Clonezilla. At this step you can either drop into a console or start Clonezilla. You don't want to use console here, unless you are a seasoned Clonezilla veteran.

**Step 7**

Choose your device image. In this step you are going to choose between creating an image or doing a direct, device-to-device copy. Creating an image is always best, especially for a first-time clone or backup. Since we are creating an image of our drive, select the first option (**Figure B**) and tab down to OK.

**Figure B**

**Both methods do clone/restore, but only one method creates an image of your drive.**

**Step 8**

Where do you want to put the image? In this step you need to tell Clonezilla where the image should be saved. You have six choices:

·         Local Device

·         SSH server

·         Samba server

·         NFS Server

·         Enter shell

·         Skip

For an external or USB drive, you will want to select local\_dev (**Figure C**). This destination is also the easiest, as you do not have to worry about setting up SSH, Samba, or NFS. Just remember that these images can get VERY large, so you will want to have an external drive that is greater than or equal to the drive you are imaging.

**Figure C**

**Choose a destination, but local\_dev is the most likely choice.**

**Step 9**

Select the repository that will hold your image. This is where you need to be very careful. If you are in a Linux environment you can almost be sure that you do NOT want to select the drive labeled like hda. You will want to look for an hdb or hdd (or sdb, sdd, etc). If you choose the "a" partition, you run the risk of overwriting your current working drive.

**Step 10**

Name the image. All you do here is give the image a name. You might want to include the date in your image name so that you know what the most recent image file is.

**Step 11**

Watch the process happen. Although Clonezilla is pretty snappy (for an imaging tool), you can expect anywhere from 30 minutes to three hours, depending on the size of the partition or drive you are imaging. I recently did a clone of a 160GB drive in just under two hours.

Once the image has written to the device, you can then reboot your machine, knowing you have a backup in case of disaster.

**10.3.3 Mounting Partitioned  Image to 2nd Notebook**

**Step 1**

Attach the external drive (or, if you are using a USB, insert a burnable CD/DVD) and then insert your Clonezilla media.

**Step 2**

Reboot. You have to boot from the Clonezilla media for this to work. You will have to change to  boot mode using the F9 key, if you are using hp notebook. (Steps 1 through 7 are as above)

What you will see is the Clonezilla boot screen (**Figure A**). For the task of creating an image, you will want to select Clonzezilla Live (Default settings) and press Enter. You will now see a Debian boot sequence appear.

**Figure A**

**You can select a resolution to better suit your monitor from this menu.**

**Step 3**

Choose your language. From the language screen, you need to select the language you want to use for the process. This step should be fairly self-explanatory.

**Step 4**

Choose your keyboard layout. You have four options:

·                      Select Keyboard from arch list

·                      Don't touch my keymap

·                      Keep kernel keymap

·                      Select keymap from full list

Most likely the Don't Touch My Keymap setting will work just fine

**Step 5**

Start Clonezilla. At this step you can either drop into a console or start Clonezilla. You don't want to use console here, unless you are a seasoned Clonezilla veteran.

**Step 6**

Choose your device image. In this step you are going to choose between creating an image or doing a direct, device-to-device copy.

**Step 7**

Since we choose "local\_dev" option, we can use 2nd disk or USB flash drive to save 1st disk's image. If using a USB flash drive as a repository, insert a USB flash drive and wait a few seconds.

Clonezilla will scan the disks on the machine in every few secs, and show you the results:

Once you see the device you have inserted shown on the status, you have to press Ctrl-C to quit the scanning report.

**Step 8**

Select sdb1 as image repository, then choose "restoredisk" option

Choose the directory name on /dev/sdb1 as the image repository. Here we put image on the top directory (i.e., Current selected dir name is "/"):

If you are not familiar with the disk or partition name in GNU/Linux, read the hints:

'The partition name is the device name in GNU/Linux. The first partition in the first disk is "sda1", the 2nd partition in the first disk is "sda2", the first partition in the second disk is "sdb1" or "sdb1"... If the system you want to save is MS windows, normally C: is sda1, and D: could be sda2, or sda5...'

**Step 9**

Here we choose "Beginner" mode:

If you choose "Expert" mode, you will have some chances to choose advanced parameters, e.g. imaging program, compression program, etc.. You can see more details [here](https://clonezilla.org/clonezilla-live/doc/02_Restore_disk_image/advanced/09-advanced-param.php). Now you can select "restoredisk" option:

**Step 10**

Choose the Clonezilla live image as source image:

Select the destination disk "sda" we want to restore:

Choose to check the image integrity before really restoring the image to disk sda:

It's recommended to check the image before restoring it. You will not know if the image is broken or not. If you are really sure about the integrity is OK, then of course you can choose "-scr" to skip checking.

**Step 11**

Select the mode you want after the image restoring is done:

By default we will choose later, but if you have decided, you can choose to reboot or poweroff the machine.

Clonezilla will prompt us the command to restore the image. This command is very useful when you want to create a customized Clonezilla live:

Before starting to restore the disk image to disk sda, Clonezilla will ask you to confirm that TWICE:

Step 12

Clonezilla now is restoring the selected disk image to 1st disk (sda). The job is done by restoring:

o    MBR (by dd), and Boot loader (by grub)

o    Partition table (by sfdisk).

o    Data on every partition or LV (logical volume) (by partimage, ntfsclone, partclone or dd. It depends on the image of each partition or LV.)

**10.3.4 PC reboots after Partition mounted**

> Restart the notebook;  
The laptop should restart normally ;  
If the Grub windows appear it means the Grub restoration was not  successful.   
> Wait for a command line for repair to open;  
Press continue;  
Type $ sudo nano /etc/fstab

This will display all Mounted disks in a table as below

|  |  |  |  |
| --- | --- | --- | --- |
| **File system** | **Mount point** | **type** | **dump** |
| /home was on dev/sda6 during installation  UUID XXXXX | / | ext4 | error=remount -ro |
| /home was on dev/sda6 during installation  UUID XXXXX | /home | ext4 | defaults |

In my test case as you can see, there is an error on the **mounted UUID as root.**

This means partition exists but grub did not successfully restored other system packages.

