Software for the computer exercises

We use Linux on the course. Those who have a Linux laptop can install the software used for the exercises there. Instructions for this are available here:
http://wasabiapp.org/evolgeno/
Even on Linux, one can download the ready-made Virtual Machine and use that. See the instructions below.

Virtual Machine

Virtual Machine (VM) emulates a computer. In a VM system, we have a **host software** that creates an environment that resembles a physical computer, and a **client software** that runs inside the host system as if it would be running on a computer of its own. In our case, your laptop runs the host software (VirtualBox) and, inside that, we run the client operating system (LUbuntu Linux) that is tailored specifically for this course.

VirtualBox host software

Those with Windows or OSX laptops need to run the LUbuntu Linux under VirtualBox.

1) If you don't have VirtualBox, install it for your host operating system (Windows or OSX) from here: https://www.virtualbox.org/. In addition to the VirtualBox host software, download also the "VirtualBox *.*.* Oracle VM VirtualBox Extension Pack".
2) Install the VirtualBox software.
3) Install the extension package. Start VirtualBox, click "Preferences" and "Extensions":
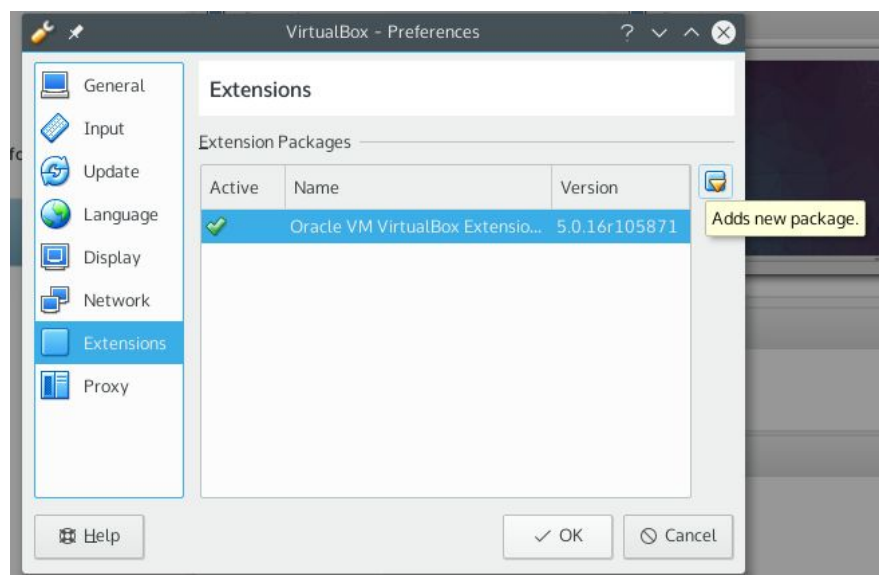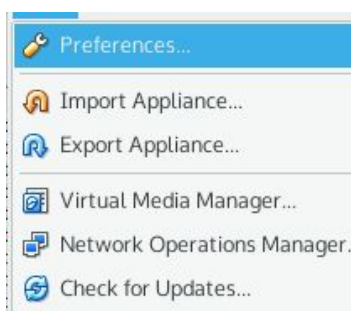
VirtualBox client operating system

We use LUbuntu 15.10 with lots of bioinformatics software preinstalled. This VM image has been compiled by Andres Veidenberg using an OSX host. I have tested it on a Linux host.

1) Download then the Linux VM (*vbox and *vdi) from here: http://wasabiapp.org/evolgeno/. Note that the second file is very big: it contains a full Linux operating system.
2) Place the files to a suitable folder and add the VM to your host:
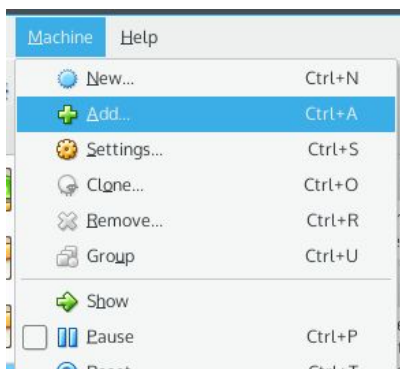
3) Optional: Enable "Shared Folders" to transfer files between the host system (your Windows or OSX) and the client (LUbuntu Linux).
   a) Make a folder called "evogeno" on your system.
   b) On VirtualBox, click "Settings" and then "Shared Folders".

   c) Modify [middle icon on the right] existing entry (or add [top icon] a new entry if nothing is shown):
      i)   Folder Path: path to your "evogeno" folder.
      ii)   Folder Name: "evogeno"
      iii) Read-only: empty
      iv)   Auto-mount: checked
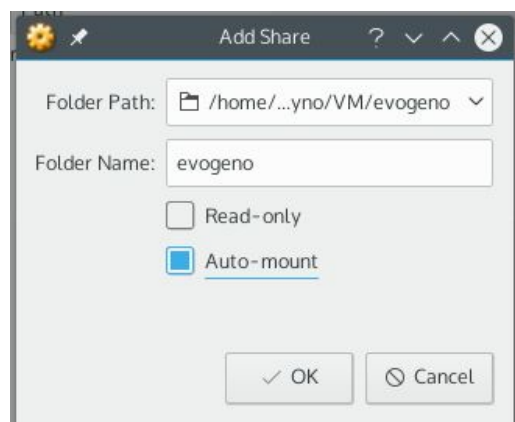
4) Use the file dialog to find the LUbuntu.vbox file. Select then the VM from the menu and click the start:

Linux VM

If everything goes fine, the system boots and the LUbuntu VM client starts inside a window. This window can be resized or made full screen (with "Right Ctrl + F"; the same to leave the full screen mode). The default user is called "evolutionary" and its password is "genomics".

In some cases the VM doesn't start. Some reasons are:
- The VM image is for 64bit processors. Most laptops that are less than 5 years old have 64bit processors. Unfortunately we can't provide a separate image for incompatible systems. Please contact me if you can't find a replacement computer.
- On some computers virtualisation is not enabled at BIOS settings by default. You can google for instructions with keywords such as "hp elitebook enable vt-x bios". Here "hp elitebook" is my laptop model (yours can be different!) and "vt-x" refers to the virtualization technology. **Be careful when editing BIOS settings as incorrect settings may cause serious harm, even breaking the computer!** If uncertain, contact someone with experience on the topic or wait until the start of the course.