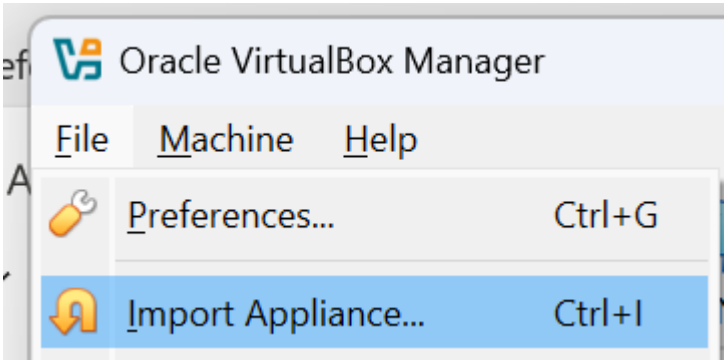
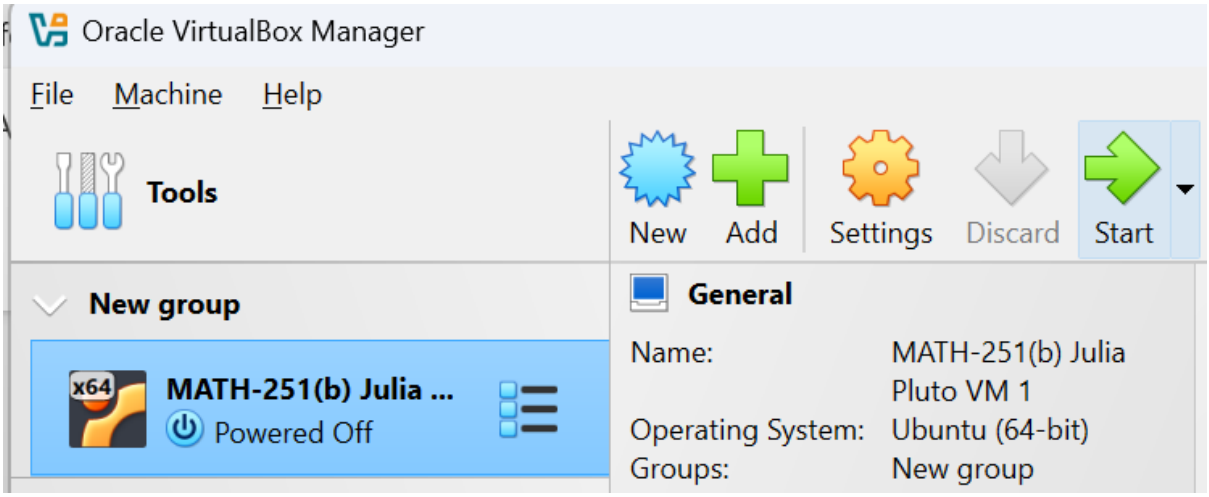
MATH-251(b) Virtual Machine (VirtualBox) Installation Guide

NOTE! DURING THIS PROCEDURE, YOU WILL NEED TO HAVE ABOUT 15GB OF FREE DISK SPACE. MAKE SURE THIS IS THE CASE BEFORE STARTING.