**10.3.5 Check if File present and opens from Non-root images**

One quickest way to search for a file is to

-              Press Windows Key and Type the name of the file, File should show if the disk was correctly mounted

You can as well use command line to check if the file exist;

Sudo ls -a  /<name of partition>/<di>r/

For example   
$ sudo ls -a /mnt/dummyDir/\*

 Files should be listed if present

$ sudo cat > /mnt/dummyDir/file\_name.txt to test if it opens

**10.4 Prepare default installation**

The planning what is installed can be found here  
<https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=645565525>Tab moodle laptop installation

**10.4.1 Prerequisites**

Prepare laptop:  
  
**Attention: laptop needs to support native UEFI boot**

Use a laptop with at least 8GB RAM and a 256GB SSD  
  
Download Ubuntu LTS 20.04.1:  <https://ubuntu.com/download/server> (Option 3)

Use a USB imaging tool like rufus to make a bootable USB stick with Ubuntu Server: <https://rufus.ie/>

When imaging is done, power on the laptop and enter BIOS (F10)  
  
Go to “Boot Options”  
  
> Set Boot Mode to “UEFI Native (Without CSM)”  
> Press F10 to save settings.  
> Plugin the USB Stick and reboot the laptop  
> Press F9 during boot/power on to select a boot device.  
Make sure that the USB stick is selected as a UEFI source.  
> Select “Install Ubuntu Server” when prompted in GRUB  
> When installation is started, select “English as your language  
> Select “Update to the new installer” if the option is available  
> Select English US as keyboard layout

Check if the connection is available and if you’re receiving an IP address from a DHCP server.  
Skip through the Proxy address and Mirror address screen to keep settings default

> Select “Use an entire disk” and make sure your SSD is selected  
> Select Done to advance to next screen

At the bottom of the screen, check of the mounting point of partition 1 is /boot/efi  
If it’s not, you didnt boot into an UEFI source USB stick, but a regular BIOS/Legacy device

Select Done and Continue afterwards

Fill out the Name fields and password fields to your liking

Preferred options are:  
Your Name: Administrator  
Your server’s name: moodleserver  
Pick a username: moodleserver  
Password: moodle

Select Done when everything is filled out

Select “Install OpenSSH Server”  
**This is important for setting up a remote connection later**

Don’t import SSH Identity

Select Done  
  
Skip the Featured Server Snaps

Let the installer do its thing untill “Reboot” is available

Select Reboot  to complete the installation

Remove the USB stick and press ENTER

**Option steps if laptop does not boot Ubuntu Server**

Go into BIOS when powering on (F10)  
Go to Boot Options  
Select “Customized Boot”  
Use the following path “\EFI\ubuntu\grubx64.efi

In UEFI Boot Order, prioritize Customized Boot as first Boot option of the UEFI Boot Order

Boot into Ubuntu Server

Enter username and password when server is booted

Now type “ip addr show” and make note of your IP address.

**10.4.2 Preparing remote connection for installation of moodle on Ubuntu Server**

On your Workstation, download PuTTY: <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

After downloading, open PuTTY and enter the ip address of Ubuntu Server and make sure SSH is selected.  
Click on the “Open” button

Click “Yes”

PuTTY should now show a prompt “login as:”

Type in the username and password to verify connection

To give access from the outside world, it’s recommended to use Anydesk. The operator (Kennan) can use Anydesk to view the contents of your workstation, including the PuTTY session. This prevents the opening of ports 22 (and possibly others) and keeps your network secure.

In order to complete this tutorial, you will need access to the following on an Ubuntu 18.04 (or 20.04) server:

         You can use either VI (lightweight editor) or VIM (heavyweight editor), ~~however, if you wish to use VIM you will need to install it~~ vim is already installed on Ubuntu Server by default

         Download image from video.nts.nl/mediafilesystem/videoserver.iso

sudo apt-get install vim

* A sudo user on your server
* An Apache2 web server, which you can install with sudo apt install apache2

**10.4.3 Create the Directory Structure**

We’ll first make a directory structure that will hold the site data that we will be serving to visitors in our top-level Apache directory. We’ll be using example domain names, highlighted below. You should replace these with your actual domain names.

·         sudo mkdir -p /var/www/moodle.com/html  
·         sudo mkdir -p /var/www/video.com/html  
·         sudo mkdir -p /var/www/project.com/html

*Grant Permissions*

We should now change the permissions to our current non-root user to be able to modify the files.

·         sudo chown -R $USER:$USER /var/www/moodle.com/html  
·         sudo chown -R $USER:$USER /var/www/video.com/html  
·         sudo chown -R $USER:$USER /var/www/project.com/html

 Additionally, we’ll ensure that read access is permitted to the general web directory and all of the files and folders it contains so that pages can be served correctly.

·         sudo chmod -R 755 /var/www

**10.4.4 Create New Virtual Host Files**

**10.4.4.1 public domains**

Apache comes with a default virtual host file called 000-default.conf that we’ll use as a template. We’ll copy it over to create a virtual host file for each of our domains.

**Create the First Virtual Host File**

Start by copying the file for the first domain:

- sudo cp /etc/apache2/sites-available/000-default.conf /etc/apache2/sites-available/moodle.com.conf

Open the new file in your editor (we’re using vim below) with root privileges:

·               sudo vim /etc/apache2/sites-available/moodle.com.conf

We will customize this file for our own domain. Modify the highlighted text below for your own circumstances.

/etc/apache2/sites-available/example.com.conf

<VirtualHost \*:80>

      ServerAdmin admin@example.com

      ServerName moodle.com

      ServerAlias www.moodle.com

      DocumentRoot /var/www/moodle.com/html

      ErrorLog ${APACHE\_LOG\_DIR}/error.log

      CustomLog ${APACHE\_LOG\_DIR}/access.log combined

</VirtualHost>

At this point, save and close the file.

Copy First Virtual Host and Customize for Second  and third Domain

Now that we have our first virtual host file established, we can create our second one by copying that file and adjusting it as needed.

Start by copying it:

·                      sudo cp /etc/apache2/sites-available/moodle.com.conf /etc/apache2/sites-available/video.com.conf

·                      sudo cp /etc/apache2/sites-available/moodle.com.conf /etc/apache2/sites-available/project.com.conf

Open the new file with root privileges in your editor:

·                      sudo vim /etc/apache2/sites-available/video.com.conf

·                      sudo vim /etc/apache2/sites-available/project.com.conf

You now need to modify all of the pieces of information to reference your second domain. The second  file for videos should look something like this, with highlighted text corresponding to your own relevant domain information.

/etc/apache2/sites-available/video.com.conf

<VirtualHost \*:80>

      ServerAdmin admin@test.com

      ServerName video.com

      ServerAlias www.video.com

      DocumentRoot /var/www/video.com/html

      ErrorLog ${APACHE\_LOG\_DIR}/error.log

      CustomLog ${APACHE\_LOG\_DIR}/access.log combined

</VirtualHost>

Save and close the file when you are finished.

Your third file for Projects

/etc/apache2/sites-available/project.com.conf

<VirtualHost \*:80>

      ServerAdmin admin@test.com

      ServerName project.com

      ServerAlias www.project.com

      DocumentRoot /var/www/project.com/html

      ErrorLog ${APACHE\_LOG\_DIR}/error.log

      CustomLog ${APACHE\_LOG\_DIR}/access.log combined

</VirtualHost>

Save and close the file when you are finished.

