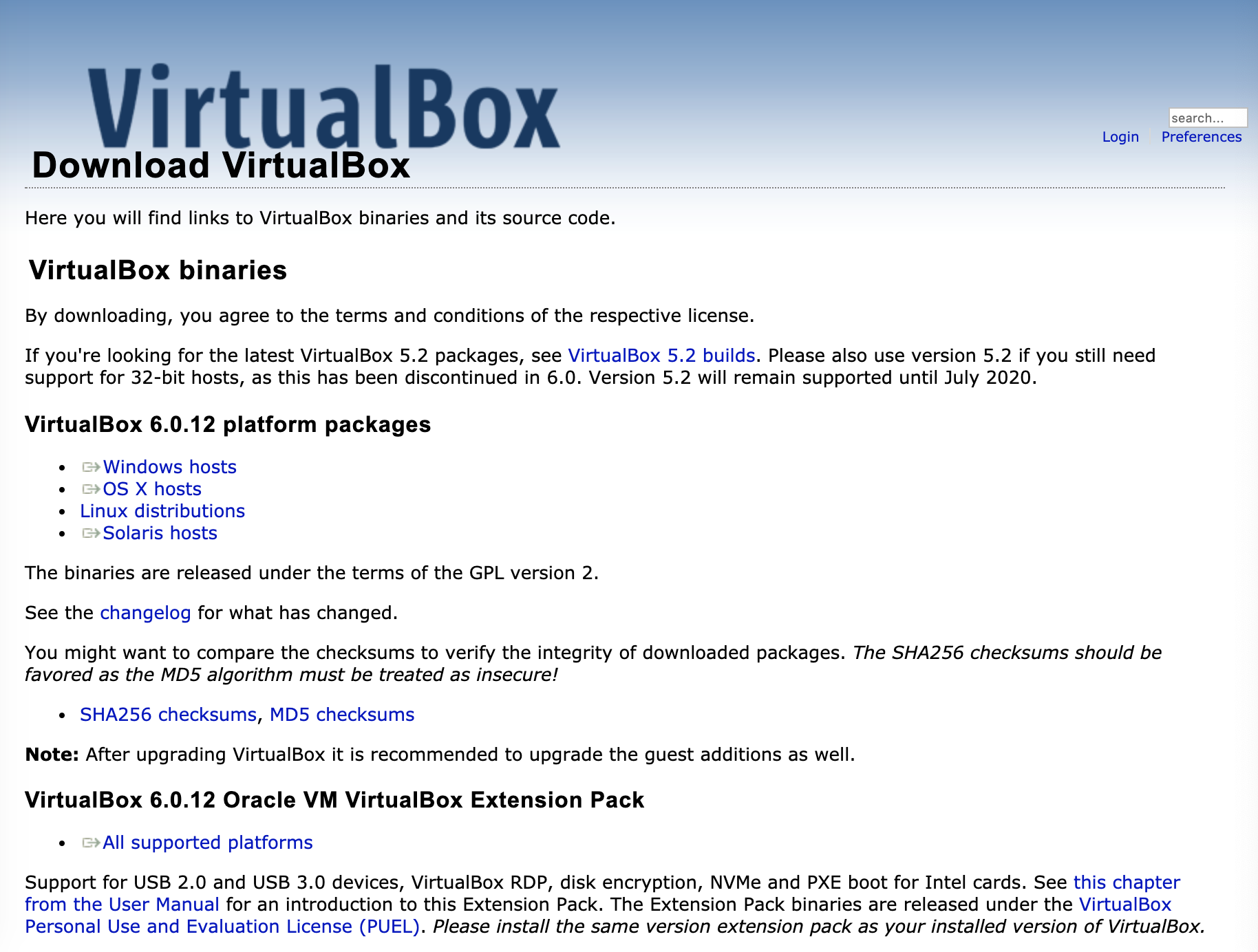
Using Oracle Virtual Machine for

COMP3005/4003/5305

**1. Installing VirtualBox on your personal compute*r***

The VirtualBox installation program can be downloaded from this virtualbox.org site. Just make sure to download the one for your Operating System (Windows, Mac, Linux): https://[www.virtualbox.org/wiki/Downloads](http://www.virtualbox.org/wiki/Downloads)



1. The following websites provide clear instructions on installing VirtualBox. However, in principle, you just need to **double-click** the install program (that you downloaded from the website above) and follow the simple instructions.

