NYU TANDON SCHOOL OF ENGINEERING

CS-GY 6083- Software Installation Guide

Oracle Database on Virtual Box (MAC OS)

ORACLE VIRTUAL BOX and DATABSE VM SOFTWARE DOWNLOAD/INSTALL/SETUP [MAC Compuers]

Professor: **Amit Patel**
Email: **asp13@nyu.edu**

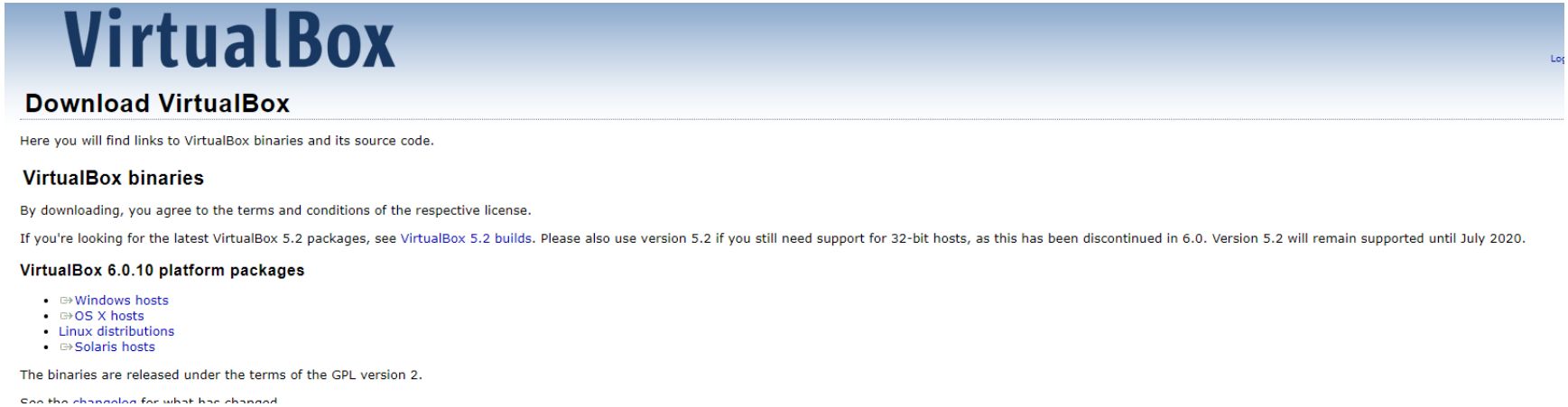
This document describes how to download, install, and configure Oracle Virtual Box and how to download, import, and configure Database application (Oracle database and related tools). When you download, use latest version to download. The screenshots in documents may be of previous version.

Please read carefully and follow steps as detailed below to download, install, and setup database environment.

1. Download and install **VirtualBox** [https://www.virtualbox.org/wiki/Downloads]
2. Download **Database App Development VM** from [http://www.oracle.com/technetwork/community/developer-vm/index.html]
3. Import **Database App Development VM** into **VirtualBox**

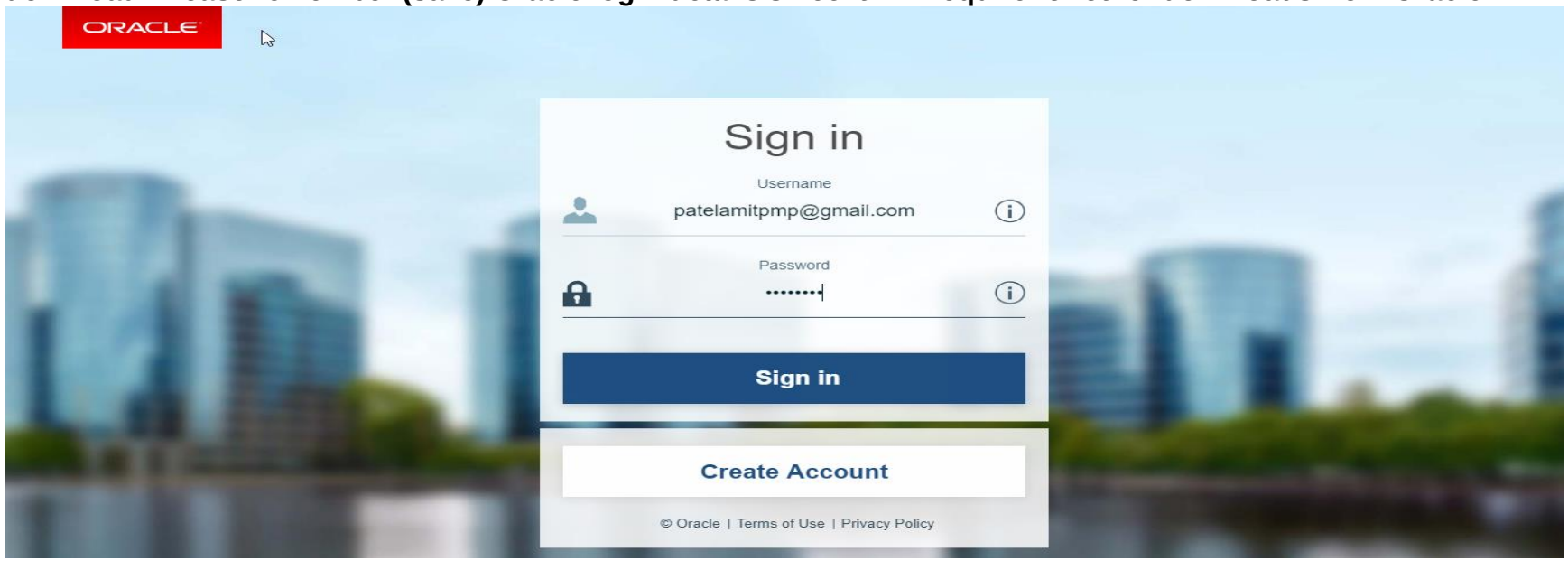
A) Download Oracle VirtualBox (use "Chrome" or "Firefox" browser to download)

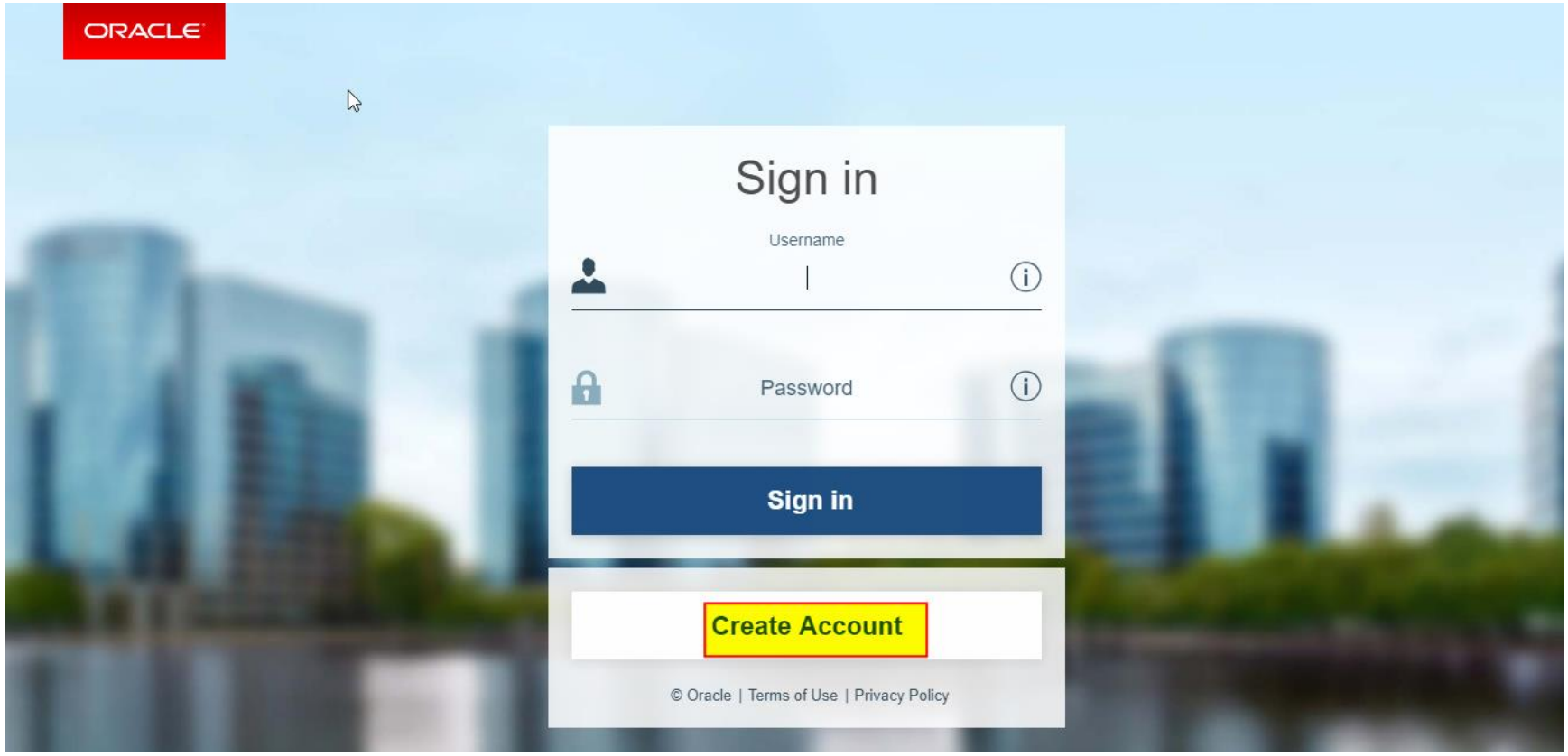
https://www.virtualbox.org/wiki/Downloads

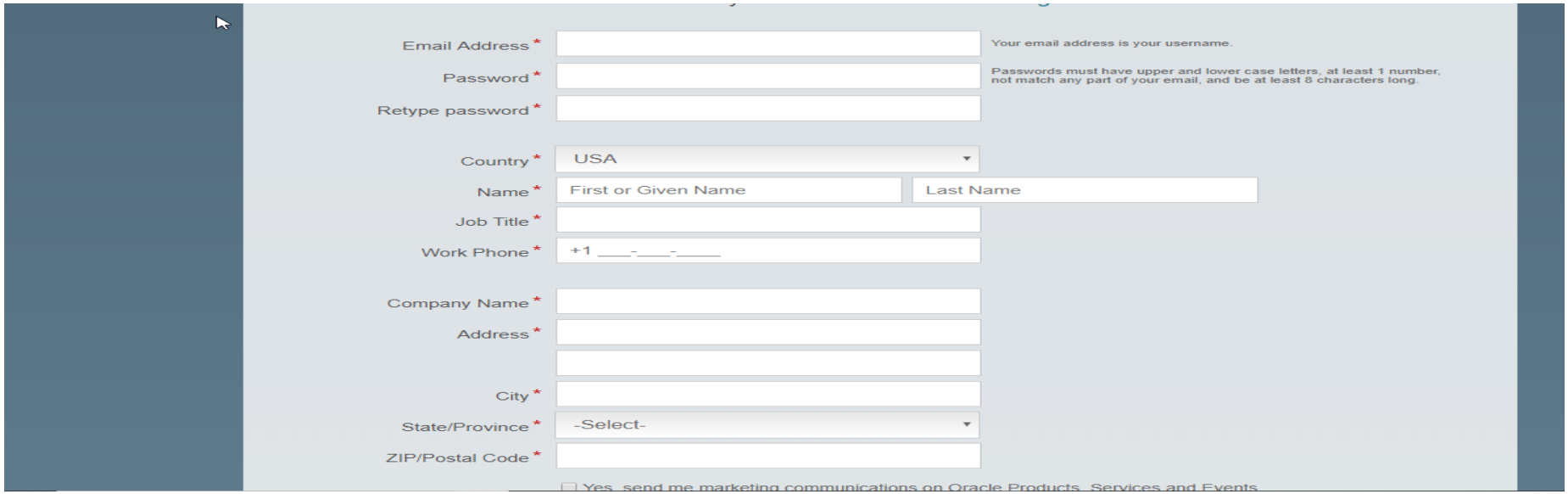


Download VirtualBox 6.0.10 platform packages for OS X hosts (for MAC laptop)

This download will ask for Oracle Account sign in. If you already have Oracle Account, type in username and password. If you do not have Oracle login, please create one by clicking "Create Account" and continue with download. Please remember (save) Oracle login details since it will require for other downloads from Oracle.




