**ZEST Raspberry Pi Set-Up**

These set-up stages are best completed on a computer/laptop if possible. It is possible to do on a smartphone/tablet but may be more challenging.

**How to add image to SD Card**

1. Download the ZEST Moodlebox Image and save it onto your computer
2. Insert a blank micro-SD Card into your computer (the SD Card should be 16GB or bigger)
3. Download [Win32 Disk Imager](https://sourceforge.net/projects/win32diskimager/) and start it up
   1. You may get a warning that your SD card is unreadable by Windows and needs to be formatted – ignore this, don’t format it. Just close the warning
4. Click the blue folder and navigate to your saved image
5. Choose your SD Card from the ‘Device’ drop down
6. Click the ‘Write’ button. This overwrites the SD Card’s data with the data from the downloaded image.
7. When finished, remove the SD Card and insert it into your Raspberry Pi.

*(Adapted from* [*https://www.howtogeek.com/341944/how-to-clone-your-raspberry-pi-sd-card-for-foolproof-backup/*](https://www.howtogeek.com/341944/how-to-clone-your-raspberry-pi-sd-card-for-foolproof-backup/)*)*

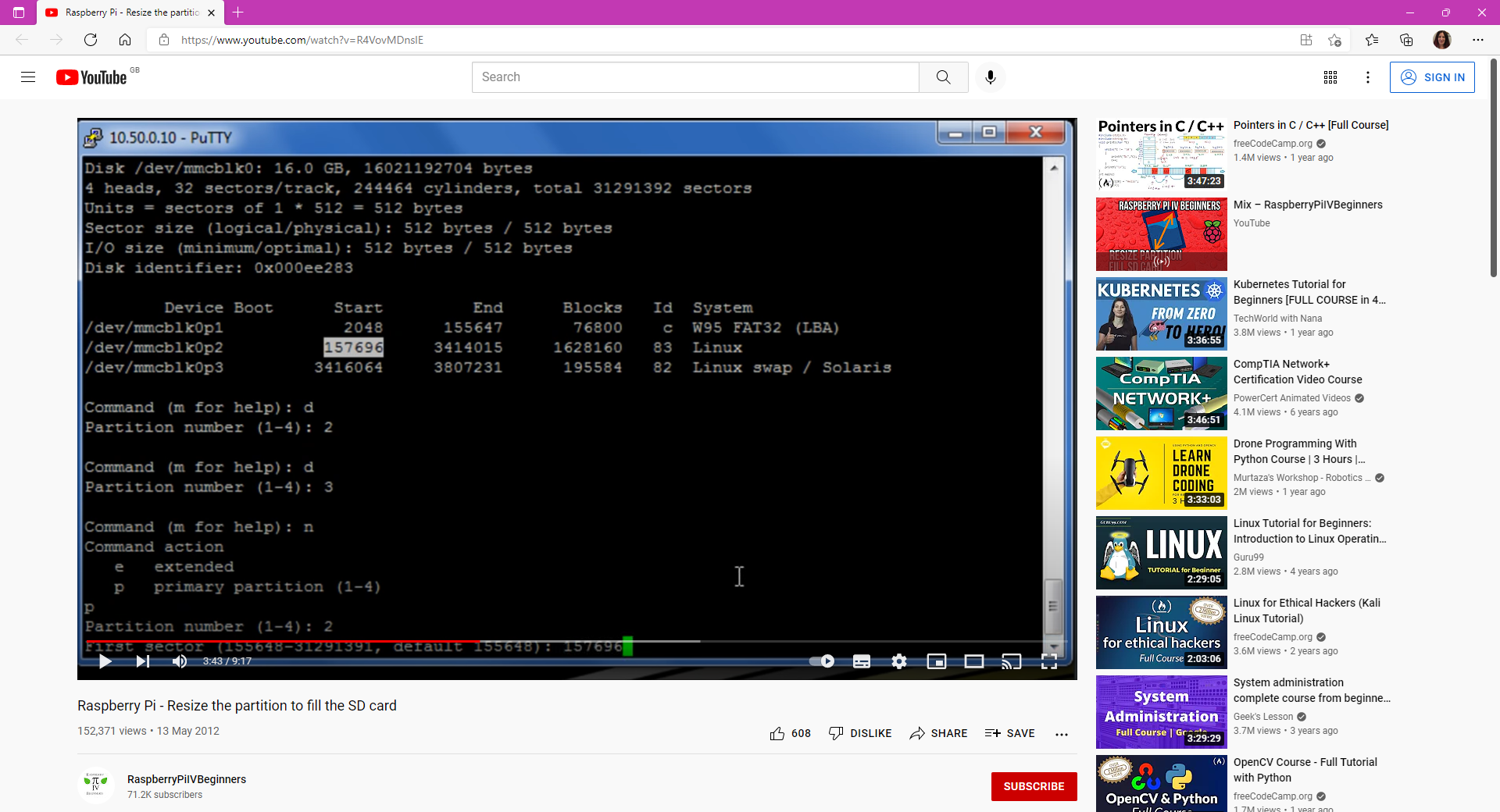
