We are going to play around with servers and the command line interface for a bit. This is one way we would make Web servers were we would put our files to be available to the world on the Web. Docker is an application that allows use to create and configure servers for our local computer. We use this server to develop our applications and then we when we are ready we can deploy them to a computer that will allow our audience to view and use our files. The nice thing about Docker is that we can carry our development environment around with use and use any computer to do our work. We are also working in the environment where the application will be used and run – so if it works on our instance of Docker we know it will work when we deploy it.

To install Docker on a Mac:

1. Go to <https://www.docker.com> and click on the "Get Docker" button.
2. Click on the "Download for Mac" button to download the installer.
3. Open the installer and follow the prompts to install Docker.
4. Once the installation is complete, open the Terminal and run the command "docker run hello-world" to confirm that Docker is properly installed and running.
5. If you see the message "Hello from Docker!", then you have successfully installed Docker on your Mac.

Please note that you may need to have admin access on the Mac to install Docker.

To install Docker on a PC:

1. Go to the Docker website (https://www.docker.com/) and click on the "Get Docker" button.
2. Click on the "Download for Windows" button to download the installer.
3. Open the installer and follow the prompts to install Docker.
4. Once the installation is complete, open the Command Prompt and run the command "docker run hello-world" to confirm that Docker is properly installed and running.
5. If you see the message "Hello from Docker!", then you have successfully installed Docker on your PC.

Please note that you will need to have Windows 10 Pro, Enterprise or Education version installed on your PC and your PC must have virtualization enabled from BIOS. Also, you may need to have admin access on the PC to install Docker.

Now we want to create an Ubuntu Linux server using Docker.

1. Open the command prompt or terminal.
2. Run the command "docker pull ubuntu" to pull the latest version of the Ubuntu image from the Docker Hub.
3. Once the image is downloaded, run the command "docker run -it ubuntu" to start a new container and open a terminal in the container. The -it flag allows you to interact with the container through the terminal.
4. You will now be inside the Ubuntu container and can run commands as if you were on a regular Ubuntu system.
5. When you're done, you can exit the container by running the command "exit" or by pressing "CTRL + D"

To start the container again, you can use the command "docker start <container\_id>" and then use "docker attach <container\_id>" to attach to the running container.

You can also use the option -d flag while running the container to run it in detached mode, this will allow you to start the container and it will keep running in the background.

Please note that the above commands are for creating and interacting with a container, if you want to create an image and push it to a registry or use it for deploying to other hosts you should use docker build and docker push commands, also you can use docker-compose to create, manage and deploy multi-container applications. There is more information at [www.docker.com](http://www.docker.com) and Humber has Linkedin Learning which has many lessons about using Docker.

Now that we have the container running we can add things like the Apache, MySQL, and PHP – which is the basis for most Web servers.