ORACLE
Sign in
Username
Password
Sign in
Create Account
© Oracle | Terms of Use | Privacy Policy

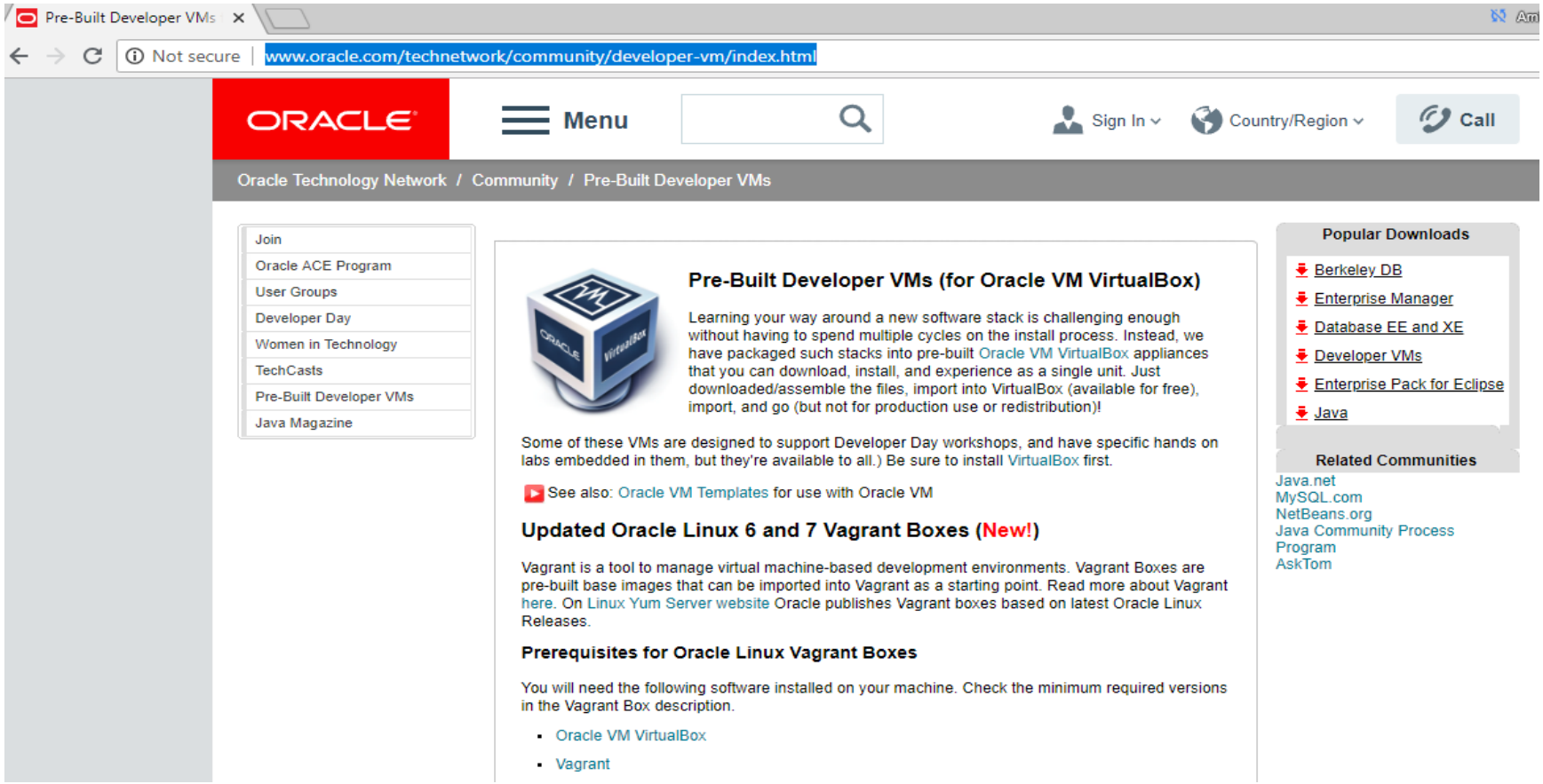


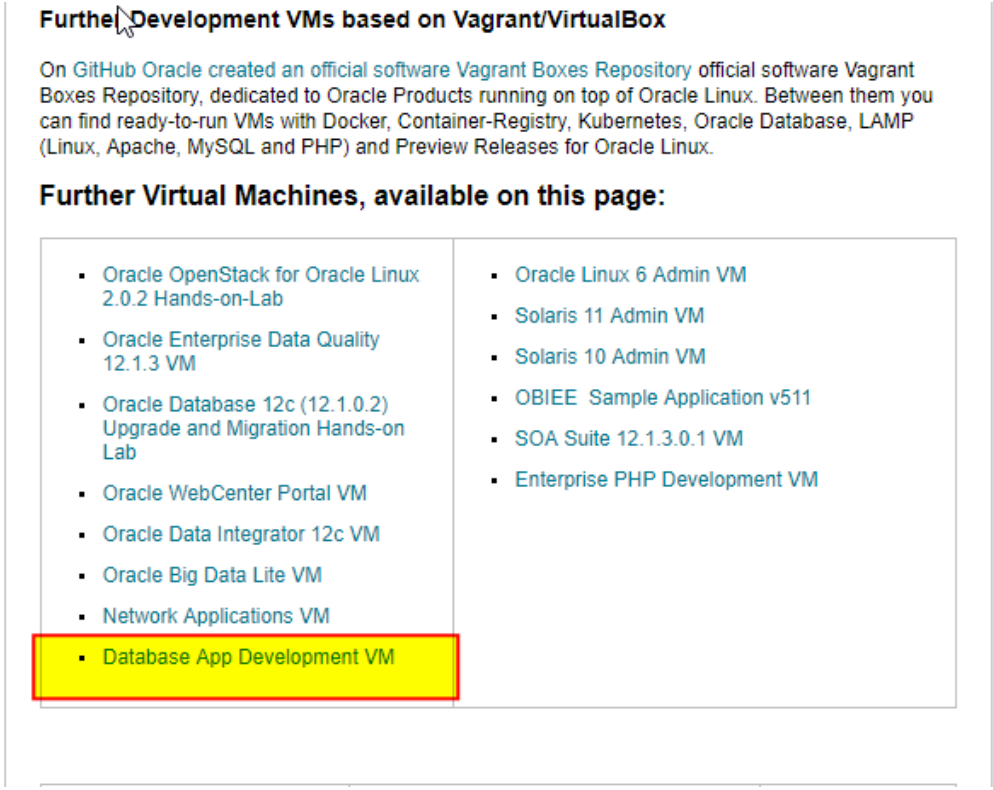
After the download, the downloaded file will appear as follow.

B) Download Database App Development VM (use “Chrome” or “Firefox” browser to download)

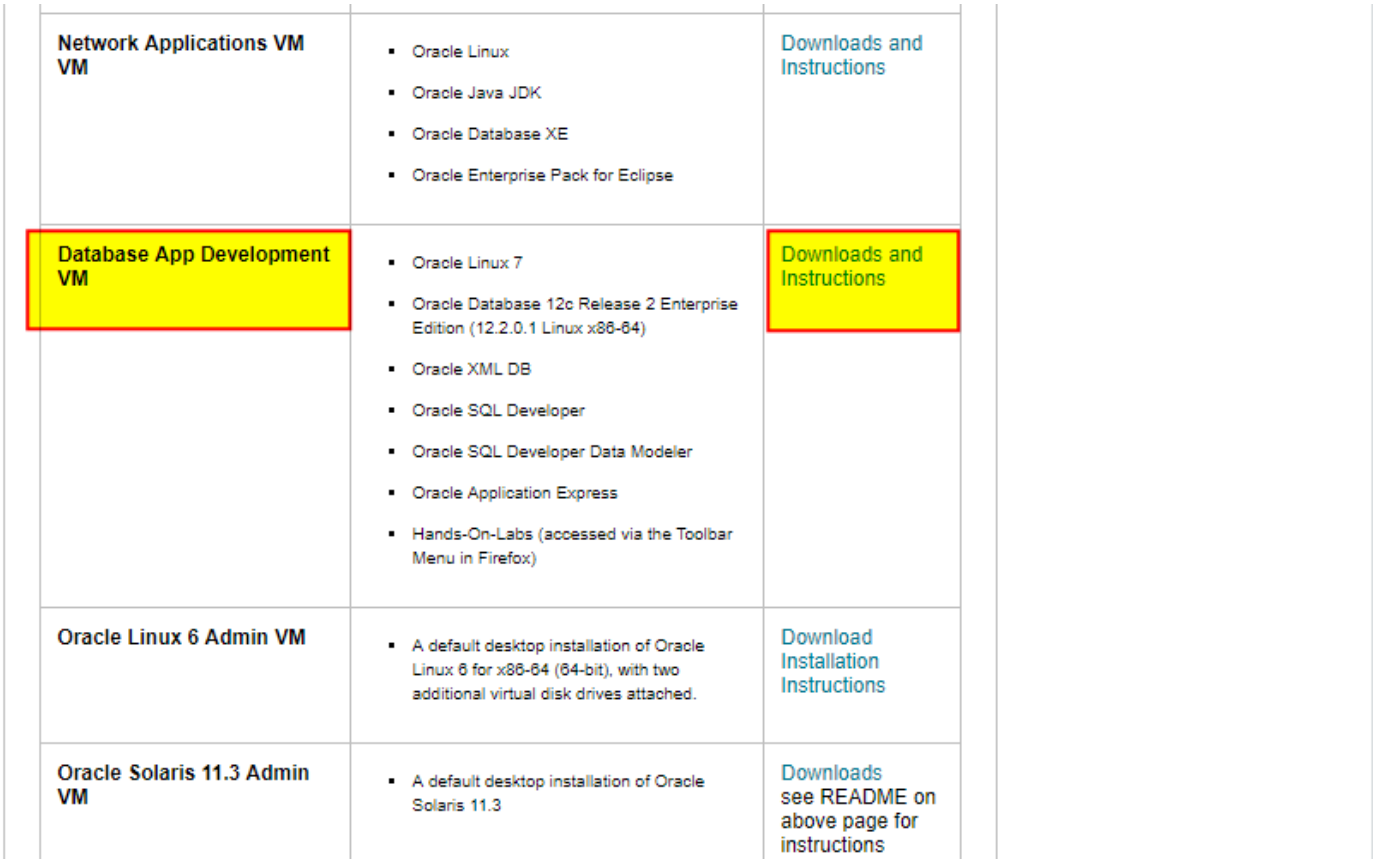
(Please note that this download takes ONE to THREE hours depending upon personal computer/laptop resources)

http://www.oracle.com/technetwork/community/developer-vm/index.html





Click on Database App Development VM



Network Applications VM VM	▪ Oracle Linux ▪ Oracle Java JDK ▪ Oracle Database XE ▪ Oracle Enterprise Pack for Eclipse	Downloads and Instructions
Database App Development VM	▪ Oracle Linux 7 ▪ Oracle Database 12c Release 2 Enterprise Edition (12.2.0.1 Linux x86-64) ▪ Oracle XML DB ▪ Oracle SQL Developer ▪ Oracle SQL Developer Data Modeler ▪ Oracle Application Express ▪ Hands-On-Labs (accessed via the Toolbar Menu in Firefox)	Downloads and Instructions
Oracle Linux 6 Admin VM	▪ A default desktop installation of Oracle Linux 6 for x86-64 (64-bit), with two additional virtual disk drives attached.	Download Installation Instructions
Oracle Solaris 11.3 Admin VM	▪ A default desktop installation of Oracle Solaris 11.3	Downloads see README on above page for instructions

Click Downloads and Instructions for the option Database App Development VM

Requirements

- At least 2GB RAM. Default VM is 1G RAM, for better performance increase.
- At least 15GB of free space (Note: virtualization works best with contiguous space so it is a good idea if on Windows to run a defrag program, and make sure you are using NTFS for your file system to handle large files on Windows.)
- 2GHz Processor (a lesser processor will be acceptable but slower)
- Mozilla Firefox 2.0 or higher, Internet Explorer 7 or higher, Safari 3.0 and higher or Google Chrome 1.0 or higher
- Adobe Acrobat reader
- Admin privileges on your box

Setup

You must accept the **OTN VM Agreement** to download this software.