*Virtual hosts for Running Multiple offline web services*

IP-based virtual hosts

IP-based virtual hosts, are basically what the httpd server uses by default. When using them, the ability to serve multiple websites is based on the client request IP:PORT combination.

To use this type of virtual hosts, a machine must have multiple network addresses. This doesn’t mean that multiple physical network interfaces are required, since multiple addresses can be assigned to the same interface ( this is called IP aliasing), and virtual interfaces can also be   
  
sudo vim /etc/apache2/ports.conf

Add the following   
  
Listen 8080

<VirtualHost 93.184.216.34:80>

  ServerName: moodle.local

  DocumentRoot "/var/www/moodle.com/html"

</VirtualHost>

<VirtualHost 93.187.216.34:8080>

  ServerName video.local

  DocumentRoot "/var/www/video.com/html"

</VirtualHost>

Above we can see that even if the two virtual hosts have the same IP address, a different port is specified in the second example: 8080. In order for the server to be able to listen to that port we use the Listen 8080 directive.

**10.4.4.2 Enable the New Virtual Host Files**

With our virtual host files created, we must enable them. We’ll be using the a2ensite tool to achieve this goal.

·                      sudo a2ensite moodle.com.conf

·                      sudo a2ensite video.com.conf

·                      sudo a2ensite project.com.conf

Next, disable the default site defined in 000-default.conf:

·               sudo a2dissite 000-default.conf

When you are finished, you need to restart Apache to make these changes take effect and use systemctl status to verify the success of the restart.

·               sudo systemctl restart apache2

Your server should now be set up to serve three websites.

*Set Up Local Hosts File*

If you haven’t been using actual domain names that you own to test this procedure and have been using some example domains instead, you can test your work by temporarily modifying the hosts file on your local computer.

On a local Mac or Linux machine, type the following:

·                      sudo nano /etc/hosts

·

For a local Windows machine, [find instructions on altering your hosts file here](https://support.microsoft.com/en-ca/help/923947/you-cannot-modify-the-hosts-file-or-the-lmhosts-file-in-windows-vista).

Using the domains used in this guide, and replacing your server IP for the your\_server\_IP text, your file should look like this:

Vim /etc/hosts

127.0.0.1   localhost

127.0.1.1   guest-desktop

your\_server\_IP moodle.com

your\_server\_IP video.com

your\_server\_IP project.com

Save and close the file. This will direct any requests for example.com and test.com on our computer and send them to our server.

**10.4.4.3 Create Demo Pages for tests**

nano /var/www/moodle.com/html/index.html

<html>

  <head>

    <title>Welcome to Moodle site!</title>

  </head>

  <body>

    <h**1**>Success! The moodle site virtual host is working!</h**1**>

  </body>

</html>

Save and close the file, then copy this file to use as the basis for our second site:

cp /var/www/moodle.com/html/index.html /var/www/video.com/html/index.html

**10.4.4.4 Open the file and modify the relevant pieces of information:**

         nano /var/www/video.com/html/index.html

<html>

  <head>

    <title>Welcome to video!</title>

  </head>

  <body> <h**1**>Success! The video server virtual host is working!</h**1**>

  </body>

</html>

**10.4.4.5 Test Virtual Hosts**

With our virtual host files created, we must enable them. Make sure they are enabled.

You can use the a2ensite tool to achieve this goal.

sudo a2ensite moodle.conf

sudo a2 ensite video.conf

Next, disable the default site defined in 000-default.conf:

sudo a2dissite 000-default.conf

When you are finished, you need to restart Apache to make these changes take effect and use

systemctl status to verify the success of the restart.  
sudo systemctl restart apache2

Also, type the following command if you are using offline web service   
sudo /etc/apache2/ports

Listen 8080

**10.4.4.6 Test your Results**

Now that you have your virtual hosts configured, you can test your setup by going to the domains that you configured in your web browser: http://<IP Adddress> to view moodle page

You should see a page that looks like this:

You can also visit your second page and see the file you created for your second site.   
http://<IP Address:8080>

If both of these sites work as expected, you’ve configured two virtual hosts on the same server.

If you adjusted your home computer’s hosts file, delete the lines you added.

**10.4.5 Move directory from ISO to Site Directories**

In the iso disk, we need to copy directories  to their respective site  dir set in step 1. Run the following commands one by one

·                      sudo cp –R /home/$USER/Desktop/videoserver/moodle/\* /var/www/moodle.com/html

·                      sudo cp –R /home/$USER/Desktop/videoserver/video-server/\* /var/www/video.com/html

·                      sudo cp –R /home/$USER/Desktop/videoserver/project/\* /var/www/project.com/html

**10.4.6 Moodle installations**

**10.4.6.1 Moodle installation**

Option 1 — Package Installations with internet connection

Install Additional Software

Open up Terminal and install the following;

·               sudo apt install apache2 mysql-client mysql-server php libapache2-mod-php

Run

·         'sudo mysql\_secure\_installation'

to set the root password for mysql - please, , WRITE IT DOWN and spare yourself some grief, you will need it later.

Ubuntu 18 ships with php 7.2  installed by default.

To make sure php 7.2 is installed, run the following command

·         php –version

Also, run the following to install additional packages

·               sudo apt install graphviz aspell ghostscript clamav php7.2-pspell php7.2-curl php7.2-gd php7.2-intl php7.2-mysql php7.2-xml php7.2-xmlrpc php7.2-ldap php7.2-zip php7.2-soap php7.2-mbstring

Restart Apache so that the modules are loaded correctly

sudo service apache2 restart

Prepare Directory

Create a directory for moodle metadata and give read/write permissions

sudo mkdir /var/www/moodle.com/moodledata

sudo chown -R www-data /var/www/moodle.com/moodledata

sudo chmod -R 777 //var/www/moodle.com/moodledata

sudo chmod -R 0755 /var/www/moodle.com/html

*Setup MySQL Server*

sudo vi /etc/mysql/mysql.conf.d/mysqld.cnf

Scroll down to the [mysqld] section and under Basic Settings add the following line under the last statement. if you want to add you have to press the "insert" button on your keyboard. this is usually above the "delete" button. this allows you to add some text.

**default\_storage\_engine = innodb**

**innodb\_file\_per\_table = 1**

**innodb\_file\_format = Barracuda**

In order to save my.cnf using the editor, press the Esc (Escape) key, type the following in sequence which will save :w then close the editor :q

:w

:q

Restart MySQL Server for changes to take effect

sudo service mysql restart

Now we need to create the Moodle database and the Moodle MySQL User with the correct permissions

Use the password you created in step 1 (**1 Install Additional Software**)

sudo mysql -u root -p

mysql>

CREATE DATABASE moodle DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4\_unicode\_ci;

Note: Use 'utf8mb4' for full range (4-byte) support of UTF-8, including Emoji ('utf8' only supports 3-byte). You will be compliant by Moodle admin page if you don't use 'utf8mb4' here.