**How to expand the root partition**

Before you start using the Pi, you will need to make sure that all the space on the SD card is available for you to use. This is because the size of the downloaded image is smaller than your SD card.

This video provides a good explanation as to how to do this: <https://www.youtube.com/watch?v=R4VovMDnsIE>

Here are the main steps based on this video:

1. Plug the Raspberry Pi in and ensure it has power
2. On your computer, download Putty – [www.putty.org](http://www.putty.org)
   1. Click the hyperlink in the first section ‘Download PuTTY’
   2. Select the relevant file (e.g. MSI ‘Windows Installer’ 64-bit)
3. Open Putty on your computer
   1. In ‘host name’ enter 10.0.0.1
   2. Ensure ‘SSH’ is selected
   3. Click ‘Open’
4. Login using the following:
   1. Username – moodlebox
   2. Password – Moodle
5. Type the following commands (after you have typed each command, press enter):
   1. Sudo su
   2. df -h
   3. sudo fdisk -uc /dev/mmcblk0
   4. p
   5. d
   6. 2
   7. d
   8. 3
   9. n
   10. p
   11. 2



* 1. Look at the highlighted section in the picture above – find this same place on your screen and type the number that you see there
  2. Leave the next command blank by pressing enter again
  3. w
  4. Reboot

Your Pi should now restart itself.