These instructions will vary somewhat depending on your host computer (Windows, Mac, Linux, etc).

General instructions on the installation and setup of VirtualBox can be found here:

https://[www.virtualbox.org/manual/ch01.html#intro-installing](http://www.virtualbox.org/manual/ch01.html#intro-installing)

With details for individual operating systems found here:

https://[www.virtualbox.org/manual/ch02.html](http://www.virtualbox.org/manual/ch02.html)

2. Once VirtualBox is installed, you have to add the **Oracle VM VirtualBox Extension Pack**

Once downloaded, simply double-click the file and it will launch the installation that will include a couple steps

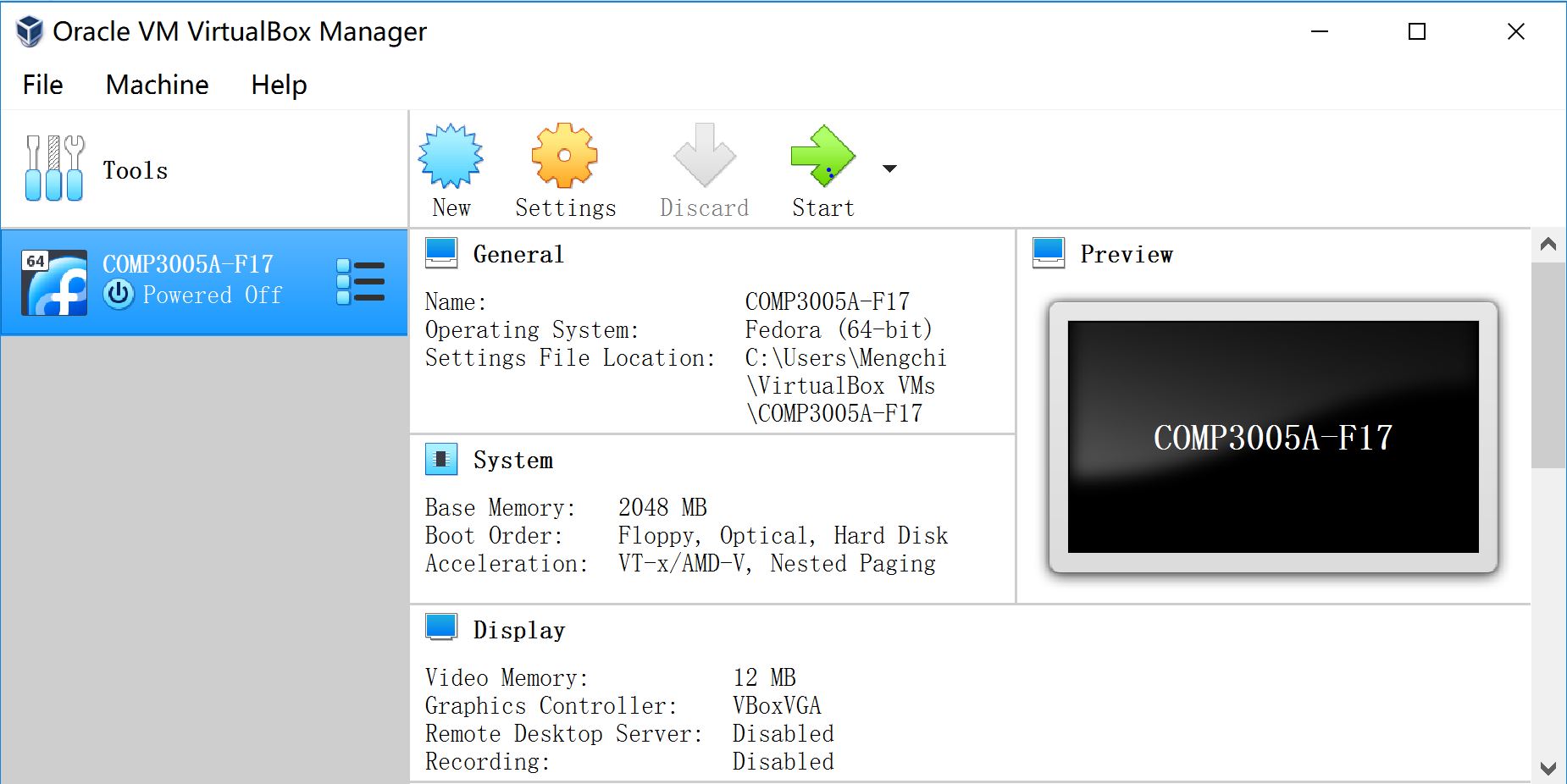
You can verify it was installed by opening VirtualBox and checking:

**File** -> **Preferences** -> **Extensions**

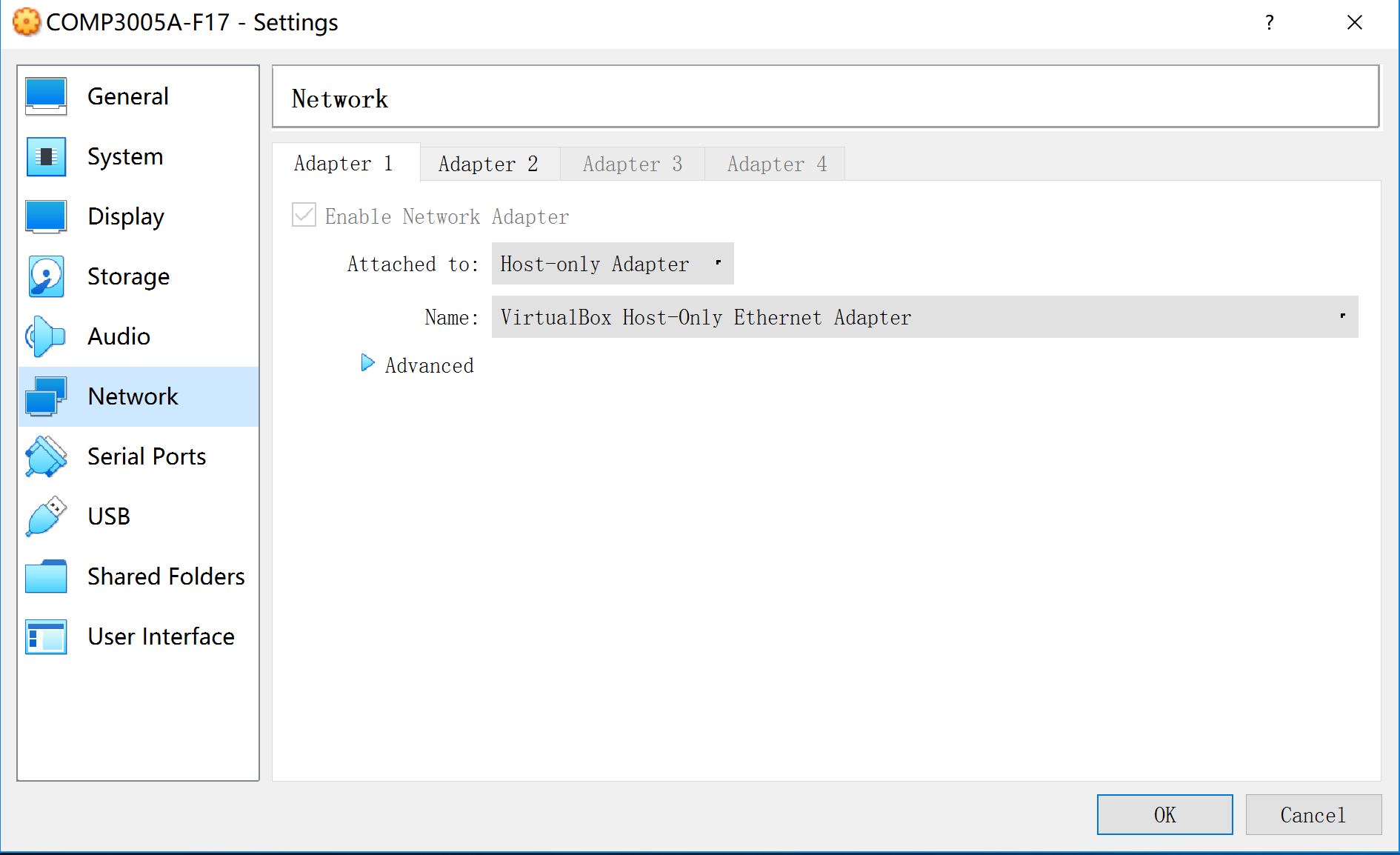
**2. Downloading Oracle Virtual Machine and Importing to VirtualBox**

To get the Oracle virtual machine, just click [OracleVM.ova](http://download.scs.carleton.ca/virtualimages/COMP3005A-F17.ova) or download it from the following website: <http://scs.carleton.ca/coursevms> under the name COMP3005-17F.ova at the bottom of the list.