Where it says "moodledude" and "passwordformoodledude" you should change to the username and password of your choosing.

mysql>

create user 'moodledude'@'localhost' IDENTIFIED BY 'passwordformoodledude';

mysql>

GRANT SELECT,INSERT,UPDATE,DELETE,CREATE,CREATE TEMPORARY TABLES,DROP,INDEX,ALTER ON moodle.\* TO 'moodledude'@'localhost';

mysql>

quit;

**10.4.6.2 Complete Setup and Test**

Note - If you are not comfortable using terminal to create the config.php file that needs to be created when going through the installer, you should temporarily make the webroot writable by doing the following:

> sudo chmod -R 777 /var/www/moodle.com/html

After you have ran the installer and you have moodle setup, you NEED to revert permissions so that it is no longer writable using the below command.

> sudo chmod -R 0755 /var/www/moodle.com/html Open your browser and go to

http://IP.ADDRESS.OF.SERVER.FOR.MOODLE/

Follow the prompts:

Make sure  the path for moodledata points to /var/moodle.com/ moodledata

/var/moodledata

Database Type

Choose: mysqli

Database Settings

Host server: localhost

Database: moodle

User: moodledude (the user you created when setting up the database)

Password: passwordformoodledude (the password for the user you created)

Tables Prefix: mdl\_

Environment Checks

This will indicate if any elements required to run moodle haven't been installed.

> Next next next…

> Follow prompts and confirm installation

> Create a Site Administrator Account

> Create your moodle user account which will have site administrator permissions.

The password you select has to meet certain security requirements.

Installation Complete, Congrats! You can now start using Moodle!

Don't Forget If you made the webroot writable, revert permissions, run in your command the following

sudo chmod -R 0755 /var/www/moodle.com/html

      ii.            Video Server Installation

    iii.            Project Installation

**10.4.7 Install video server**

Download video server

Use the password you created in Moodle Installation step 1

sudo mysql -u root -p

mysql> CREATE DATABASE nts\_training ;

You’ll see this output confirming that it was created.

Output

Query OK, 1 row affected (0.00 sec)

Then exit the MySQL shell by pressing CTRL+D. From the normal command line, you can import the dump file with the following command:

·         mysql -u username -p nts\_training < videoserver.sql

* username is the username you can log in to the database with
* newdatabase is the name of the freshly created database
* videoserver.sql is the data dump file to be imported, located in the Desktop/videoserver directory

Move the video-server directory from Desktop/videoserver/video\_server/\* to video.com site directory with the following commands

sudo chmod -R 0755 /var/www/moodle.com/html

sudo cp –R /home/$USER/Desktop/videoserver/video\_server/\*  /var/www/video.com/html

Complete the setup

Configure database by editing Database.php, Run the command bellow

sudo vim /var/www/video.com/app/Stream/config/database.php

You should see a file that looks like this

class Database {

       private $host = "\_\_your\_host\_\_";

      private $db = "nts\_training";

      private $username = "\_\_your\_db\_username\_\_";

      private $password = "\_\_your\_db\_password\_\_";

      …

}

Replace $host, $username, $password with your credentials

Hit :wq to save and quit file

Now test the installation

http://IP.ADDRESS.OF.SERVER.FOR.VIDEO/

**10.4.8 Install projects**

Describe how to install the DHTMLX projects/video server app

The different images list are kept in:  
  
<https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=1365002216>Tab Moodle server test  
Table images

|  |  |
| --- | --- |
| **Columname** | **How to fill in** |
| Image name | Describe the name of the test |
| Included | Describe what is included in the image |
| Documentation | Describe which procedure chapters are related to this test |
| Size (MB) | Size of the image in MB |
| Status |  |

The images are kept in the following directory:

**10.4.9 Test projects program**

The test result are kept in:  
  
<https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=1365002216>Tab moodle server test

|  |  |
| --- | --- |
| **Columname** | **How to fill in** |
| Name test | Describe the name of the test |
| Procedure how to test | Describe how the test should be done |
| Documentation | Describe which procedure chapters are related to this test |
| Image #1 | Describe if test is applicable (Put “X” when applicable) Give cell color No color = Test is not included Yellow = Need to be tested Green = Pass Red = Not passed  When color is red describe in same cell why the test has failed |
| Image #2 |
| Image #3 |
| Image #4 |

Different test programs  
<https://www.tecmint.com/linux-disk-cloning-tools/>

**10.4.9.1 Testing User Management**

To test if the user database is functioning properly, you need to add a user.

After adding the user, log in with those credentials and see if you can login. Next, change some info in the user’s  account and delete it afterwards.

Loging with an admin account: admin/wgnd8bWGND\*B (default in current image)  
Go to Site administration  
Click on tab “users”  
Click “add a new user”  
Fill in all the required fields

Login with newly created account

Log out and log back in as Admin

Site Administration > users > browse list of users  
Edit the new user account, First name and/or Surname is easiest to check, save changes

Log in with new account

Check if changes applied  
Log in as Admin account

Site Administration > users > bulk user actions  
Select user  
Select Delete, click Go

**10.4.9.2 Testing Courses**

To test if Courses are working properly, we will be adding courses and course pages, and edit them afterwards, including deletion.

Login as Admin and go to Site Home

Click “add new course”

Fill out the fields and add an image

Save the course and display it

Click on “proceed to course content”

Click “turn editing on”

Now add resources to all 4 topics

Select “page” as the resource  
Fill the fields with information

Save and return to course

Go back to site home and check of your course is displayed

Click the course and edit the Topics to your liking

To delete the course, go to Site administration > courses > manage courses and category  
Find your course and click the trashcan for deletion of  the course.

Click continue

**10.5 Install laptop**

Describe   
- how the copy (clone) the harddrive from the first laptop to the second laptop   
- how second laptop working and if it is the same as the image from the first laptop. The second laptop should have the same config as the first laptop.  
- How to change the laptop IP to an available IP address  
- How

**10.5.1 Preparation**

Before the image can be made the laptop should be installed with the minimum config of the video/project/moodle server.   
  
This image should be less than 10GB if possible.  
  
Describe which laptop to use (config)  
Describe how to make this image

**10.5.2 Clone harddrive**

Describe hardware used  
Describe how to copy (clone)

**[Software cloning]**

Hard drive cloning with Macrium <https://www.macrium.com/reflectfree>The free version is enough to clone a ssd or hard drive.

Required for this step is:

* Windows computer with Macrium (program) or anything else that is capable to clone disks
* SSD/HDD with moodle server installed on linux bootable and configured
* SSD/HDD you wish to clone (Make sure its the same GB as the original HDD/SSD to avoid clone problems)
* HDD/SSD docking station with usb, or internal computer access with 2 extra SATA slots for cloning.