1. Log back into the system (repeat steps 3 & 4). Once you are logged back in:
   1. Type: sudo resize2fs /dev/mmcblk0p2

This stage could take a while – be patient

1. Once complete, turn it off and log back in again (repeat steps 3 & 4)
2. Type: df -h

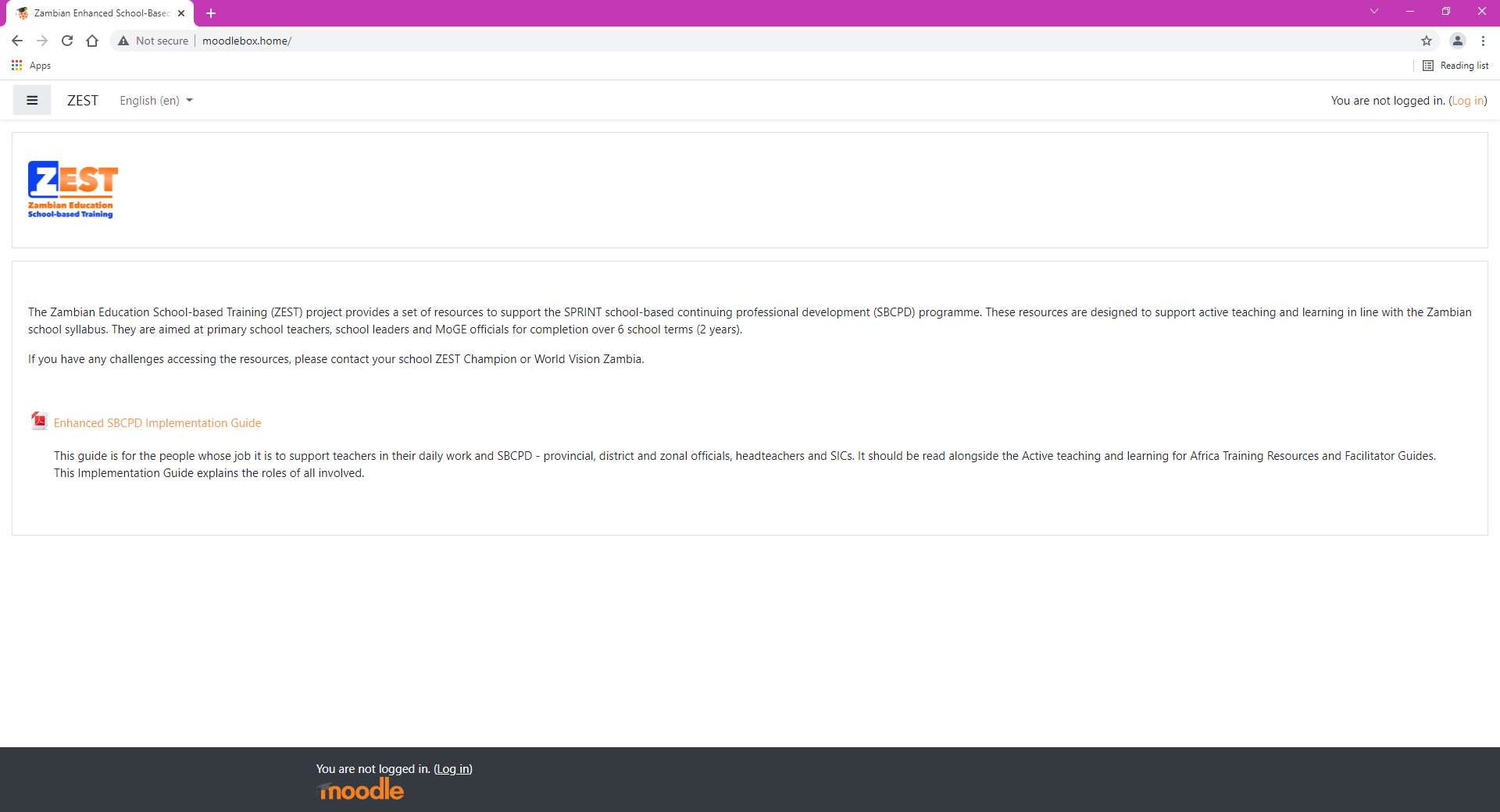
This should now show you the updated size of your SD card

That should be the changes made. You can now close down Putty.