Accept License Agreement | **Decline** License Agreement

Step 1. Download and install Oracle VM VirtualBox on your host system.

Step 2. Download the files (the use of a download manager is **highly recommended**):

Oracle DB Developer VM 7,926,255,104 bytes, md5sum: f7e8e3fe3596f27dd80a378297ccd0ae)

Step 3. Import your VM: **File > Import Appliance** to launch Appliance Import Wizard. Click **Choose...** to browse to the directory you re-assembled all the files in and select the **OTN_Developer_Day_VM.ova** then click **Next>** to begin importing the virtual machine. It will prompt you to agree to the appropriate developer licenses while importing. You will see 'Oracle Developer Days (Powered Off)' when it is finished importing.

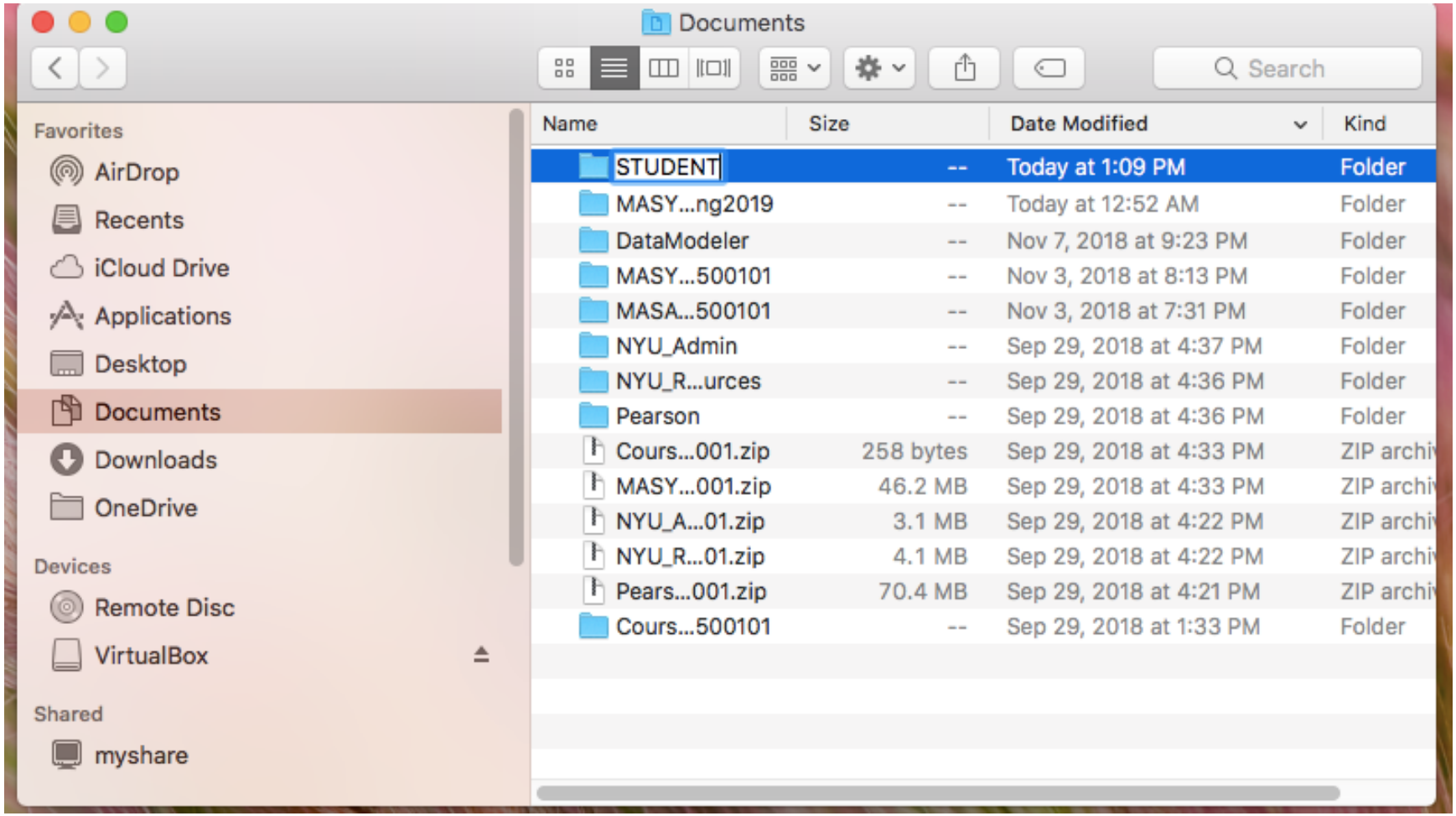
Step 4. Test your VM: Once the import has completed, double-click the OTN Developer Days VM. Click **OK** to close the Virtualbox Information dialogs. When you get to the Enterprise Linux 6 screen you can now login. (Username and password is **oracle**.) Allow the process to complete; it is ready when you see a terminal window, which you can close. Once you are finished working in the guest VM you can shut it down via **System > Shut Down**; this will return the guest VM to the Powered Off state.

If you have any questions about this process, post a message to our Virtualization Discussion Forum (use hashtag "developerday"). Otherwise, you are now ready to complete the Hands-on Database Application Development HOLs at the workshop or at your desk. See you there!

Please review requirements about your desktop/laptop, Accept the License Agreemnt and start downloading Oracle DB Developer VM (this download will take about 1 to 3 hours depending upon desktop/laptop resouces)

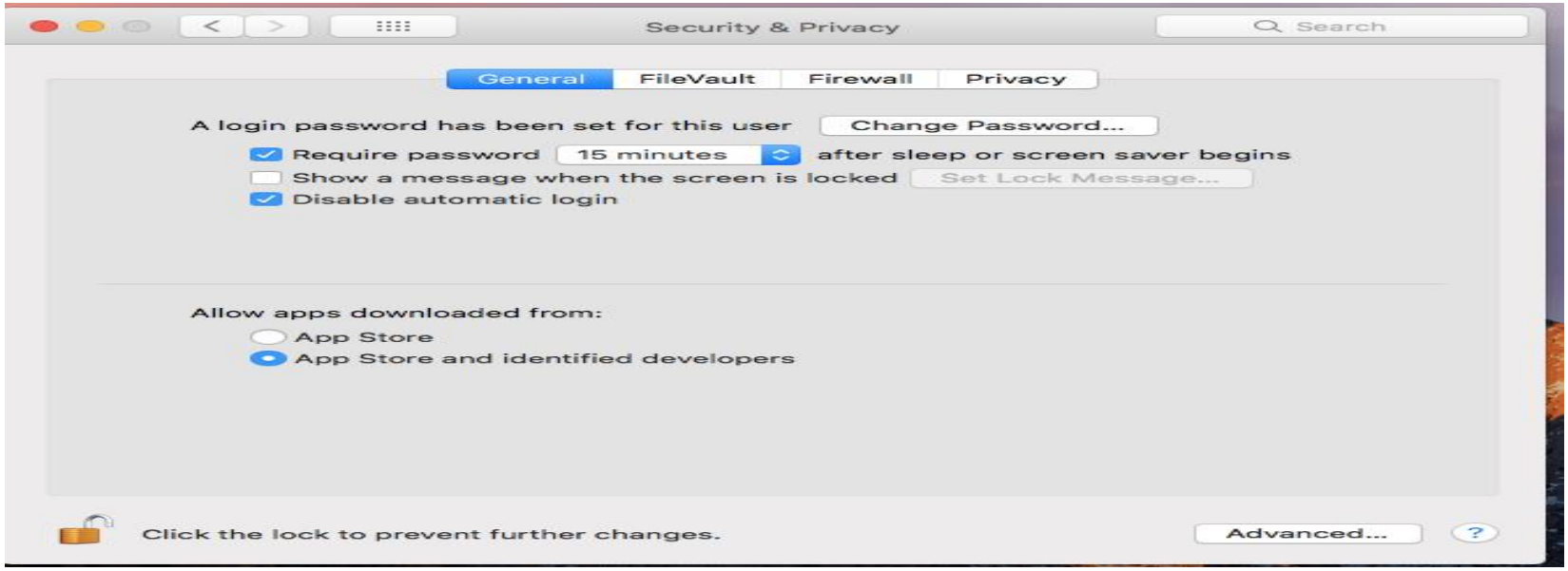
After the download, the downloaded file will appear as follow.

Create a folder "STUDENT" under "Documents" folder of your laptop/desktop.