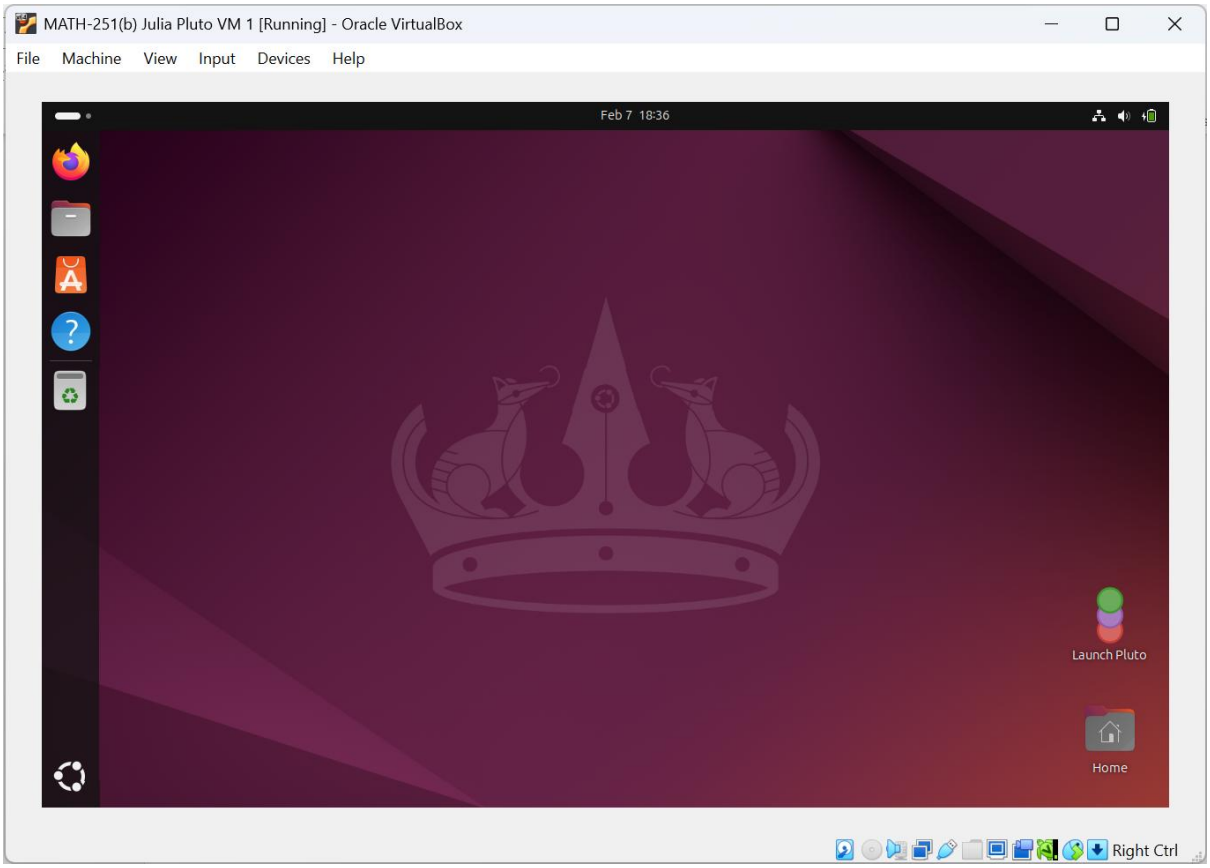
1. Install Oracle VirtualBox (if not installed).
   Download and install the binary package corresponding to your operating system from: https://www.virtualbox.org/wiki/Downloads (There are Windows, Mac and Linux versions, choose the correct one). *We tested version 7.1.6.*
   NOTE! If you have a recent Apple Mac computer with an M1/M2 chip, you will need to download a "macOS / Apple Silicon hosts" version. For older macs, you will need to download the "macOS / Intel hosts" version.
2. Download the file *JuliaPlutoVM.ova* to a folder on your local machine using this link:
3. https://drive.google.com/file/d/1kyeTaR1lG_Cw23DUIFRCvbv4t1KlQnc-/view?usp=drive_link
4. Launch VirtualBox.
5. Choose from the menu the option "File > Import Appliance".