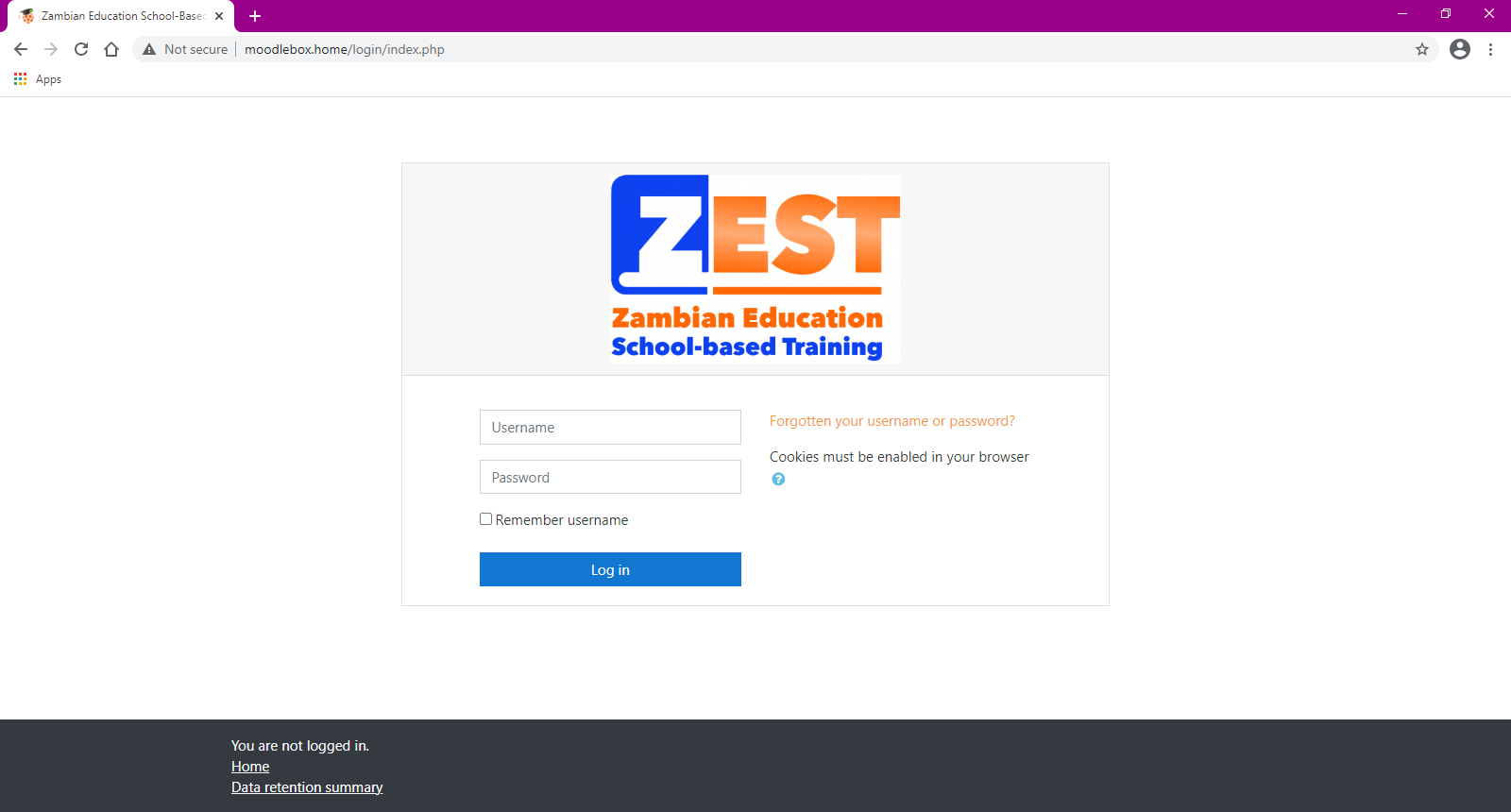
**Familiarising yourself with the Raspberry Pi**

Make sure your Raspberry Pi is turned on and within close range of your device.

Open your browser (e.g. Chrome, Firefox, Internet Explorer) and type in <http://moodlebox.home/>. You should see this screen:



Click the Log In link at the top (circled red in the image above) to go to the **login page** – you should see the screen below:



There are 3 default user accounts set up on the Raspberry Pi. You can use these accounts to familiarise yourself with the Pi before you start configuring it.

**Administrator**

Username: admin

Password: Zest2020!

This role is aimed at individuals with good technical skills. It has full access to the Pi content and coding – please use it carefully as any changes made could disrupt the rest of the Pi.

**Caution**: as Administrator, you have the ability to edit the course. It is crucial that you do not make any changes to the ZEST course materials as this could disrupt the overall functionality of the course plus the learning materials themselves.

The minimum expectation of this role is to:

* Change the default command-line password
* Assign at least 2 administrators (and delete the default)
* Assign at least 1 School Champion (and delete the default)
* Provide training to School Champions on their role and that of users.

To add value, this role can:

* Support School Champions with troubleshooting at a more advanced level if required
* Undertake occasional healthchecks on Raspberry Pis to review how they are being used and to monitor SD card space

**School Champion**

Username: champion

Password: Champion1!