The easiest way to clone two HDD/SSD with software is to put them in a docking station, and connect the USB to the windows computer.  
  
If you dont have a docking station you can open up your computer, and connect the two HDD/SSD’s to your computer. (Make sure your computer is turned off). After everything is connected bootup your Windows computer.

Open Macrium or any disk cloning software.

In Macrium click on backup at the left tree, then select the disk you want to clone (Linux bootable moodle drive)

Click Clone this disk…

Now select the destination drive, this is the empty HDD/SSD with the same amount of GB you want to use after the cloning process.

Click advanced options, and enable Perform a forensic sector copy, this will copy the whole disk no matter if there are any broken sectors. It will copy everything to the new drive.

Click on next and it will start cloning. This may take around 30 mins to 1,5 hours depending on computer speed, and disk size.

After the progress bar reaches 100% the disk is ready to use and can be installed.

[Hardware cloning]

Required for this step is:

* StarTech HDD/SSD docking station with clone feature (button)
* HDD/SSD source with moodle server installed on linux bootable and configured
* SSD/HDD you wish to clone (Make sure its the same GB as the original HDD/SSD to avoid clone problems)

Place the source SSD/HDD in slot 1 (source)

Place the second drive in slot 2 (destination)

Hold the Clone button in front of the StarTech docking in for 3-5 seconds.

The 4 lights will blink yellow and it will start cloning.

When the first light stays on, it means the cloning progress is at 25%.

After the cloning progress is finished all 4 lights will blink together.

**10.5.3 Testing**

<https://docs.google.com/spreadsheets/d/1PaT7pQlUMPKaCBoF7y4nPCryuVyQFrkHHic-ljDmCLg/edit#gid=1365002216>Tab moodle test  
Perform testno #1 till #6 if succeeding. If not find cause what went wrong, ask help from Kennan/Geoffrey were needed with remote connection (see testno 1)

**10.5.4 Change IP address**

**10.6 Adding servers for moodle export**

-Add table servers with following attributes:

1.id  
2.server\_id  
3.location  
4.IP\_Address  
5.Password  
6.username

-Add attribute server\_id to documents table as foreign key

When export button is pressed and server\_id == null, do the following:

1. Popup a window to show available servers in a grid
2. Users select one of the server he/she wishes to export the moodle data
3. Pick the server id and match to server IP\_address, Password, Username from the servers table
4. Uses the selected variables from the server table in the config.php file for database connection
5. On successful export, save the server\_id in the documents table

-Add tab after Program Update status tab for showing server available for moodle export  
-show all servers available for moodle export in a grid when servers tab is clicked

-when user selects one of the servers in the grid, select that server for export

**10.6.1 Generating token in moodle**

**10.7 Install wireless network**

**10.7.1 Hardware used**

**10.7.2 Install wifi router**

We are going to install and configure a TP-Link AC1200

Connect your mobile phone to the TP-link, the wifi password is located at the back of the router.

* Open your webbrowser and navigate to 192.168.1.1
* It will ask you to change the default password, i use “wgnd8b”
* Select region and timezone
* Internet provider: other
* Now skip the auto setup by clicking the top menu navigation.
* The router is now ready to use

You could change the default Wi-Fi password but it's not required.

**10.7.3 Setup mobile phone**

**10.7.4 Test course**

**10.8 Install moodle for windows on client laptops**

Install moodle for windows for the laptops see if the audio recording plugin works where you have questions in moodle and user need to give the answer by build in microphone.

**11. Create course from Google document**

**11.1 Document structure**

Create a google document in google google drive  
Add a name for your document(this will be the course name) at the top left corner of the document

Enter the topic of the document(can be the same as the name of the document you entered above

Add table of contents as your first page, to enter the table of contents:

1. Click where you want the table of contents (first page).
2. Click Insert on the menu options
3. Navigate to table of contents
4. Choose how you want the table of contents to look.

Enter your Headings(h1,h2…) this will be the chapters and subchapters in moodle  
Enter the content(text,videos,audios,urls, images) below headings

Document Structure will be Name of the document=> Title => Table of contents =>  content

**11.2 Make content**

**11.2.1 Text blocks**

Text block content should be well spaced(visible)

Heading:

Heading1 Can use font style calibri and size 14

Heading2 Can use font style calibri and size 12

Heading3 Can use font style calibri and size 10

content:

Can use font style calibri and size 10

**11.2.2 Images**

>Images can be copied directly from their source and be pasted where they need to be shown

>Resize the image proportionally with your document content and the content of the images for clear visibility, very big images tend to be disturbing and too small images may not be visible enough especially if their could be text to be read by user from the images

NB: images should be added on lesson pages and not main pages(main pages are for chapter description)

**11.2.3 Tables**

>Inorder to add tables, go to insert in the document menu

>Select table and choose the dimensions you want for your table

**11.2.4 Videos**

Copy the link directly from  the browser where the video is currently played, usually ending with the video format eg .mp4

Example

<https://video.nts.nl/uploads/cuts/p011108_moodle_videos_20.mp4>

Paste the link in the document where you want the video to show

Eg  The link would look like

:

for the video below

<https://www.youtube.com/watch?v=tyLrc5uI8gc&ab_channel=TradestarKenya>

**NB:** ascertain that the src url is show as a link(in blue text), otherwise your video would not be seen or played in moodle

**NB**: videos  should be added on lesson pages and not main pages(main pages are for chapter description)

When adding videos for offline, ascertain that they are below 8mb(ie, moodle allows upto 8mb in to a single filearea)

**Method 1: embedding the url**  
> Go to the youtube video of choice   
> Click at share button at the left bottom of the page

> Click at embad  
> Copy paste the following HTML text for an inframe into the google doc  
  
  
  
The copied text would like   
  
<iframe width="560" height="315" src="<https://www.youtube.com/embed/hl74T-31tKI> " frameborder="0" allow="accelerometer; autoplay; clipboard-write; encrypted-media; gyroscope; picture-in-picture" allowfullscreen></iframe>

NB: ascertain that the src url is show as a link(in blue text), otherwise your video would not be seen or played

**11.2.5 Audio**

Add link for audio directly as the video links

[https://video.nts.nl/uploads/cuts/p011140\_moodle\_french\_audio\_2/p011140\_Moodle\_french\_audio\_2\_1088.mp3](https://video.nts.nl/uploads/cuts/p011140_moodle_french_audio_2/p011140_)

**NB:** ascertain that the src url  show as a link(in blue text), otherwise your audio would not be seen or played in moodle

**11.2.6 Questions**

Adding/Editing/Importing questions to course

1. From the projects programs New Documents > Questions tab
2. Importing from google document

**Adding from Projects Question Tab**

From the projects tree menu,  button Show, select Moodle Content. This will list the moodle courses that are available.