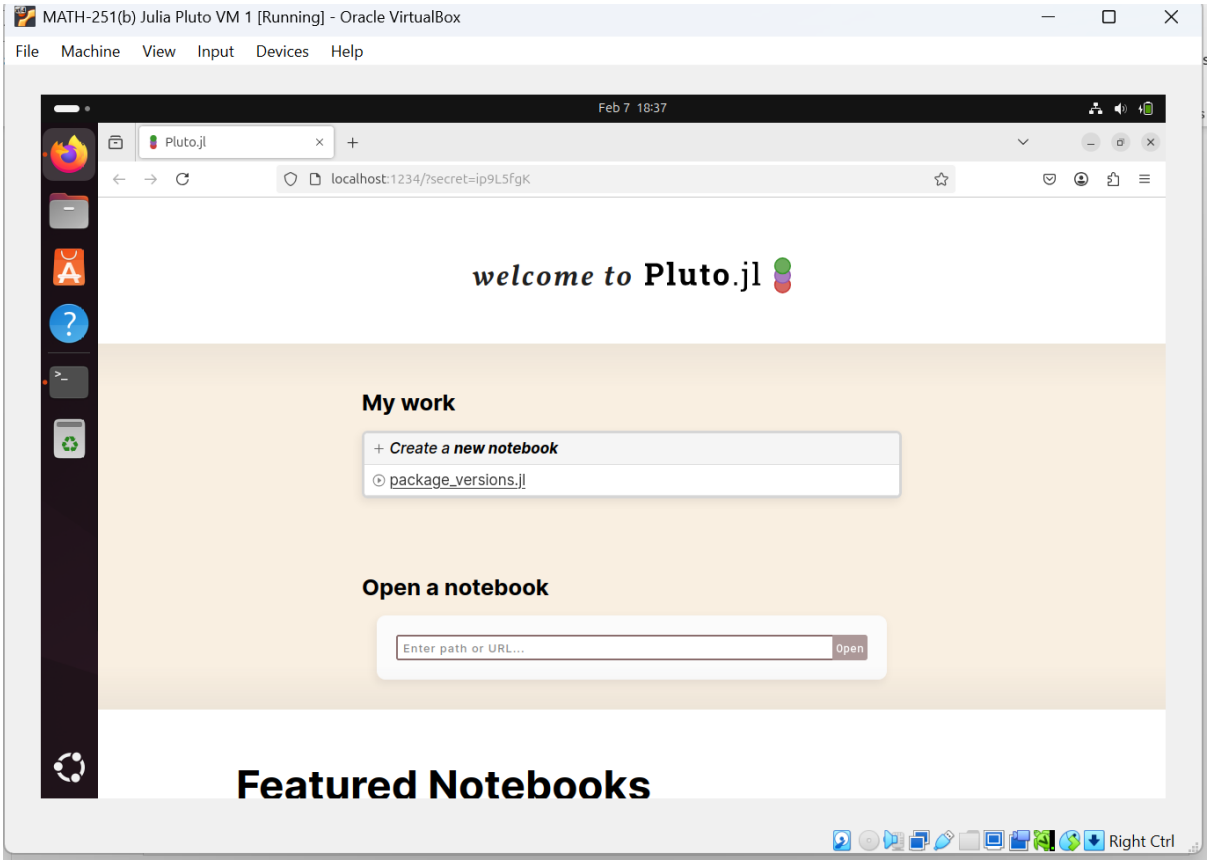
6. Click the button ( ) next to the text box, reach the path where you downloaded *JuliaPlutoVM.ova*, and select it.
7. Click Next.
8. (Optional) By default the VM will use up to 2 cores and 8 GB of RAM. If your laptop cannot handle that, you can reduce the ram to 4096 MB. Don't hesitate to ask for help from a TA!
9. Click Finish, and (if requested) agree on the license. The import will take up to a few minutes.
10. In the main window select the newly created entry "MATH-251(b) Julia Pluto VM" from the left pane, double click or click Start (green right arrow) from the upper toolbar. This will launch the virtual machine.



11. After a few minutes, the Ubuntu desktop is booted. The user is **student** and the password is **student**. If it prompts a window for "Software Update", click **CANCEL**! Do **not** update the virtual machine throughout the course, otherwise, it might break the necessary software for the course.



12. In the Ubuntu desktop, double click **Launch Pluto** and wait for Pluto to start. It will first open a terminal window, then open a tab in Firefox.



13. Congratulations, you now have a working Pluto installation!
    a. To **access the Pluto notebooks from the class**, log in to Moodle via Firefox and download the files from there.
    b. To **stop Pluto**: Close the tabs in Firefox then go to the Terminal and press Ctrl+C.

14. (Optional) To free up space, note that after importing the *JuliaPlutoVM.ova* file in step 8, you can delete the file *JuliaPlutoVM.ova* that you downloaded.

NOTE: if needed, the user is **student** and the password is **student**.

Acknowledgements

These steps were adapted from a similar document used by the *MSE-468 – Atomistic and quantum simulations of materials* class.