This role is aimed at individuals who will take lead responsibility for managing the Pi on a daily basis and troubleshooting. This role can do the following:

* Add, remove and update user accounts (including passwords)
* Enrol/unenrol users in courses
* Add/amend School Champions
* Manage the upcoming events feature
* Manage the latest announcements feature
* Complete courses as a student
* View course reports
* Add/manage school files
* Backup and restore courses
* Restart/Shutdown Moodlebox

School Champions are expected to provide training to school users, support with troubleshooting, ensure those responsible for Continuing Professional Development (CPD) are given copies of the course reports (for tracking teacher progress and completion), and ensuring school files are used in an appropriate way.

**Test User**

Username: test

Password: ZESTTest1!

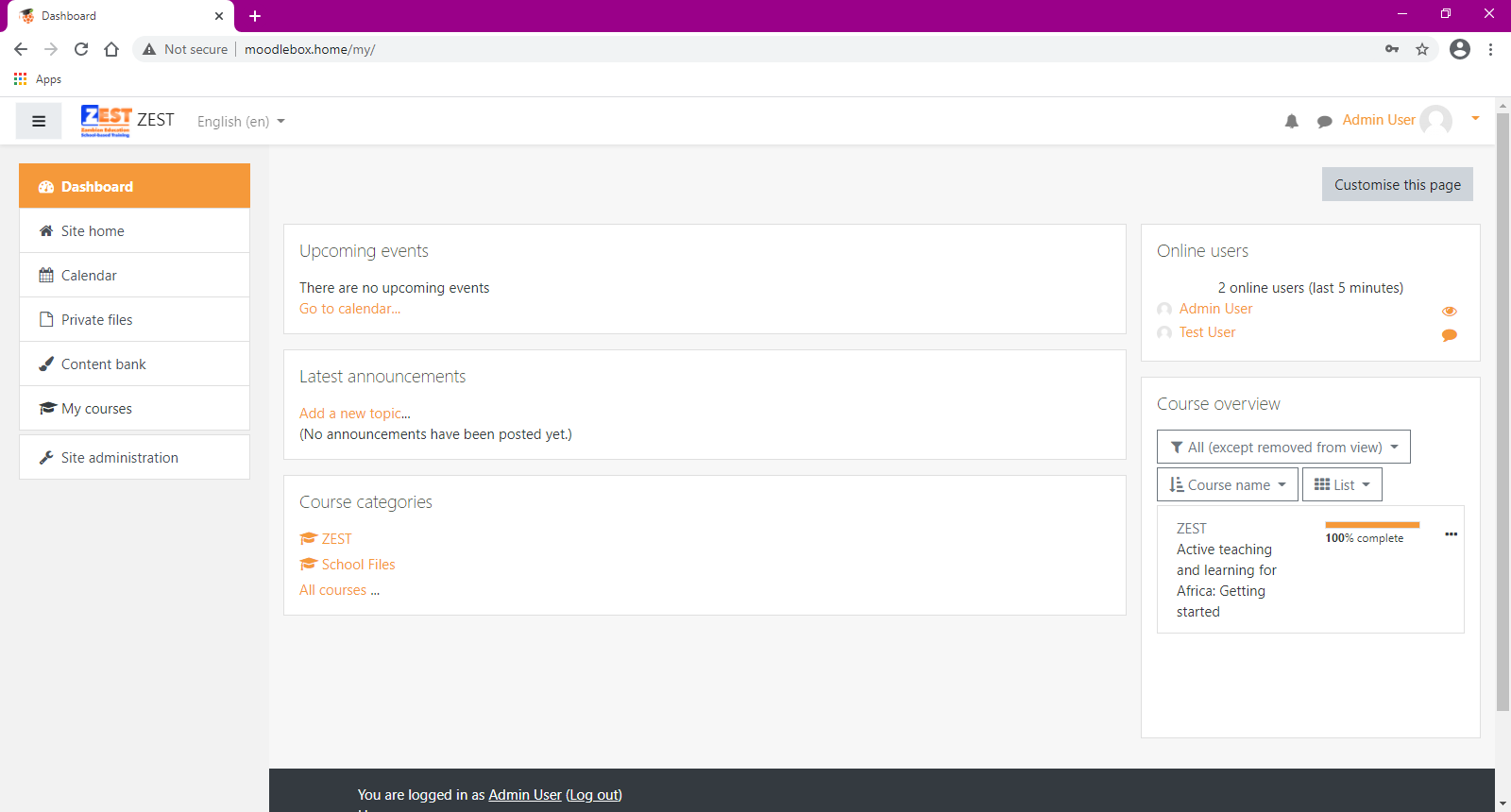
This role is aimed at individuals who will be using the training materials. This role can do the following:

* Complete courses as a student
* Access statement of participation (certificate)
* View upcoming events
* View latest announcements
* Access the chat function
* Add/manage school files

**Setting up the ZEST Raspberry Pi**

Once you are ready to start setting up the Raspberry Pi for use in your own environment:

1. Login as Default Administrator



The first thing to do is to change the default logins:

**Command Line Logins**

These are the logins you used earlier to access Putty:

Default Username – moodlebox, Default Password – Moodle

To change these:

1. Click on ‘Site Administration’ (circled red in the image above)
2. Click on ‘Server’
3. Scroll down to ‘Moodlebox’
4. Click on ‘Moodlebox Dashboard’
5. Look for the ‘Moodlebox Password’ section and type in your new password
6. Click ‘Change Password’

(Keep this safe! This username/password gives full access to the raspberry pi code – be careful who you give details to).

**Administrator**

Create an Administrator account for yourself:

1. Click on Site Administration
2. Click on Users
3. Click on Add a new user
4. On this screen, enter details in the Username, Password, First Name and Surname fields.
5. Enter something in the email field (be aware – unless Moodlebox is connected to the internet, the email address isn’t relevant but it is a required field. Consider using a ‘dummy’ email address e.g. ‘name’@moodlebox.invalid).
6. Click ‘Save’
7. After saving, the user account can be edited as/when required

To assign Administrator permissions:

1. Go to Site Administration
2. Click on Users
3. Scroll down to Permissions
4. Click on Site Administrators
5. There are 2 lists – ‘existing administrators’ and ‘all users’. Search for the user you wish to make an Administrator (i.e. yourself), select the user and then tap the ‘Add’ button