1. Select the moodle course of interest and on the right section, in the list of tabs select New Documents tab.
2. The course will be listed in the Project Documents grid. Select the course.
3. In the bottom section select Table of content tab, here you will find the course content tree, which includes course topics as the first level,  Lesson or page as the second level and lesson pages as the third level.
4. To add question(s) to a page, select the desired page(third level row), then on the right section select question tab.
5. From the question tab toolbar, use the new button to add a new question, this button lists the various types of questions that can be added.
6. Click the question type that you wish to add and a new question will be created with the default question properties.
7. To edit/update the details of the question, select the question and edit from the form that shows the question details. Thereafter click save to persist the changes.

Supported question types include:

Essay - has free answer,

Multichoice - answer is from a list of supplied options,

Numerical - answer is a specified numerical value,

Short Answer - answer is a specified string

For questions to be displayed correctly in moodle, they have to be supplied together with their associated  answers.

**Adding answers to question**

1. Select the question, then select the answers tab
2. Use the new button in the answers toolbar to add a new answer. A new answer record will be created.
3. To edit the answer details, select it from the grid, edit the details from the form and click save.

**Exporting Questions to Moodle**

1. From the table of content, select the page with the questions you want to export
2. Open the questions tab and click on export. The page  questions will be exported to moodle. Visit the moodle page to view the result.

**Importing questions from google document**

In order for questions to be extracted from documents to projects questions, the questions in the document have to follow a set of guidelines as stated below.

The question should have three sections which include:

1. Question Title - this is specified by specifying the text as a heading 5. Can be written as (Question 1).
2. Question text - should be below the question title, this is specified as normal text
3. Answers  title - this is specified by setting the text as heading 6.
4. Answer list - this is normal text, press enter to add more answers, add (1) to identify the correct answer

Example of question structure is as follows:

Question 11(essay)

What in your view are the benefits of e-learning?

Ans

Question 12(multichoice)

What is the color of the sky?

Ans

Red

Orange

Blue(1)

Green

Question 13(numerical)

What is the sum of 5 and 6 ?

Ans

11(1)

Question 14(short answer)

A class has properties and \_\_\_\_\_\_\_\_\_

Ans

methods(1)

Question 15(true/false)

Anyone can sing ?

Ans

Yes(1)

No

Thereafter, questions can be added in the following ways:

**Import questions to course then link to page**

1. To import questions to course, select the course you need to add the questions to.
2. Go to the main  questions tab, and click on import from google document.
3. On the popup enter the document url and click on import. This action will fetch all the questions from the document and add them to the selected course.
4. To link the questions to a lesson page,  go to the new documents tab and select the table of contents tab in the lower section.
5. Select the desired page from the table of contents grid and then open tab questions on the right section.
6. Click on the link button, a popup with all the questions linked to the selected course and not linked to the selected page will appear.
7. Select all the questions you want to add to the specified page and click in the link button. The questions will now be added to the page.
8. From here the questions can be exported to moodle with the export button as described in the section above.

**Import questions to page directly**

1. Select the course containing the page you want to add questions to.
2. Go to the new documents tab, then on the bottom section select the tab table of contents.
3. In the table of contents, select  the desired page then open tab questions on the right section.
4. Click on the import from google document button and on the popup add the url to the document to import from, then click the import button. This action will import all the questions specified in the document to the selected page.
5. From here the questions can be exported to moodle with the export button as described in the section above.

**11.2.7 adding mathematical symbols and notations**

To add mathematical symbols in course:

1.Add ASCIIMath.js library in code in the header section of html i.e

<script src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.4/latest.js?config=AM\_CHTML"></script>

2. Use char such as ` ….` to enclose your formula eg

`x = {-b \pm \sqrt{b^2-4ac} \over 2a}. ` for quadratic equation

**11.3 Create zip file**

Open google document and navigate to file on the top menuClick file and move down to download and select web page(.html,zipped) to download

**11.4 Import file**

**11.4.1 Import zip file**

Open project program using the link  <http://bo.nts.nl/site/#Projects>

>move to project option in the menu bar and click  Google Doc extract program

>while in the Google Extract program, click New to import the zipp file you had downloaded earlier

>You can select on the popu that appears or drag and drop the zip file in the popup

>The program will extract the zip file and after a successful extract your course will be seen on the grid on the left of the program

**11.4.2 Import from URL**

For importing the course without having to create a zip file first:  
  
> Go to the google document you wish to import  
> Add the following user to the document:  
[ntsdocuments@extractdocument.iam.gserviceaccount.com](mailto:ntsdocuments@extractdocument.iam.gserviceaccount.com)

> Start up the google docs extract program  
> Copy the url from the google doc you wish to import  
  
For example  
[https://docs.google.com/document/d/1Grztr82HtFWAv1o6t\_ijMF5W35DaqTF3egyzUfI3zoo/edit#](https://docs.google.com/document/d/1Grztr82HtFWAv1o6t_ijMF5W35DaqTF3egyzUfI3zoo/edit)> Press “New” button  
> Paste the url  
> Choose the export server (by default education.nts.nl)  
> Press import  
  
  
Check if all chapters are property imported  
> Press “Export” to import the course in moodle  
  
Note: When the course should be reimported press “Update” at the subtab “Chapters” instead of the export button.

**11.5 Create course**

> To upload the course press “Export to Moodle” button 

**11.6 Updating course**

>click on the course you want to update in moodle

>Click Update course button to update the course in moodle

>This is after some changes are made or the google document has been reimported

**11.7 Enroll students**

>to enrol students to the imported course:

Login to moodle as admin  
>click site home on the menu on the left

>select the imported course

>on your right click the setting icon and select more

>click on the users tab on the page that opens

>under the user click enrol users  
>click Enrol users and select the student you want to enrol for the courses

**11.8 Importing google document through google document url**

To import a google document, click the share button on the top right corner

On the popup that appears, go to get link at the bottom of the popup window

Click share to everyone with the link

Click done.

