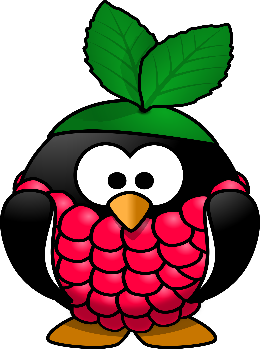
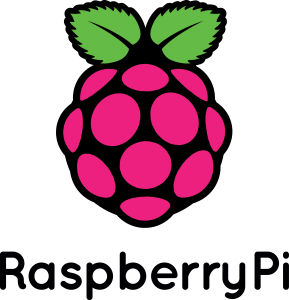
**Raspberry Pi’looza** 

**1.      Find all required components for the raspberry pi:**

**·        1 Raspberry Pi**

**·        1 HDMI converter**

**·        1 Mouse**

**·        1 Keyboard**

**·        1 Micro SD card**

**·        1 Power cable**

**·        1 VGA cable**

**·        1 Ethernet cable**

**-        Insert the mouse into one of the four USB ports.**

**-        Next insert the keyboard in a different USB port.**

**-        Connect the HDMI to VGA converter to the HDMI slot, then connect the VGA cable to the converter.**

**-        The Micro SD card is preinstalled into the pi, but to make sure, check to see if it is installed on the bottom edge of the pi.**

**-        Next, plug in the Ethernet cable, it is the large cable that resembles a phone jack, this is used to give the pi network access.**

**-        Then plug in the power cable to the pi, as well as the power outlet, and wait until you are able to see the login prompt on the computer screen. (Unlike most computers, the pi turns on automatically when plugged in.)**

**2.      On the monitor you will see a login screen prompting for a username and password. The username is pi, and the password is raspberry (note: don’t forget the P in raspberry!)**

* **Username: pi**
* **Password: raspberry**

**When that is complete you should see a line saying pi@raspberrypi and waiting for you to type something! (If you do not, then go back and repeat step 2 or call for assistance.) This is called the terminal, or command line. You use it to tell the computer to do things or give you information using commands, which you type in and hit enter.**

**3.     Next, you’re going to run a command! Type in ifconfig and hit enter (“ifconfig” stands for “interface configuration” and tells you about your network configuration). From here, you’re going to search for your IP address (hint: IP addresses are 4 numbers separated by dots, like 103.24.242.1). When you think you have it, write it down and check by running ./checkip.sh in the command line.**

* **Find IP address command: ifconfig**
* **Verify IP address command: ./checkip.sh**

**4. After you have found your IP address, exchange your IP address with your neighbor. After you have received your neighbor’s IP address, you are going to ping your neighbor’s IP address. ping stands for “Packet Internet Groper” and is a computer network tool used to detect if computers are online.**

* **Exchange IP with neighbor (do this in the real world, there’s no command for it).**
* **Neighbor’s IP address: \_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_**
* **Ping neighbor IP, for example: ping 101.98.78.1**

**5. The next step is to create a user profile. To do this, you are going to type, sudo adduser USERNAME (where USERNAME is the username you want to use). Write down the username (and password!) so you don’t forget them. This will ask you to enter a password and ask a few questions, and then create a new user! Note: The username must be one *word* (letters and numbers are okay, just no spaces!) and start with a lowercase letter.**

* **Create a new User: sudo adduser USERNAME**

**6. Now you are going to exchange your user’s information with your neighbor’s (don’t forget, you need their info too!).**

* **Neighbor’s username: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Neighbor’s password: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**7. With your neighbor’s username and IP address, you are going to run SSH (“Secure Shell”). SSH is a tool that can be used to securely log onto remote systems. In this case, your neighbor’s raspberry pi. It is commonly used in Linux and UNIX based servers. To remotely login to your neighbor’s pi, you’re going to type ssh username@IPaddress.**

* **SSH into your neighbor’s pi, for example: ssh** [**danton@10.112.97.56**](mailto:Danton@10.112.97.56)

**8. Notice how the prompt has changed from pi@raspberrypi to the username you logged in as @raspberrypi? This is because you’re now running on their pi! Unfortunately, you aren’t going to mess with someone else’s pi today: Now you need to log out. To do that, use the exit command. (You should see the prompt change from username@raspberrypi to pi@raspberrypi.)**

**9. The next step is to download a file using wget (or “World Wide Web Get”), wget is a tool used for downloading content from a server over the web. In this case you are using wget to download a password from a pi using its IP address. This is possible because your pi is connected to a network with a server. In order to get the file, you’re going to type in wget 10.1.1.1/password (The file is called password, so you are telling it to connect to 10.1.1.1 and download “password”).**

* **Use wget to download the password file: wget 10.1.1.1/password**

**10. Once the password file is downloaded, you will then use cat (short for “catenate”) to view its contents. To view the contents of the password file, type in cat password (which is cat followed by the name of the file you would like to view).**

* **View the password file you just downloaded using cat command:**

**cat password**

**11. The last thing you have to do is type in ./desktop.sh into the command line and enter the content of the password file you downloaded into the password prompt.**

* **Run ./destop.sh then enter content from the password file.**

***CONGRATULATIONS,***

***YOU’RE A HACKER!!***

**What have you learned?**

**(You don’t really have to answer these if you don’t want to. And you certainly don’t have to write it down!)**

**Which cord is the VGA cable?**

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**What is cat short for?**

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**What is SSH? (What does it do?)**

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**What is Ping?**

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**What command did you use to find your IP?**

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**What does IP stand for?**

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**Want to learn more?**

**If you’d like to learn more with the Raspberry Pi, go to their website at** <https://www.raspberrypi.org/help/>

**If you’d like to learn more about Linux, a great tutorial series is at** <http://ryanstutorials.net/linuxtutorial/>

**If you’d like to learn about programming, check out Scratch on the Raspberry Pi (under the Programming menu) or (later on) check out these websites:**

<http://codecademy.com/>

<http://cybrary.it/>

<http://code.org/>