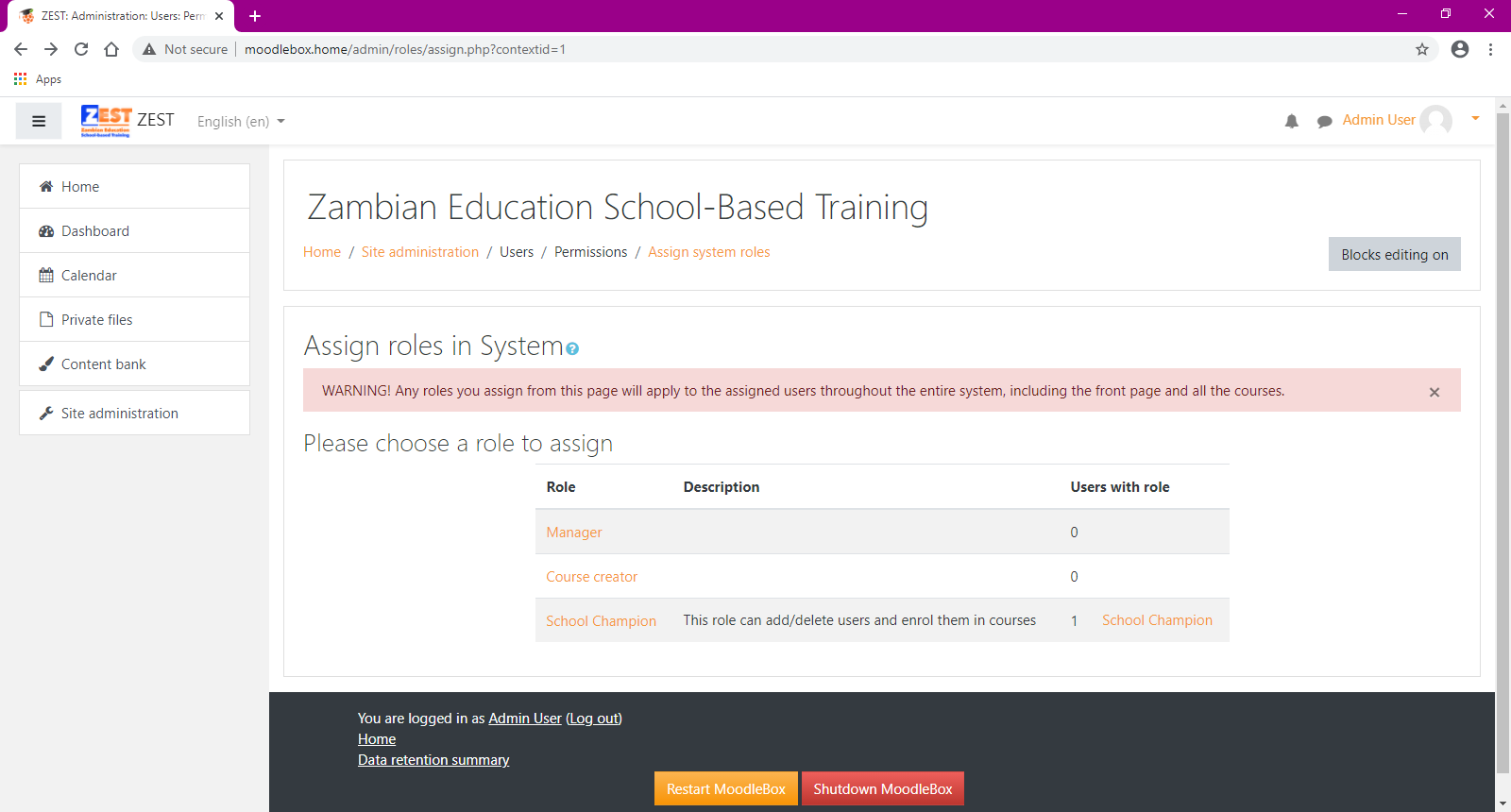
Repeat this process for any other individuals who will be assigned as Administrators.