**NB/ the share button should show a link icon below it as shown**

Now copy the google document url and use it for extraction in extract program

**12. Test Moodle course**

**12.1 Find course on mobile phone**

**12.2 Verify table of content**

**12.2.1 New chapter 2**

Text 3

**12.3 Verify content**

**12.3.1 Headers**

Some

Test 12.3.1dd

**12.3.2 New chapter**

Test 12.3.2t

**12.4 Updating course**

**12.4.1 creating backup**

- create backup in moodle app  
- This text is new2

**13. Hardware**

**13.1 Server**

add

**13.1.1**

**13.1.2 Software**

**13.2 Clients**

**13.2.1 Devices**

Devices are being used by the students to access the elearning content. For these devices the following can be used:

|  |  |  |
| --- | --- | --- |
| **Type** | **Criteria** | **Brands/Models** |
| PC |  |  |
| Notebook |  |  |
| Tablet |  |  |
| Hybrid |  |  |
| Mobile phone |  |  |
|  |  |  |

<https://www.banggood.com/Teclast-P80X-SC9863A-Octa-Core-2G-RAM-32G-ROM-4G-LTE-8-Inch-Android-9_0-Tablet-p-1491065.html?rmmds=search&ID=521090&cur_warehouse=CN>

[https://www.teclast.com/en/](https://www.banggood.com/Teclast-P80X-SC9863A-Octa-Core-2G-RAM-32G-ROM-4G-LTE-8-Inch-Android-9_0-Tablet-p-1491065.html?rmmds=search&ID=521090&cur_warehouse=CN)

https://www.amazon.de/TECLAST-Prozessor-Quad-Core-Bluetooth-Unterst%C3%BCtzt/dp/B08F74KCJW/ref=sxin\_8\_sxwds-deals-bau?\_\_mk\_de\_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&cv\_ct\_cx=tablet&dchild=1&keywords=tablet&pd\_rd\_i=B08F74KCJW&pd\_rd\_r=27fa63ea-4cb7-4243-809b-322cf1fbae15&pd\_rd\_w=mKfkm&pd\_rd\_wg=TxnR3&pf\_rd\_p=94c1eb5e-6a6b-46b9-92f1-a556680c326f&pf\_rd\_r=PGBNS9MSXRKK3CXQK4PR&psc=1&qid=1605311414&sr=1-1-52097d59-f253-4553-be63-55323b14096b

https://www.gsmarena.com/xiaomi\_redmi\_9-price-10233.php

<https://www.amazon.nl/Ulefone-Note-Ontgrendeld-Drievoudige-Ontgrendelen/dp/B089K6T2P8/ref=sr_1_4?__mk_nl_NL=%C3%85M%C3%85%C5%BD%C3%95%C3%91&dchild=1&keywords=smartphone&qid=1605310166&sr=8-4>

<https://www.alldocube.com/en/android/iplay7t/>

**Specification**

|  |  |
| --- | --- |
| **Category** | **Adviced** |
| Screen |  |
| Sound |  |
| Microphone | Yes |
| Camera | Front camera |
| Speakers | Yes + headset |
| Keyboard |  |
| Memory | 2GB or more? |
| Weight |  |
| Battery time |  |
| Flash drive |  |
| Harddrive |  |
| Network connectivity |  |
| Wifi |  |
| Mobile connectivity |  |
| Operating system | Android? |
|  |  |

Extra text

**13.2.2 Accessoires**

Keyboard  
Mouse

Covers

Storage/Loading

New accessores

**13.2.3 Software**

**13.3 Teaching board**

Beamer  
Smartscreens

**13.4 Networks**

Wireless  
Wired  
Internet

**13.5 Power**

Grid  
  
Solar power  
  
Backup power

**14. Content**

<https://icdleurope.org/find-a-test-centre/icdl-europe-the-netherlands/>

ecdl

Typevaardigheid  
https://www.olct.nl/typecursus-voor-volwassenen.htm

**14.1 Copyright content**

**14.2 Open source content**

**14.4 New contents**

Filmstudio  
Video and audio recording  
Powerpoint presentation  
Blackboard/Whiteboard presentation  
In the field, on the job video recording

**15. Examination**

**16. Video Streaming Mobile App**

|  |  |
| --- | --- |
| **16.1  Welcome Screen** |  |
| **16.2   Login/ Register**  To use the app, you need to sign in using the email address and password or Google account of your Flare  account.    If you do not have an account yet, click Create new account and follow instructions at our website    When signing in the first time the user is asked to define a map(server address) from the available array of server addresses. This will ensure user is connected to the right server and view the right content    By default you need to sign in only when you start the application for the first time. |  |
| **16.3  Home View**  **a)**      **The App basically consist of Two Tabs namely**  -          **Discover**  -          **Profile**  **b)**      **Destination Navigations** |  |
| **16.3.1  Discover**  Home view, termed as Discover, organizes the app content in a way that makes it easy for you to access the app content.  These contents are organized in following sections  i)              Recent banners  Has a list of most recent videos organized in lexicographically (upload date-time)    ii)             Per Authors  Contain list of authors, sorted using total videos:- Author with more videos given priority  iii)           Per Subjects  Contain list of subjects, sorted using total videos:- Subjects with more videos given priority    iv)           Per Subcategories  Contain top 5 list of subcategories, sorted using total videos:- Subcategories with more videos given priority    v)            Continue Watching  Your most unfinished watching videos  vi)           Your most visited subjects |  |
| **16.3.2  Destination Navigations**    **i)**                    **Author Videos**  Contain list of all authors, with total number videos for each |  |
| **ii)**                  **Subjects**  Display a list of all subjects, with total number of videos for each |  |
| **iii)**                **Subcategories**  Display a list of all subcategories, with total number of videos for each |  |
| **16.3.4   Profile**  Consists of two secondary tabs  -          My Uploads  -          Favourite/Bookmarks                  Other Destinations  -          Uploading Screen  -          Settings    i)                    My Uploads  Displays a list of videos uploaded by you. |  |
| **ii)**                  **Favourites/Bookmarked**  Displays a list of videos bookmarked by you |  |
|  |  |
| **16.4  Uploading Video**  i)                    Click upload button from Profile > My Uploads tab  ii)                   Select the video from gallery  iii)                 Fill in the detail form  **iv)**                Upload |  |
| **16.5   Settings**  This screen enables you to personalize some features such as Dark mode and Video Auto-play  Other information such as About app, App version, and server map address can also be found here. |  |
| **16.6. Search**  Search feature, at the top of almost every screen to enable quick search of videos, subjects, subcategories, authors within then app |  |
| **ii)**                  **Search Results & suggestions**  Displays search hits when found, and/or other close suggestions of what you might be looking for. Suggestions can contain videos, subjects, authors, subcategories or all depending on search term used |  |
|  |  |
|  |  |

**16.7 Iphone app**

Describe what you have made so far for the iphone app  
Describe how to access this code  
Describe where it goes wrong (challenges) and what you have tried to solve  
Describe what still has to be done

**16.7.1 App Development Status**

We use one codebase to support both iOS and Android platforms. [nts-dev/flare-app (github.com)](https://github.com/nts-dev/flare-app)

The same codebase can also be used for the other platforms supported by Flutter including the web (Linux and Windows).

The codebase, when compiled creates the exact same app (UI and almost same level of performance) on both platforms.