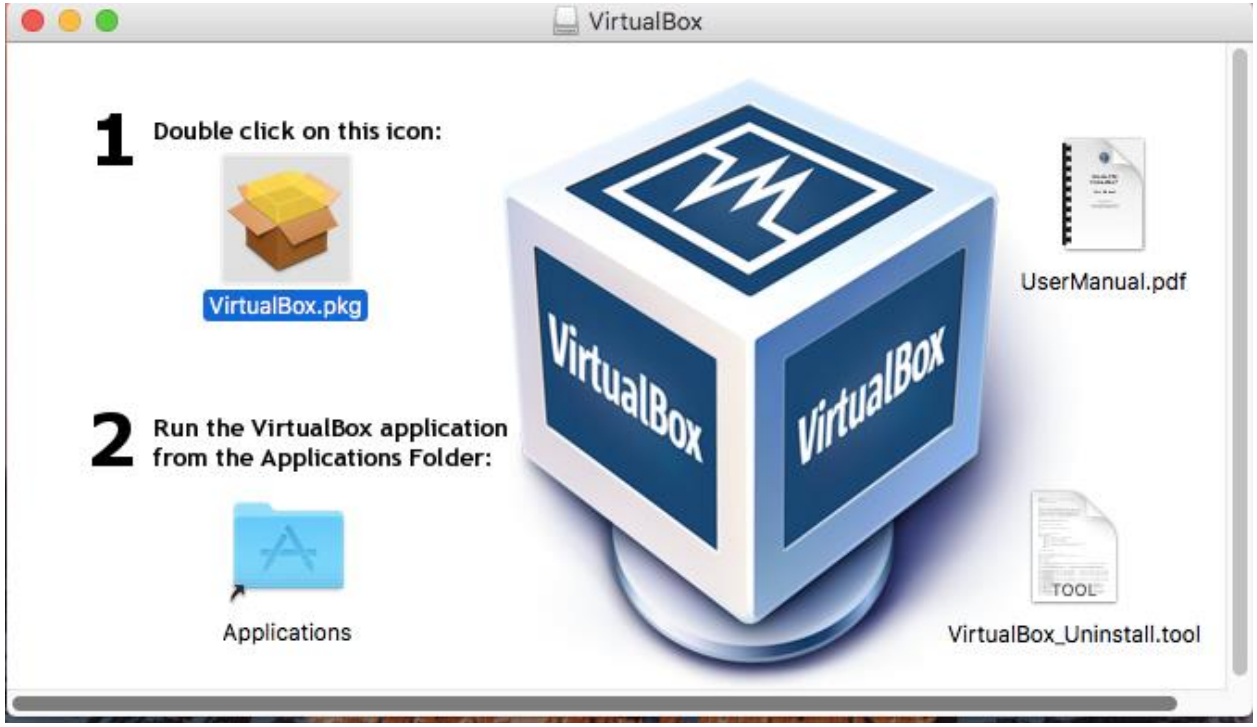


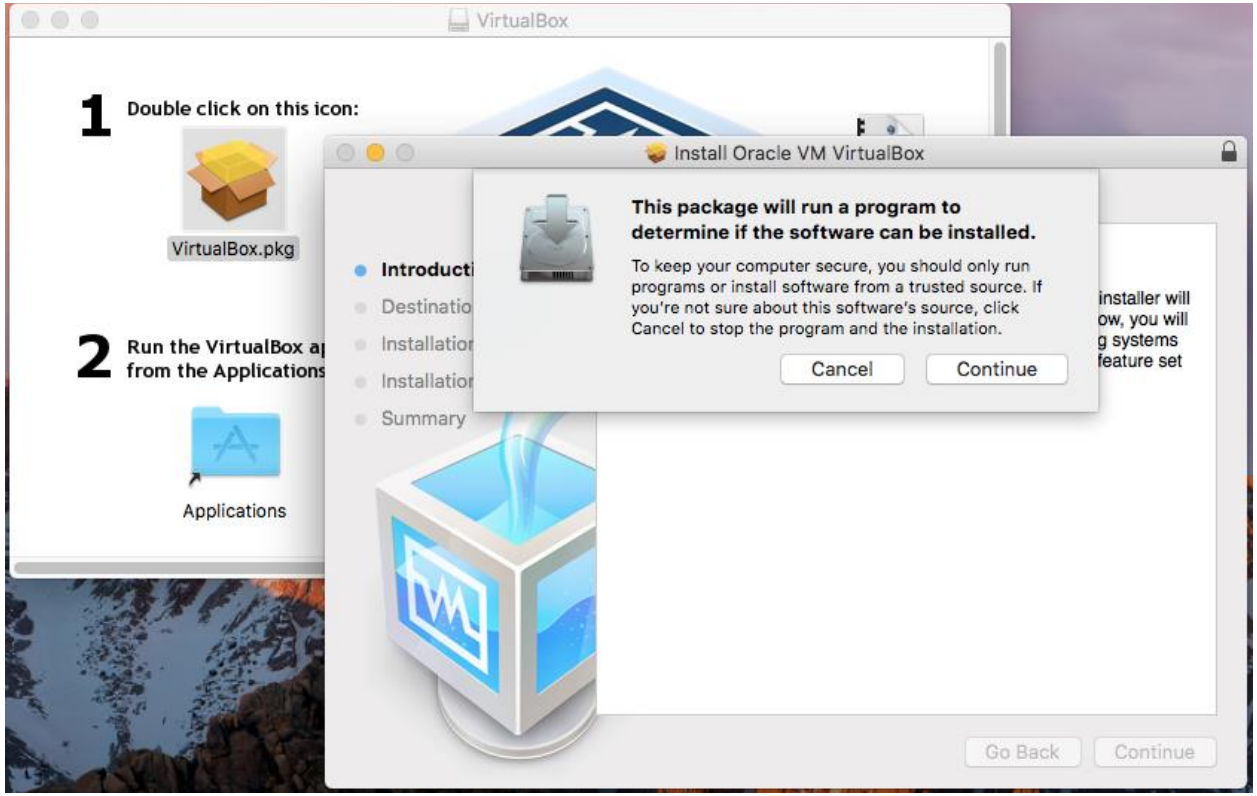
C) Install and set up Oracle Virtual Box and Oracle DB applications.

On your MAC laptop/desktop go to,
System Preference→ Security & Privacy → General
Please make sure that under "Allow app download from" option "App Store and identified developer" has been selected.

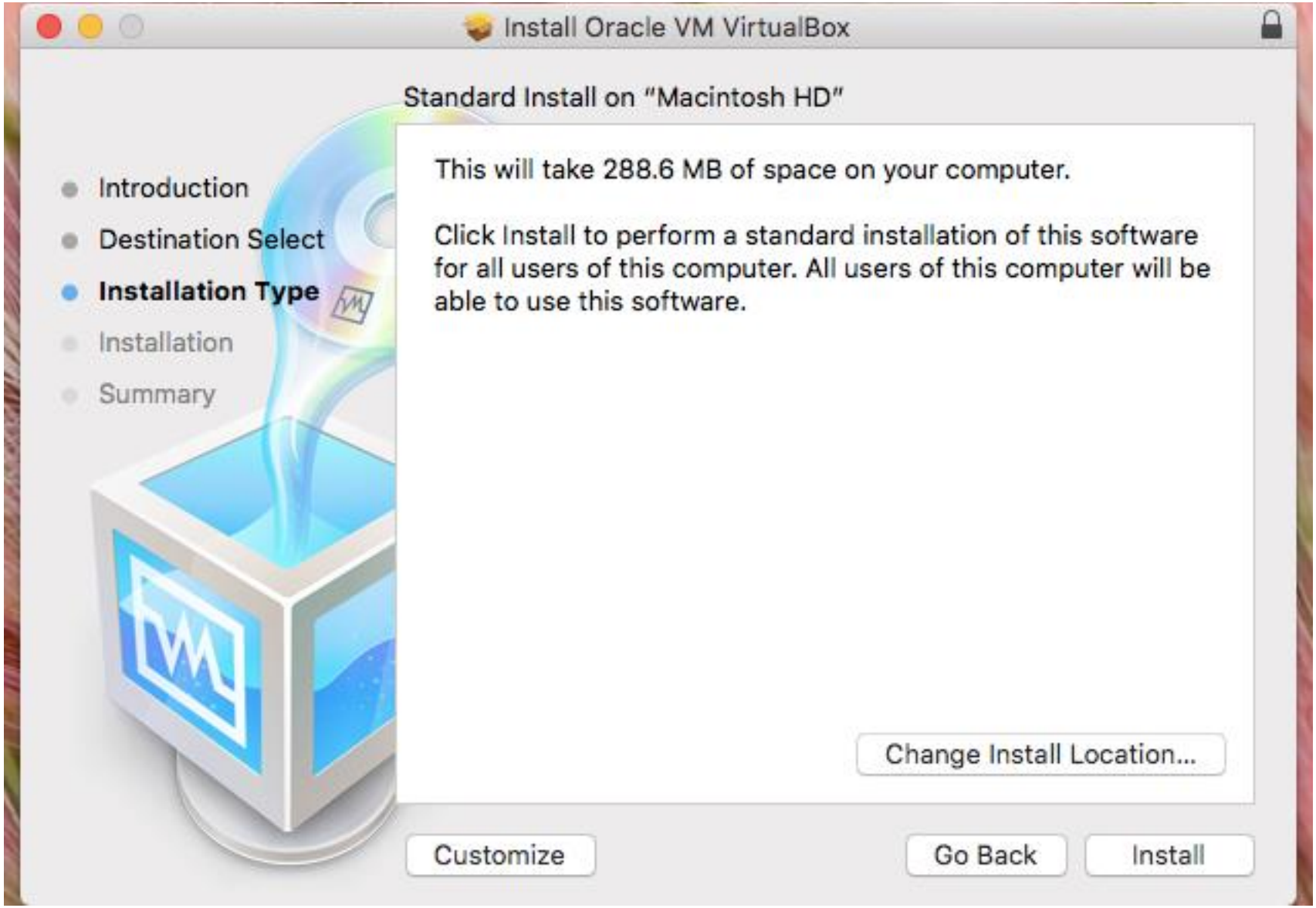


Double click on downloaded "VirtualBox-6.0.0-127566-OSX.dmg" and then double click on VirtualBox.pkg under label 1.

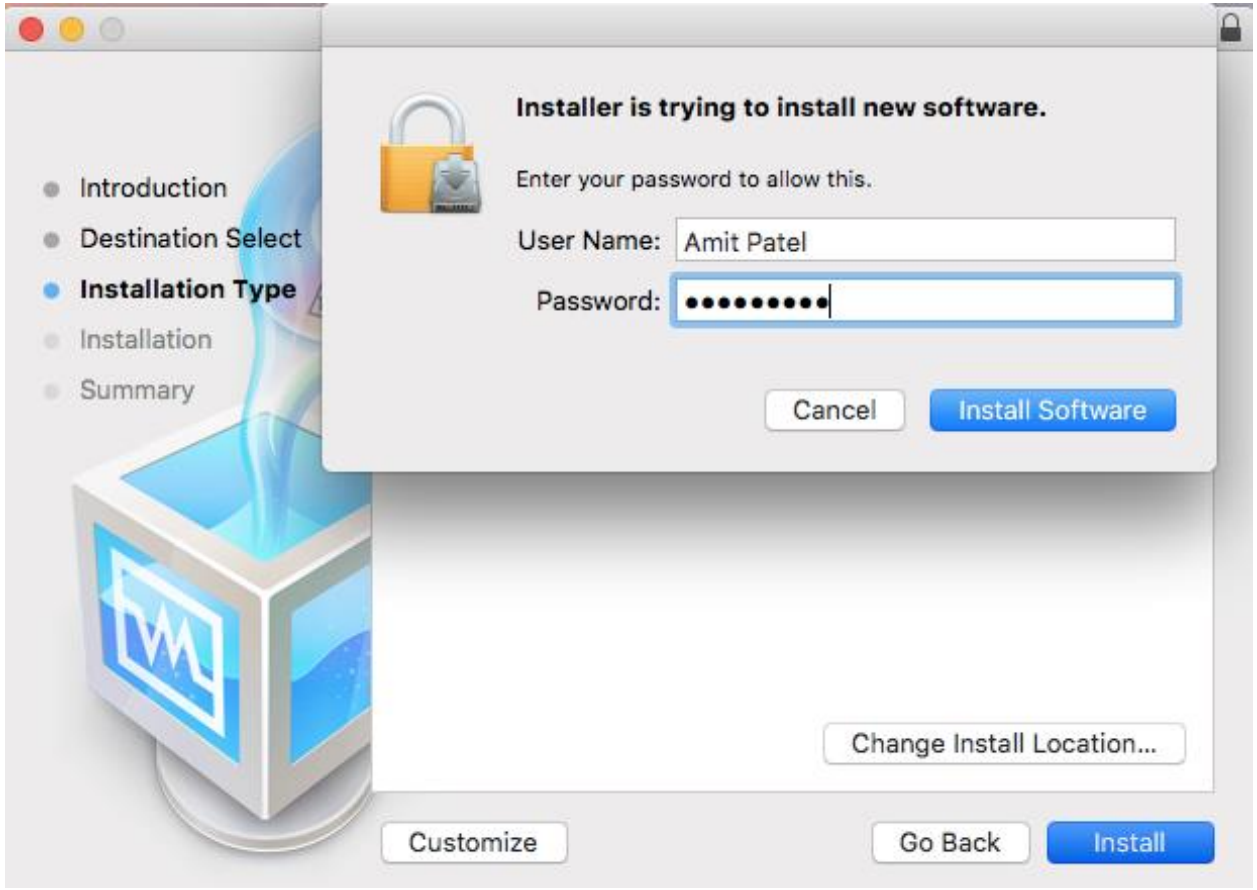

VirtualBox
1
Double click on this icon:
VirtualBox.pkg
2
Run the VirtualBox application
from the Applications Folder:
Applications
VirtualBox
VirtualBox
UserManual.pkg
TOOL
VirtualBox_Uninstall.tool