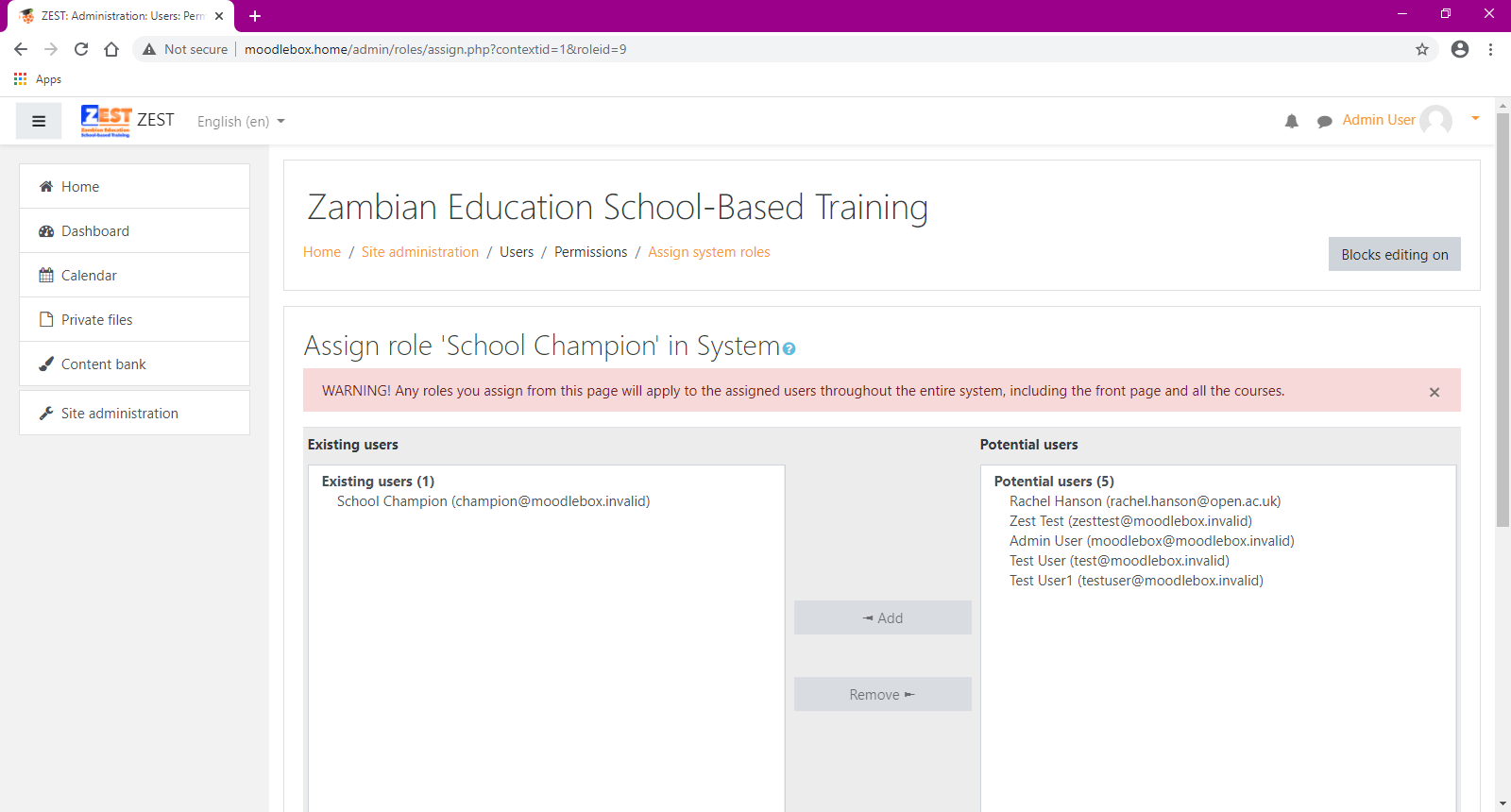
**Note:** you can’t delete Administrator accounts, but you can remove administrator permissions from individuals, or amend existing Administrator account details to those of a new user. There must always be at least 1 active administrator at any time.

## Assigning School Champions

At least one School Champion per school should be assigned. These School Champions will be able to assign others to this role as needed.

1. Create a user account for the school champion
   1. Click on Site Administration
   2. Click on Users
   3. Click on Add a new user
   4. On this screen, enter details in the Username, Password, First Name and Surname fields.
   5. Enter something in the email field (be aware – unless Moodlebox is connected to the internet, the email address isn’t relevant but it is a required field. Consider using a ‘dummy’ email address e.g. ‘name’@moodlebox.invalid).
   6. Click ‘Save’
   7. After saving, the user account can be edited as/when required
2. To assign School Champion permissions
   1. Go to Site Administration
   2. Click on Users
   3. Scroll down to Permissions
   4. Click on Assign System Roles
   5. Select ‘School Champion’
   6. Select the User(s) who should be assigned this role and click Add.





## Enrolling School Champions

To ensure the School Champion role works effectively, they should also be enrolled in the courses by the Site Administrator.

1. Click on Site Home. Select the first course
2. Click on the cog at the top right-hand side of the screen and select ‘More…’
3. Go to Users
4. Click on Enrolled Users
5. Click on ‘Enrol Users’ (grey button at top right-hand side of the screen)
6. Select the relevant user and assign them the role of Student (Note it is possible to select more than one user at this stage)
7. Click ‘Enrol Users’
8. The list of enrolled users will appear at the bottom of the screen

Repeat steps 1-8 for each Training Course and School Files.

Once enrolled, the School Champion should be able to start creating their own school users and assigning them to courses.

**Next Steps**

The next step is to train your School Champions. A sample powerpoint presentation has been provided which can be used for this purpose – this can be used as it is, or amended to suit your own circumstances.