Due to this, the development status of an iOS version is of the same level as of Android version**.**

**Can be verified when IOS App is run on XCode Emulator.**

**In fact, the original version of flare app, built on Kotlin, was discarded due to iOS support then. Kotlin support for IOS was not yet mature when the first version was built.**

**The current version of the app is built with iOS support in mind to make it easy to share the same code base for the two major platforms.**

**What is remaining for IOS App**

App Cycles

1. Development adjustments

Essentially, the development for both App versions are not yet finished since there are few adjustments/ fixes to be made. These are the most apparent adjustments:

         Uploading video to server (Local network)

         Downloading video and saving it on users local storage(From local network)

         Enabling app to be served by local network (On wifi)

2.                   Generating release bundle for IOS : Described in the next section [16.7.2](https://docs.google.com/document/d/1Grztr82HtFWAv1o6t_ijMF5W35DaqTF3egyzUfI3zoo/edit)

**16.7.2 How to Make a Release version of IOS App**

**Prepare for building**

**This process assumes the following have been setup**

1. Apple’s guidelines for releasing an app on the app store. Link [App Store Review Guidelines - Apple Developer](https://developer.apple.com/app-store/review/guidelines/)
2. App’s icons and launch screens ready.
3. An Apple Developer account.

Before we can build and release the app on the App Store, we need to set up a place for it using App **Store Connect.**

But first, we need to register a **unique bundle ID** for the app. This can be done by logging into the Apple Developer account and following these steps:

Open the App IDs page.

* Click + to create a new Bundle ID.
* Fill out the needed information: App Name, and Explicit App ID.
* If your app needs specific services, select them and click Continue.
* Review the details and click Register to finish.

Now that we have a unique bundle ID, it’s time to set up a place for your app on the App Store Connect. Log in to the App Store Connect.

* Select My Apps.
* Click + then select New App.
* Fill in App details and make sure iOS is selected, then click Create.
* From the sidebar, select App Information.
* In the General Information section, select the Bundle ID that you registered above.

**Adjust Xcode project settings for release**

We’ve set everything up from Apple’s side, and next we’ll adjust Xcode project’s settings to prepare the App for release. Go ahead and fire up Xcode.

* Open Runner.xcworkspace that is inside the app’s iOS folder.
* From the Xcode project navigator, select the Runner project.
* Then, select the Runner target in the main view sidebar.
* Go to the General tab.
* In the Identity section, fill out the information and make sure the Bundle Identifier is the one registered on App Store Connect.
* In the Signing section, make sure Automatically manage signing is checked and select your team.
* Fill out the rest of the information as needed.
* Next, we  update the app’s icon. This can be done by selecting Assets.xcassets in the Runner folder from Xcode’s project navigator.

**Build and upload The App**

At this point, all the settings have been updated for release and there is a placeholder ready on App Store Connect, which means you can build and release.

* From the command line, run flutter build ios
* Then go back to Xcode and reopen Runner.xcworkspace
* Select Product -> Scheme -> Runner.
* Select Product -> Destination -> Generic iOS Device.
* Select Product -> Archive to produce a build archive.
* From the Xcode Organizer window, select your iOS app from the sidebar, then select the build archive you just produced.
* Click the Validate… button to build.
* Once the archive is successfully validated, click Upload to App Store….
* Back on App Store Connect, check the status of your build from the Activities tab. Once it’s ready to release:
* Go to Pricing and Availability and fill out the required information.
* From the sidebar, select the status.
* Select Prepare for Submission and complete all required fields.
* Click Submit for Review

**16.7.3 Challenges**

One major challenge that I face while developing the iOS version is the lack of Platform to test the generated bundle.   
The OneInAll Mac in Tradestar is too old and can neither be upgraded or made to support current xCode application. Development of iOS APP requires a **minimum** **Xcode** **version** of 11.**0**.0. We have tried setting up a remote environment in NTS earlier but did not manage to generate the bundle.

**17. Moodle App**

**17.1 Introduction**

**17.2 Installing moodle app**

**17.2.1 Android**

Where to find android add  
How to install android app

**17.2.2 Windows app**

**17.2.3 Iphone app**

**17.3 Setup connection**

**17.3.1 NTS moodle server**

How to setup NTS moodle server connection

**17.3.2 Local server**

**17.3.3 Change connection**

**17.4 Viewing courses**

**17.4.1 Finding course**

*Daniel to program*  
How to change picture for the course in projects program  
  
*Martin1 to program*  
How to find the course  
How to relist courses that it fits on 1-2 pages

Search button for the course

**17.4.2 Viewing course**

*Martin1 to program*  
How to remove the first “Start>” page showing up for each chaper  
How to remove the last page “Proficiat/Congratulations”   
  
With last page it should show screen “End of chapter”   
With achieved score (if any) and show icons:  
- “<<” to return to beginning of the chapter   
- “home” to return to mainmenu   
- “next” to go to the next chapter

**17.5 Emptying cache**

When to empty cache

How to empty cache

**18. Testing Moodle/Google extract program**

**18.1 Logging in**

Login table

|  |  |  |  |
| --- | --- | --- | --- |
| **Server name** | **Internal IP** | **External IP** | **Users** |
| Central server bo.nts.nl |  |  |  |
| Kenya moodle server |  |  |  |
| Notebook #1 (Salland) |  |  |  |
| Notebook #2 (Salland) |  |  |  |

**18.2 Adding server**

How to add server on central google extract program (bo.nts.nl)

To add a server, you'll need:

1.Name of server

2.Domain

3.Token  
4.Path

5.Location

**Sever name**

-This is a general name given to the moodle server it can be domain name eg. local, education.nts.nl

**Domain**

**-**domain is gotten from the domain name of the moodle server installed eg education.nts.nl,77.61.38.207:9090 etc

**Token**

-Token is used to identify a user on the webservice it can be found when one is logged in as admin.see the image below

-Log in to moodle as admin

-Go to site administration

-Go to plugin

-Go to webservice

-Go to manage token

-Copy the token for admin

**Location**

-This is the location where the server is situated, eg Kenya,Netherlands, Salland etc

**18.3 Upload course from URL**

**18.4 Upload course from file**

**18.5 Course modifying tests**

**18.5.1 Adding chapters’ main chapter(sections)**

-Add chapter(s) at the end of the document with chapter id i.e (1,2….)

-Chapters added with no id are not added to the moodle structure hence will not be shown on the extract program. These ids are used to identify the chapter and therefore they should be in order in which they appear in the document.

**18.5.2 Adding lessons(subchapters)**

-Lessons can be added in any main chapter(section at any location).

-when you add chapters add it with its id i.e( 1.1,1.2,1.3….)

-when you want to add a chapter(s) above others, ensure to edit the previous once so that the ids are in order in which they appear.

-add chapters with not duplicating chapter ids

**18.5.3 Adding lesson pages**

Lesson pages can be inserted with their ids too . i.e (1.1.1,1.1.2….) in order