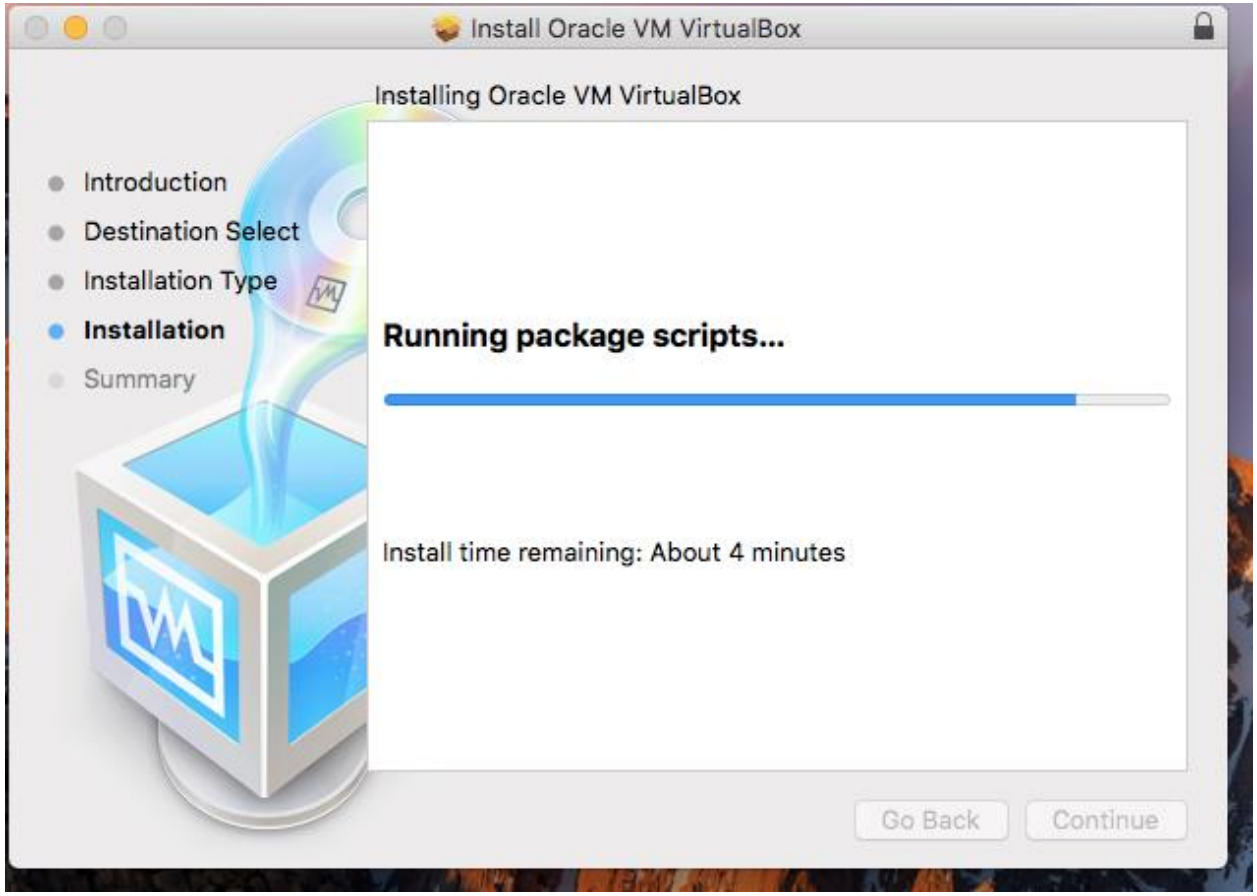
Click on Continue

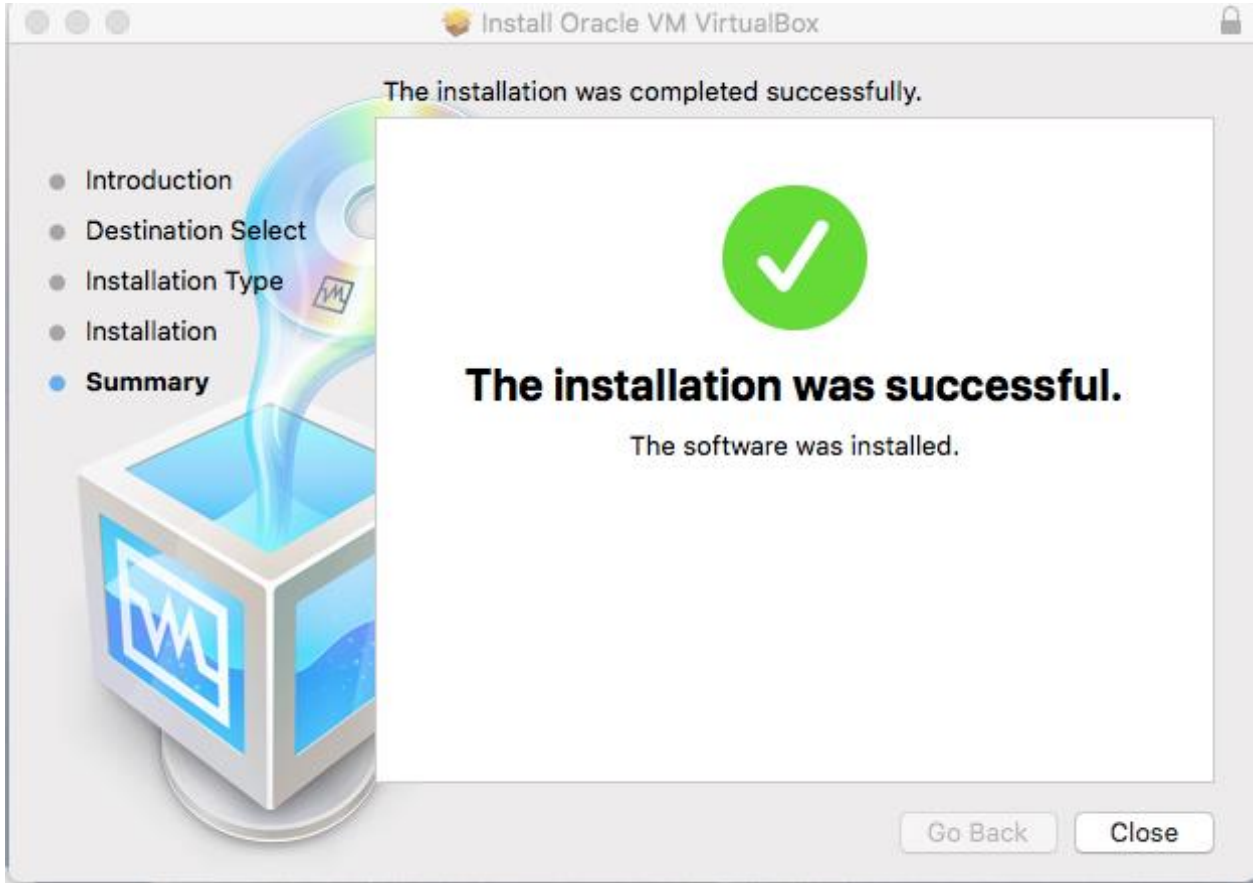


Click on Install



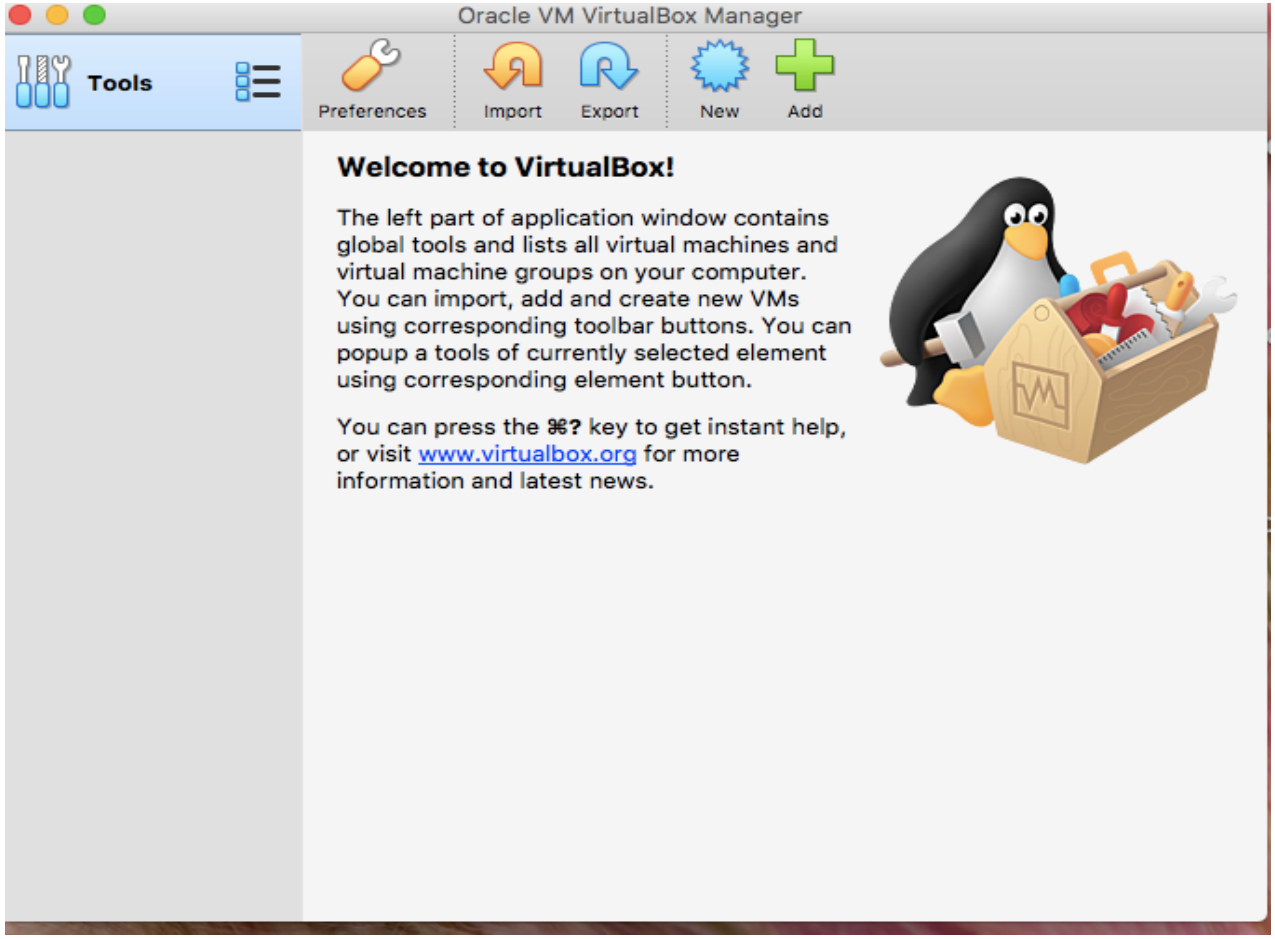
Enter your MAC laptop/desktop login credentials


Install Oracle VM VirtualBox
Installing Oracle VM VirtualBox
Introduction
Destination Select
Installation Type
Installation
Summary
Running package scripts...
Install time remaining: About 4 minutes
Go Back
Continue