1. Open VirtualBox on your personal computer



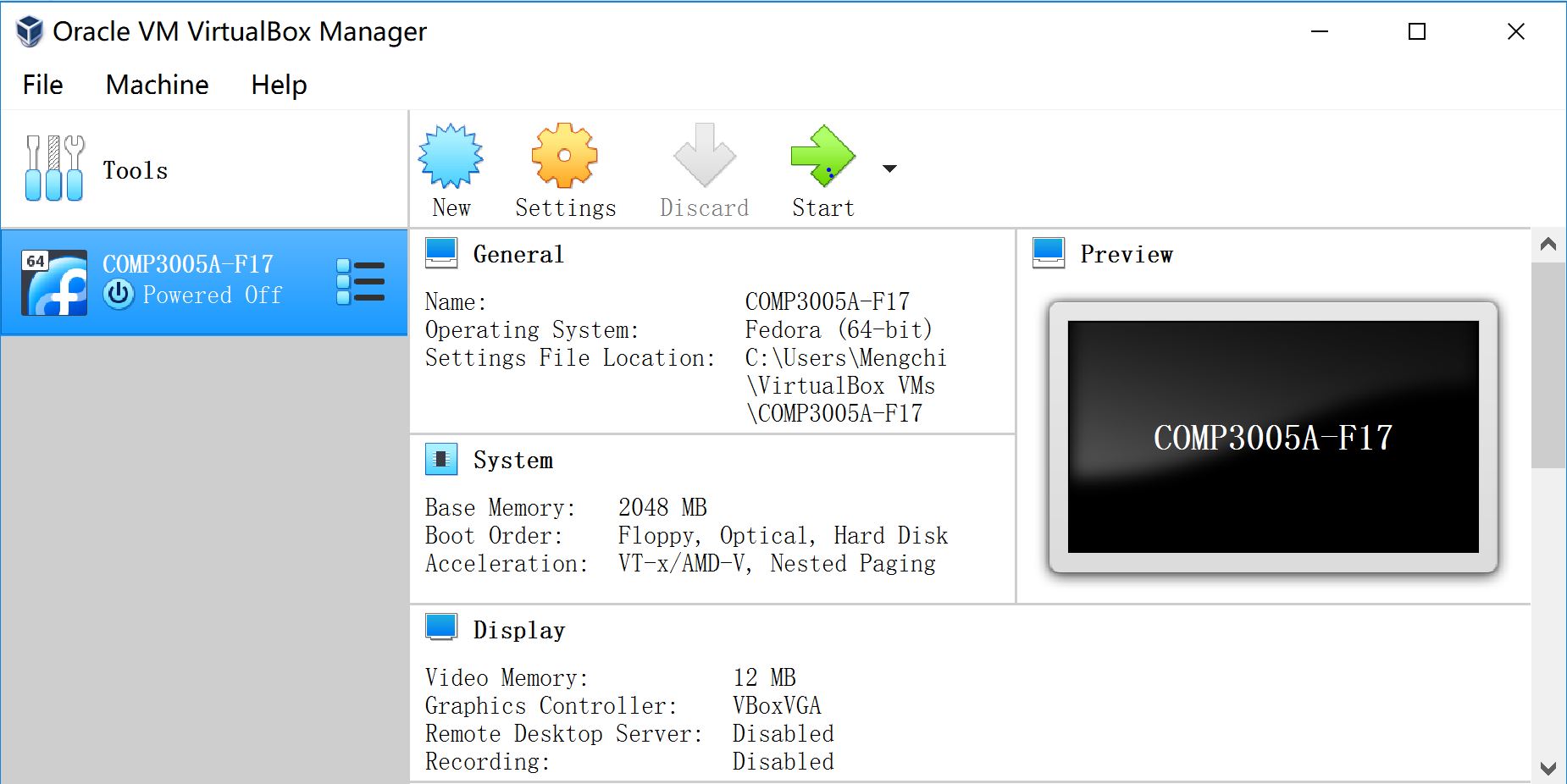
2. click on **Settings -> Network-> Adapter 1-> Enable Network Adapter-> Host-only Adaptor** as follows.