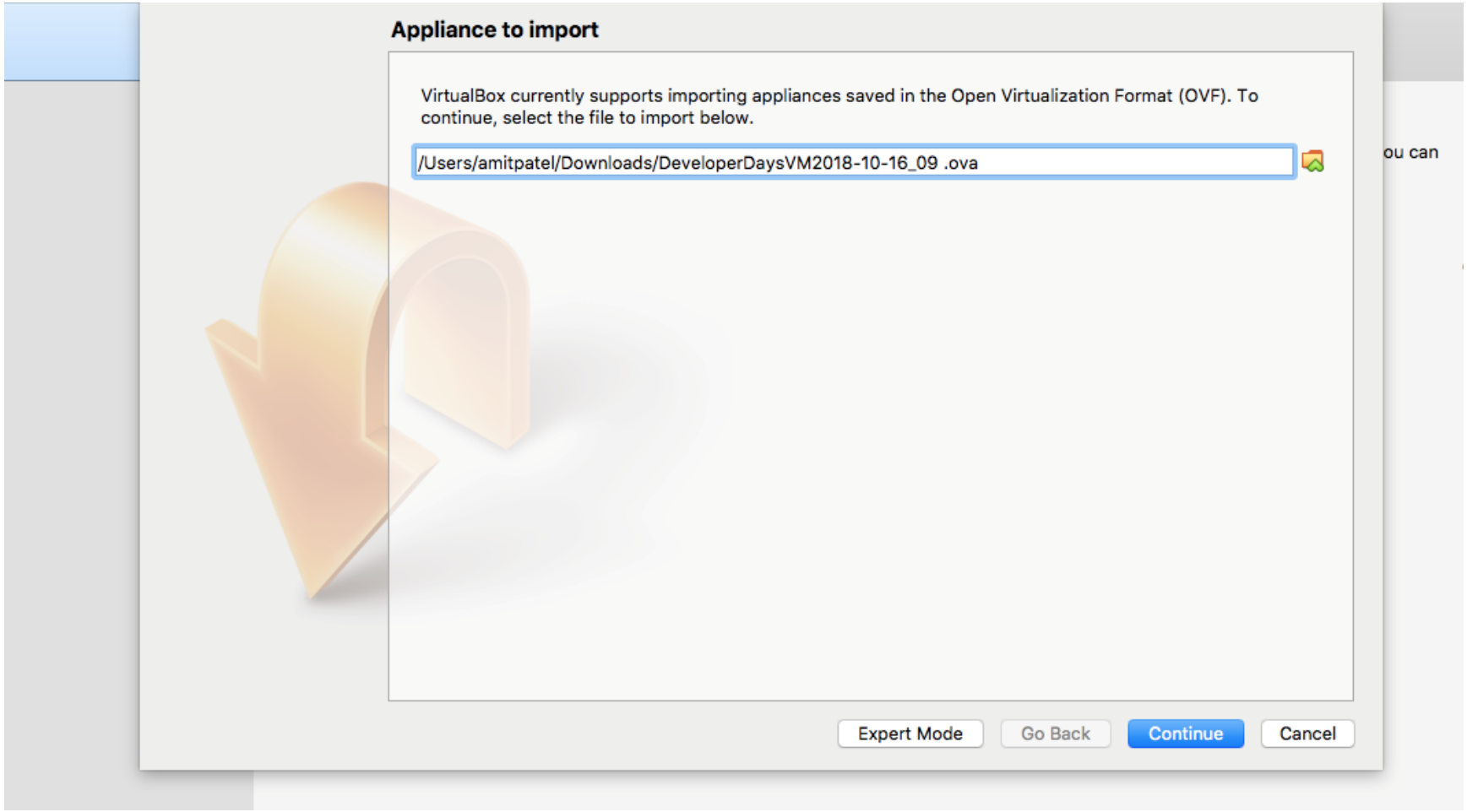
Click on Close

On you MAC desktop/laptop, click on Launchpad and double click on VirutalBox icon.

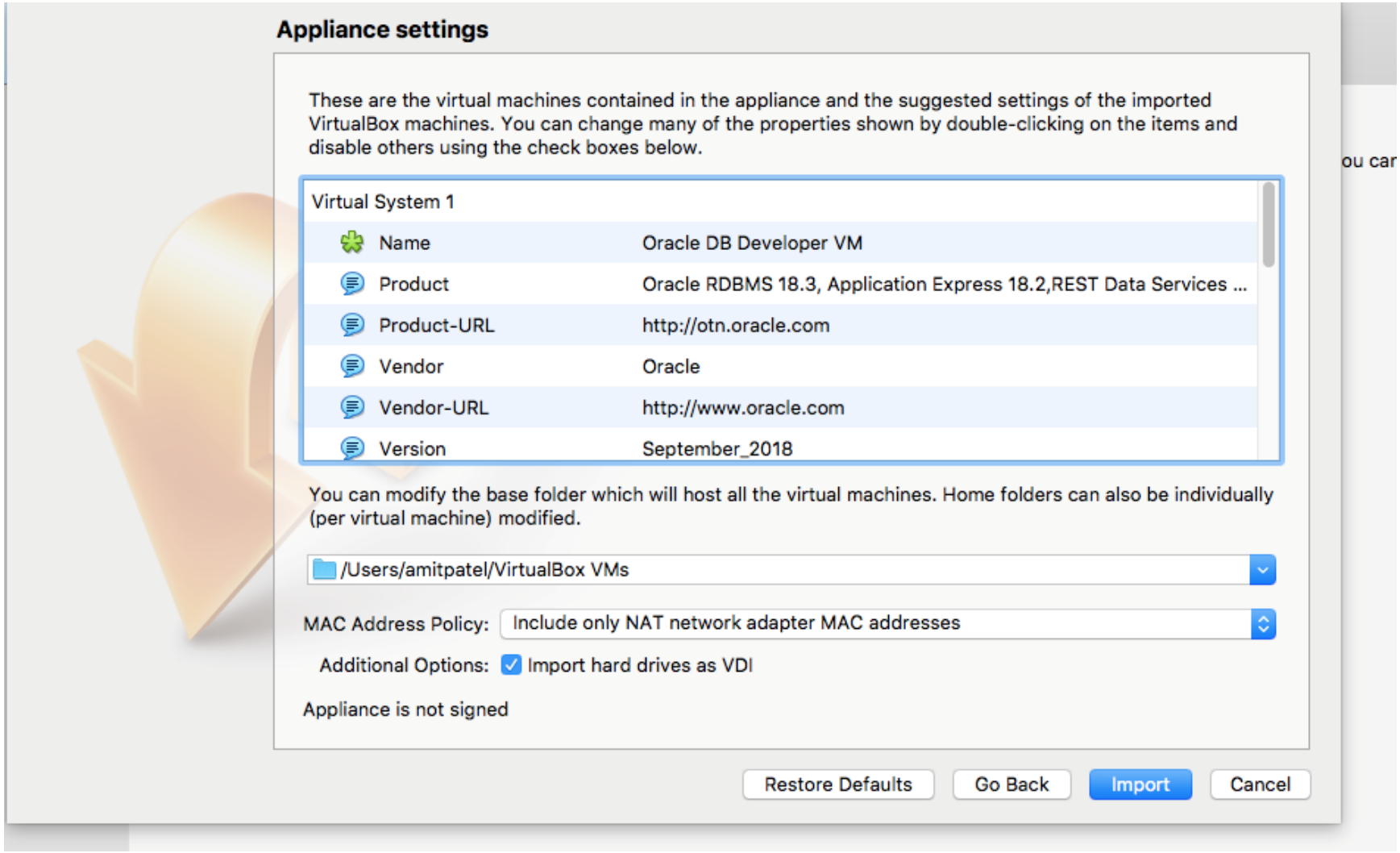


Click on “Import”

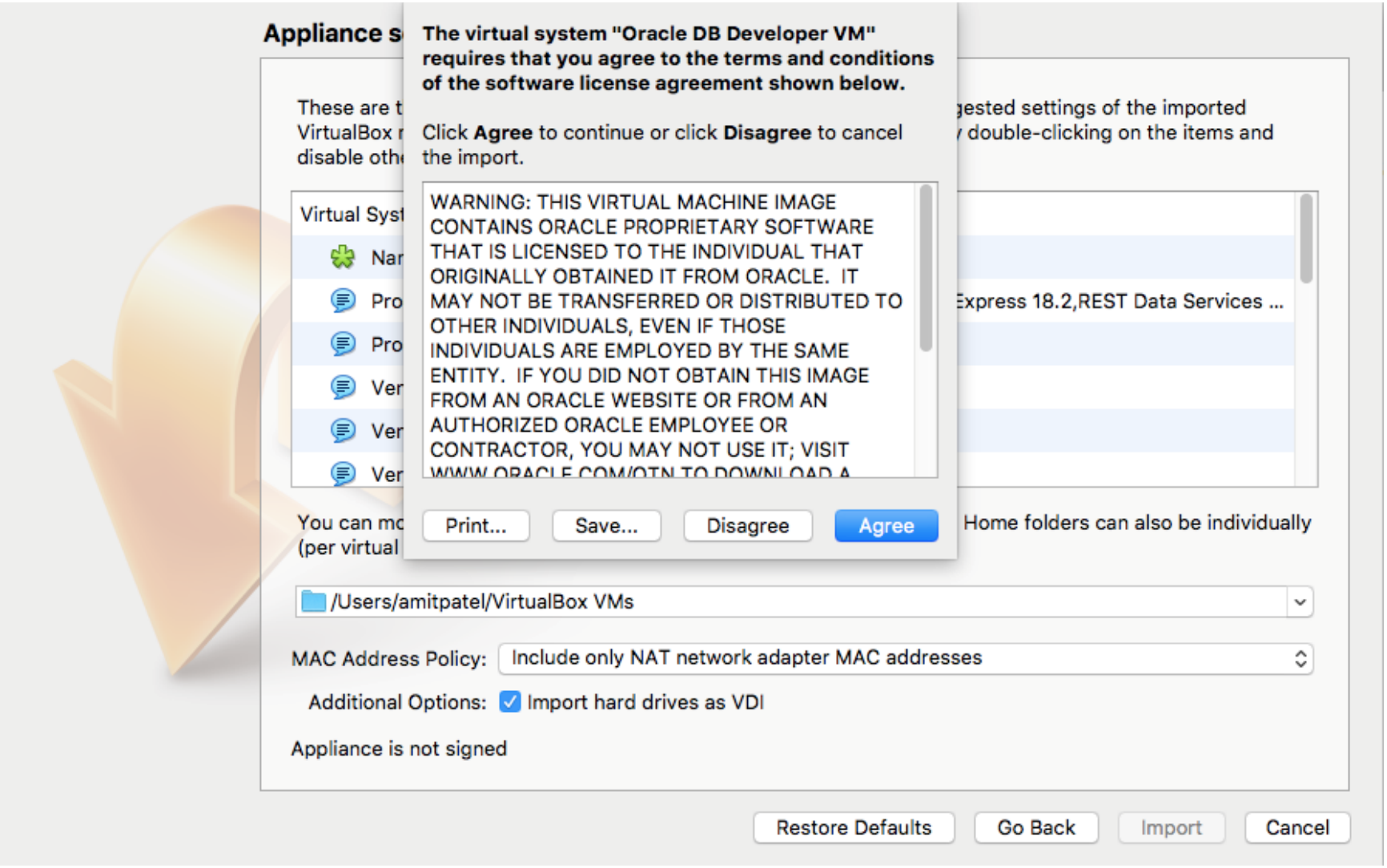
Click on Folder icon and browse to select downloaded (per step B) “DeveloperDaysVM2018-10-16_09.ova” file



Click on “Continue”

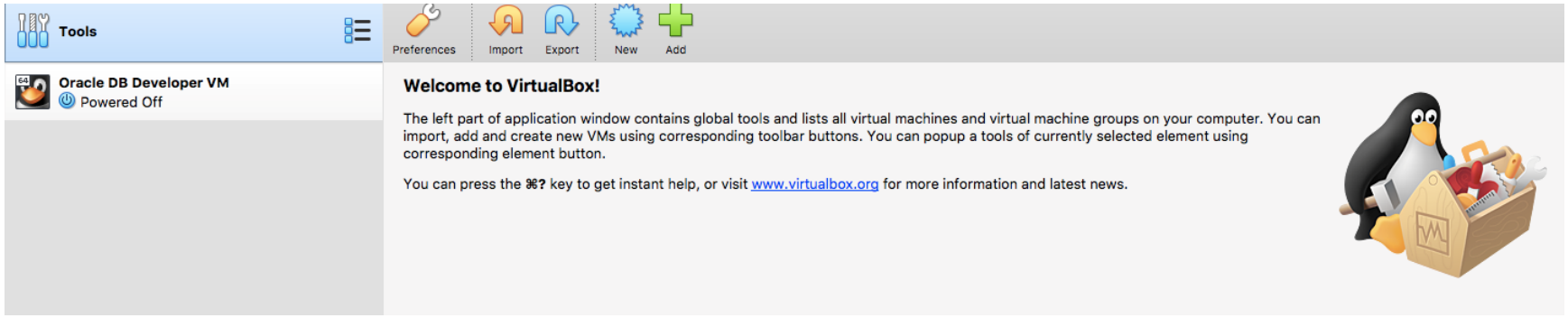


Click on “Import”

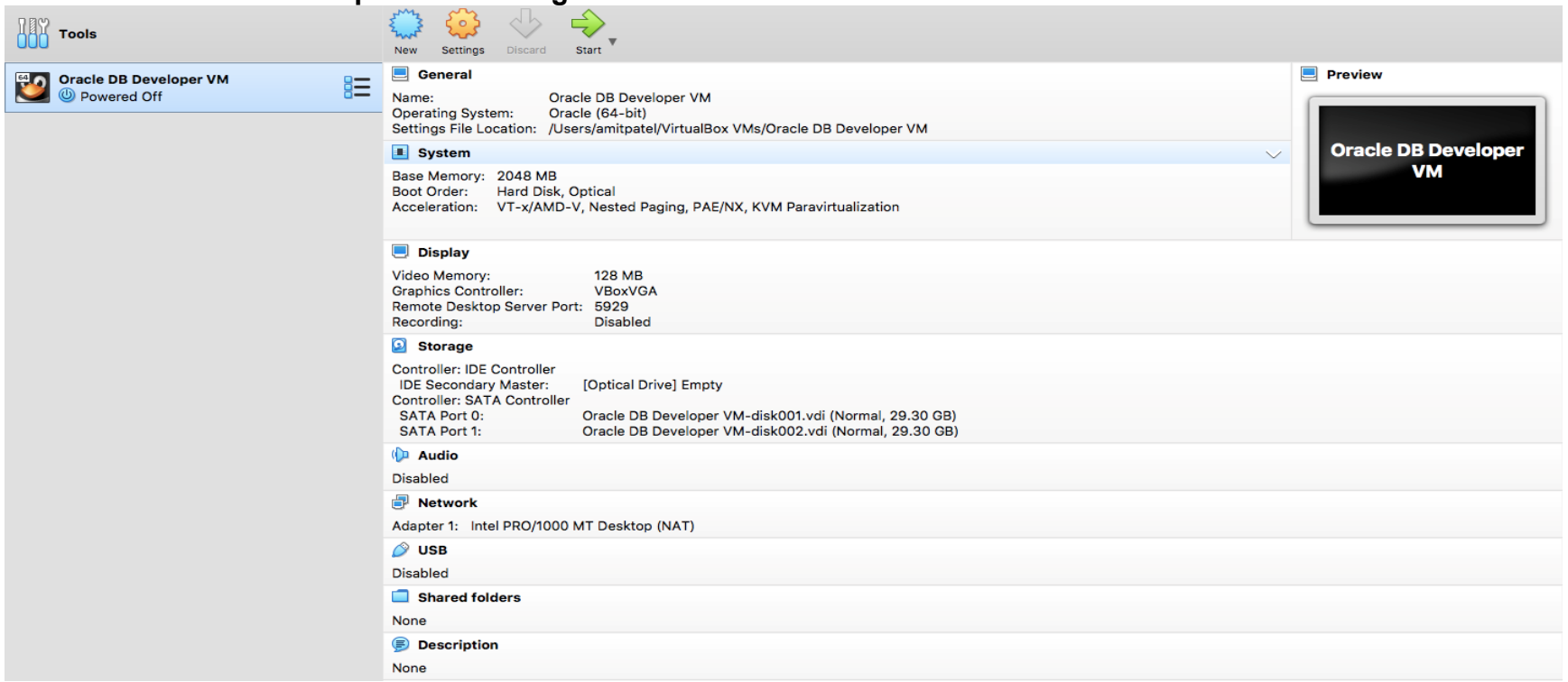


Accept the agreement by clicking “Agree”

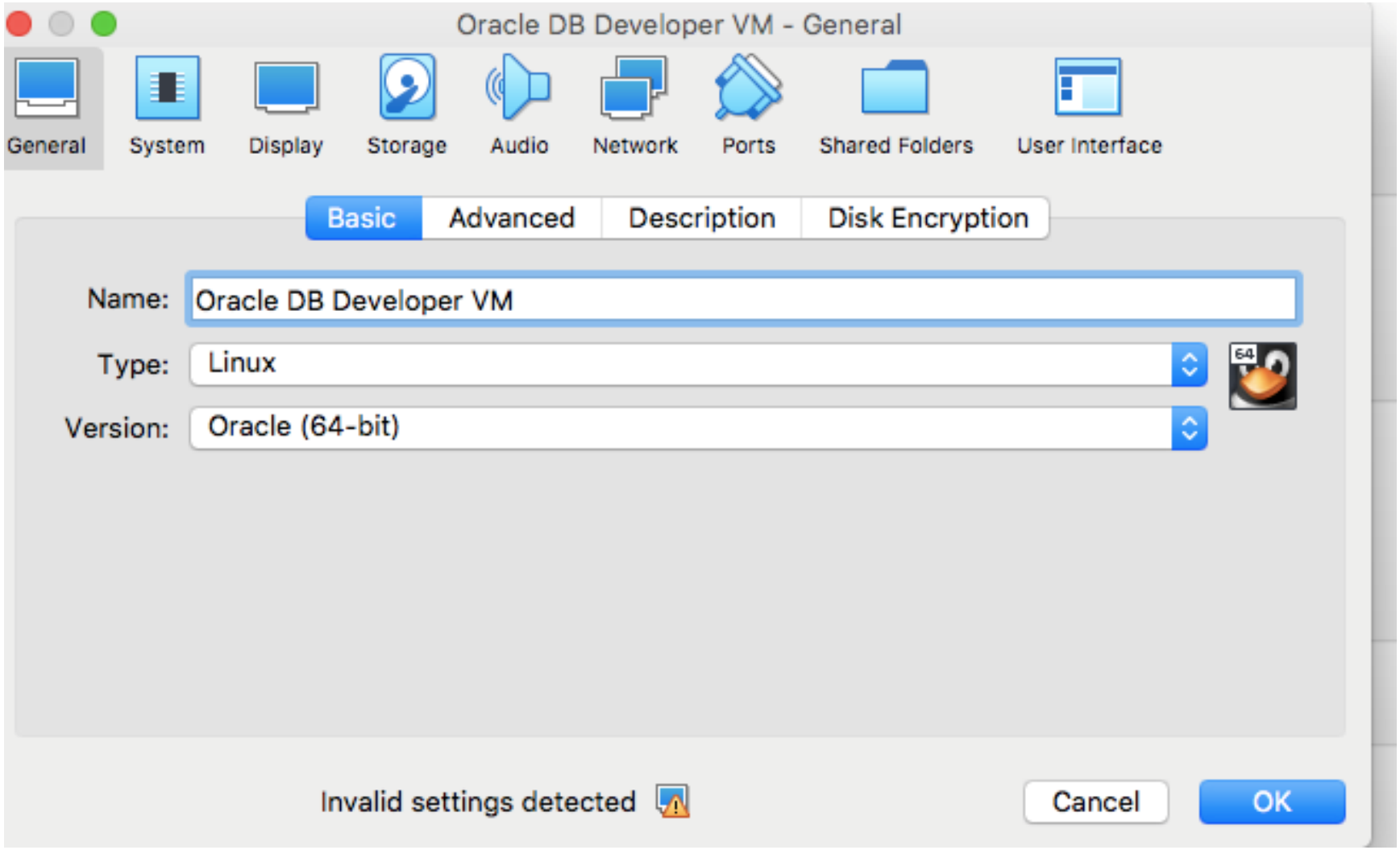
After the import, Virtual box appear like below screenshot with “Oracle DB Developer VM” in Powered Off state.



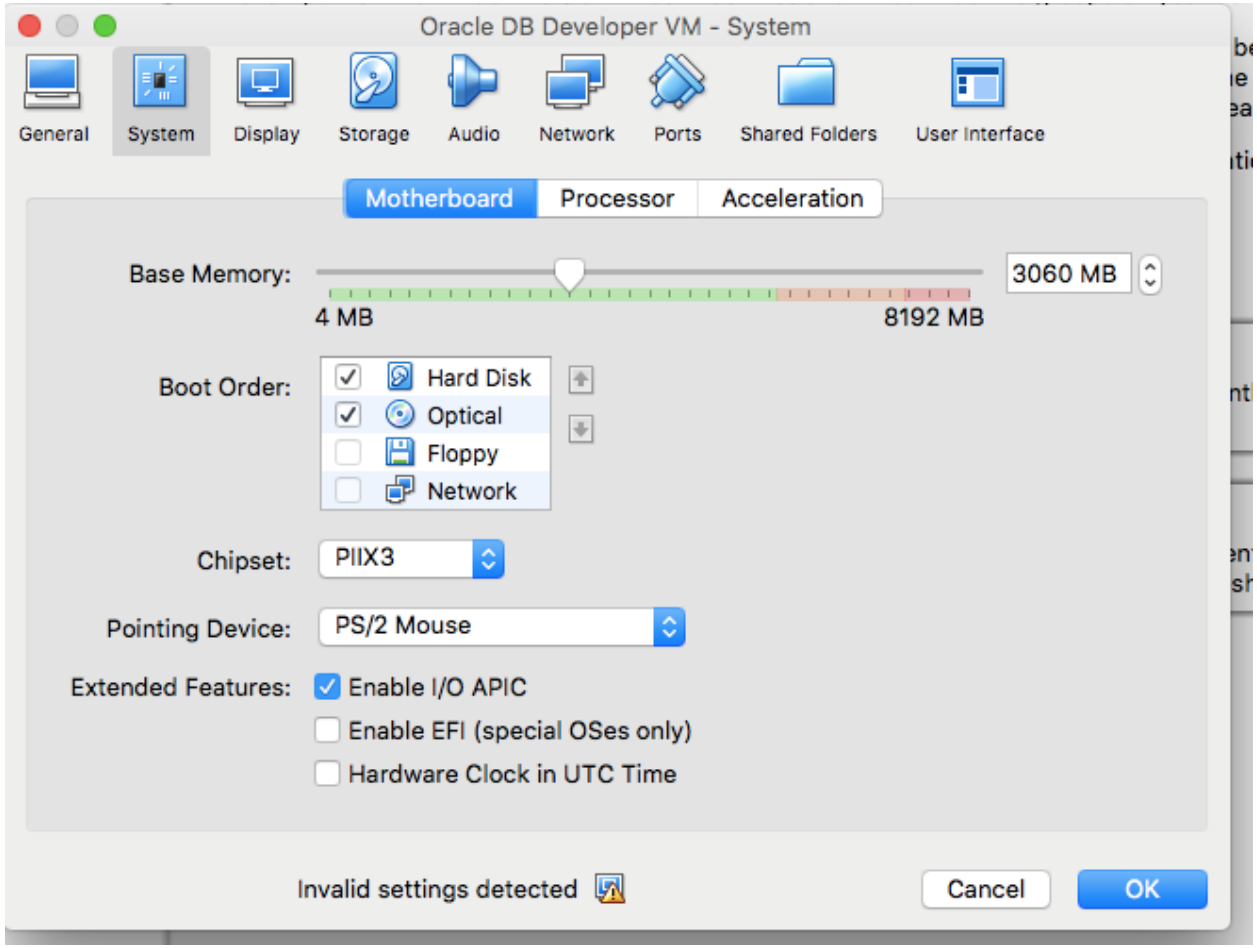
Select “Oracle DB Developer VM” and right click on it.