3.  **File** -> **Import Appliance** (or **CTRL-I**)

4. Browse to the VM appliance (.ova file) and select it and follow the instructions

5. The VM will now appear in the VirtualBox VM list



6, Click **Start**

If you have any problem with VirtualBox or Oracle VM, you may find the solution on the website [Virtual Machine Technical Support](https://carleton.ca/scs/technical-support/virtual-machines/virtual-machine-technical-support/). If you still have some problems, please go to visit TAs during their office hours. Only if they cannot solve your problem, then visit our Technician in HP5165 with extension 4338. For hardware problems, see item 5 below.

* Andrew Pullin

**3. Logging into the**   **Oracle Virtual Machine**

You can login via the VirtualBox terminal to the OracleVM with the following username and password:

**username**: fedora

**password**: oracle

When you login, you may find the default VirtualBox terminal is a little small, so it may be better to ssh to the Virtual Machine with **putty** or some other tool to get a better console to work with. To do this, you need to know the IP address of the OracleVM. It should automatically be created with what is known as a "**host-only networking**". This means your host running VirtualBox, is the only machine that is allowed to connect to the VM. You can run the following command from within the OracleVM console to get the IP address:

**[fedora@OracleVM ~]$** ifconfig | more

The result should give you the IP address. It will likely be **192.168.56.101** or something very similar depending on your VirtualBox settings. If there is no IP address, you can set a static IP address using:

ifconfig eth0 192.168.56.101 netmask 255.255.255.0 up

Once you have those settings, you can use **ssh** or **scp** to connect to your VitualBox, and use the option **-p** with **3022** as the value and **127.0.0.1** as the ip address. Note that **ssh** and **scp** can be used via windows 10 by enabling developer mode, and enabling Ubuntu Bash for Windows.

You can now use **putty** (or some other ssh tool) to connect to your VirtualBox host using the fedora username and the above IP address as the host. The password of course is the same as above. You can also transfer a file or folder to your VirtualBox host by using **PSFTP** in the putty package. If you are on a linux/macbook host, it is much simpler just by running ssh command in a terminal:

> [ssh fedora@192.168.56.101](mailto:fedora@192.168.56.101)

To transfer a local file or a folder to your VirtualBox host, just run scp command as follows:

> [scp *file\_name* fedora@192.168.56.101](mailto:fedora@192.168.56.101):

> scp –r *folder\_name* fedora@192.168.56.101:

**4. Use Oracle via sqlplus client**

The oracle sqlplus client has been installed, to connect to the database from the shell, just run:

**[fedora@OracleVM ~]$** sqlplus

The oracle database user and password are:

**username**: fedora

**password**: oracle

You can then run SQL DDL, DML and QL commands, such as:

SQL> create table student ...;

SQL>insert into Student ...;

SQL>select \* from student;

**5. Dealing with the “Hardware Virtualization” Error**

This error only occurs with 64-bit Virtual Machines. To avoid this error, SCS is usually only using 32- bit virtual machines, but there may be instances were a class will decide (or need) to use a 64-bit Virtual Machine, or you may decide you want to try one on your own.

Some computers may not have hardware virtualization technology turned on by default. This may cause an error to occur:

*"VT-x/AMD-V hardware acceleration is not available on your system. Your 64-bit guest will fail to detect a 64-bit CPU and will not be able to boot."*

1. Go into your computer's BIOS (by rebooting and pressing the indicated key, such as **F2** or **DEL** immediately – keep pressing it until you can into the BIOS... if you see your operating system starting, you waited too long!)

2. Look for an option in the various menus related to hardware virtualization. Make sure this option is **ENABLED**.

For Intel processors, this is typically called **VT-x** or **VT-d**

For AMD processors, this is typically called **AMD-V** or **SVM**

(or the BIOS may simply say *hardware virtualization* without the fancy acronyms)

3. Exit the BIOS by using the “**Save Settings and Exit**” or equivalent. This will restart your computer.

If your CPU does not support the virtualization technology, you will not be able to run a 64-bit guest

Virtual Machine.