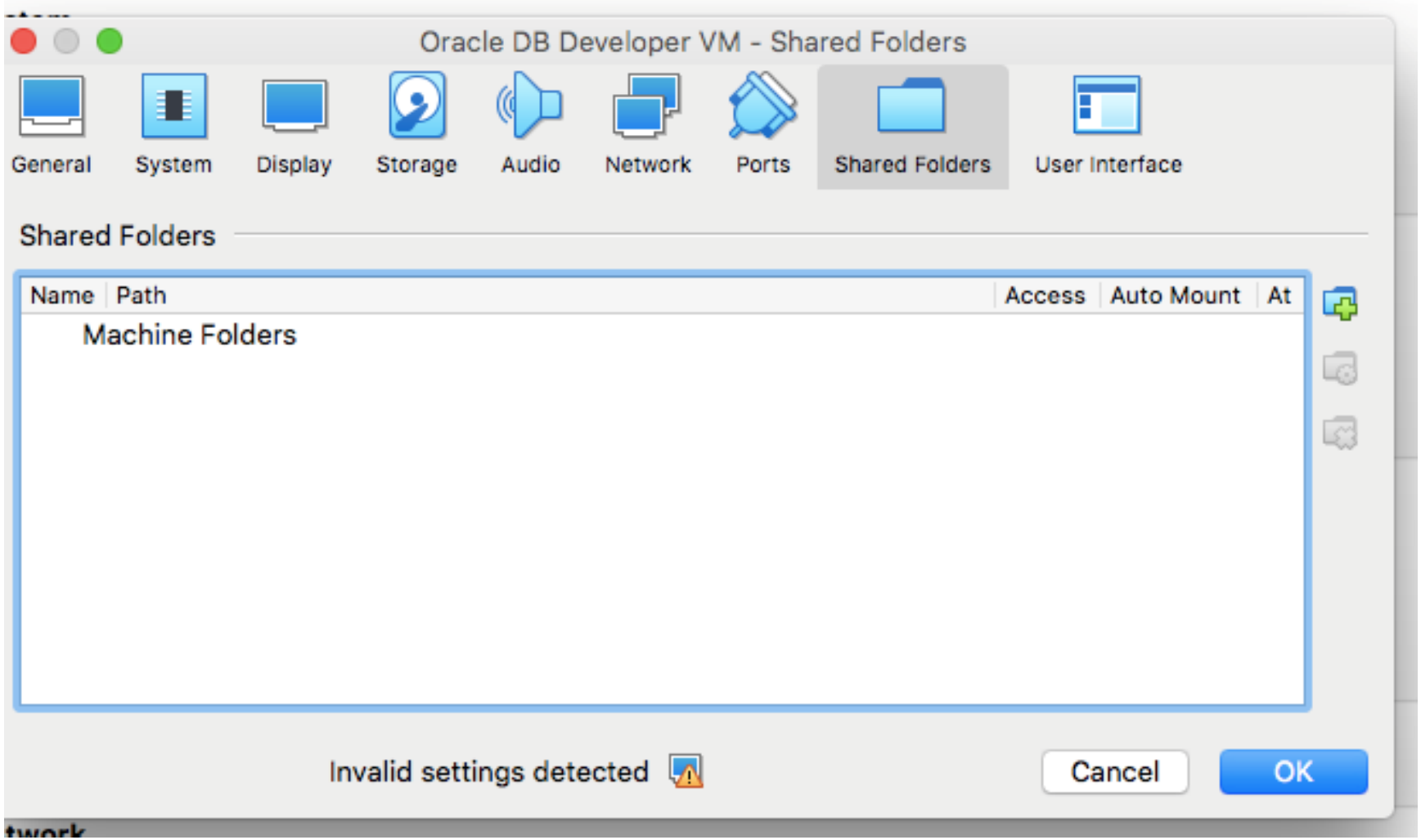
Click on “Basic” and notice Name, Type, and Version values as appear as below screenshot.



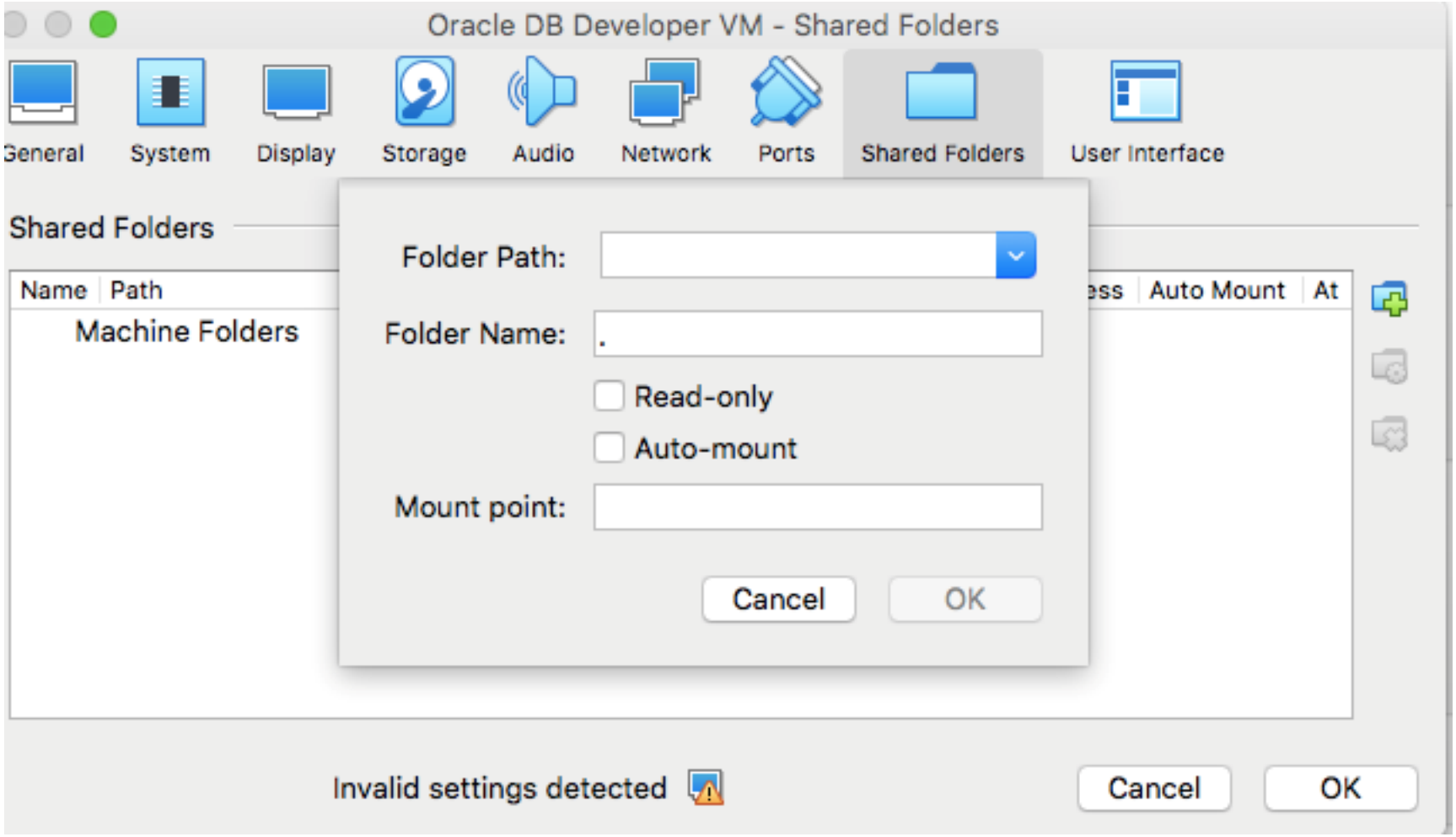
Click on “System” tab and set the base memory bar to about 40% of total memory of your laptop/desktop (In this example, total memory is 8192MB and Base Memory bar is set to 3060MB) and click OK



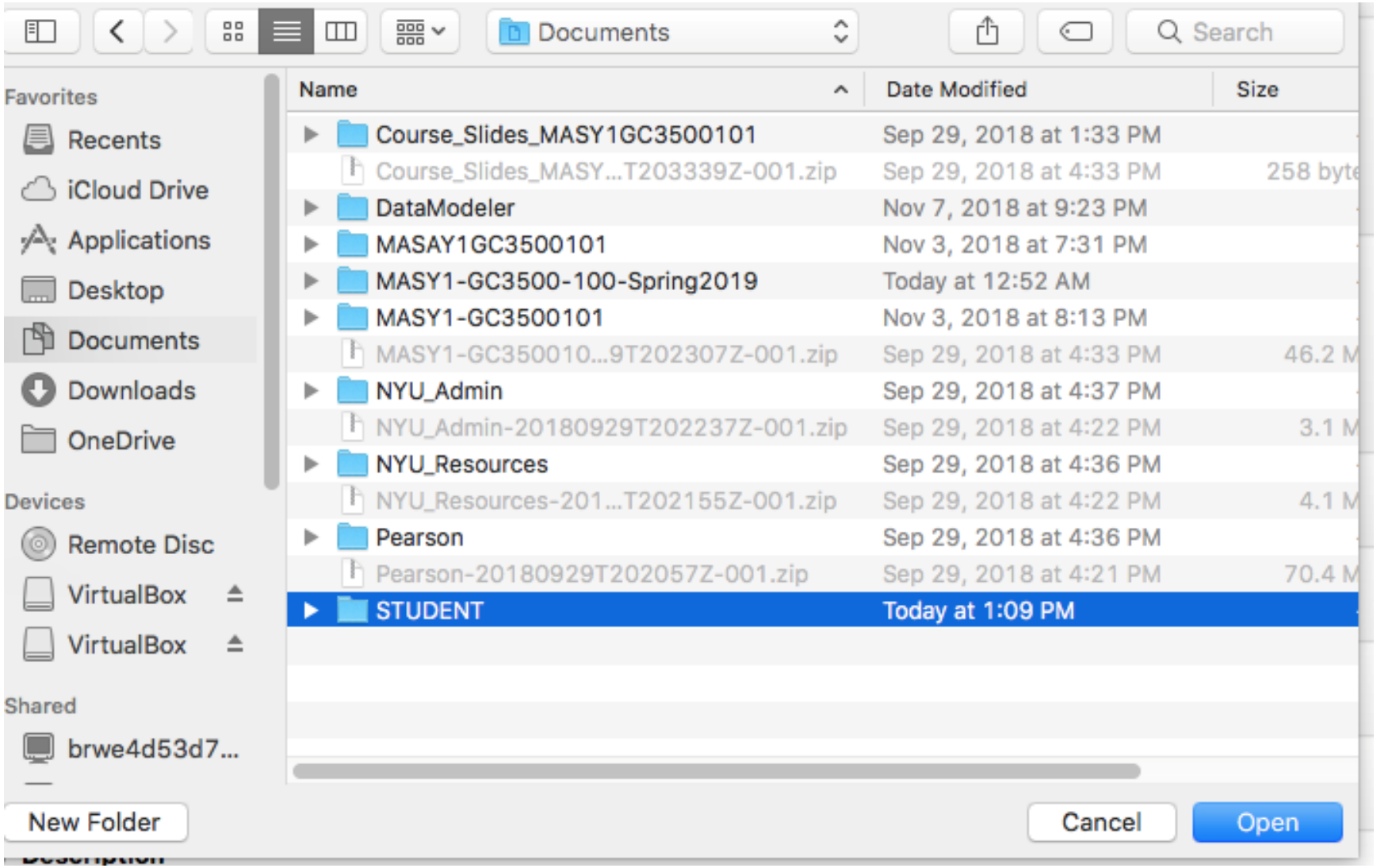
Click on “Shared Folders”



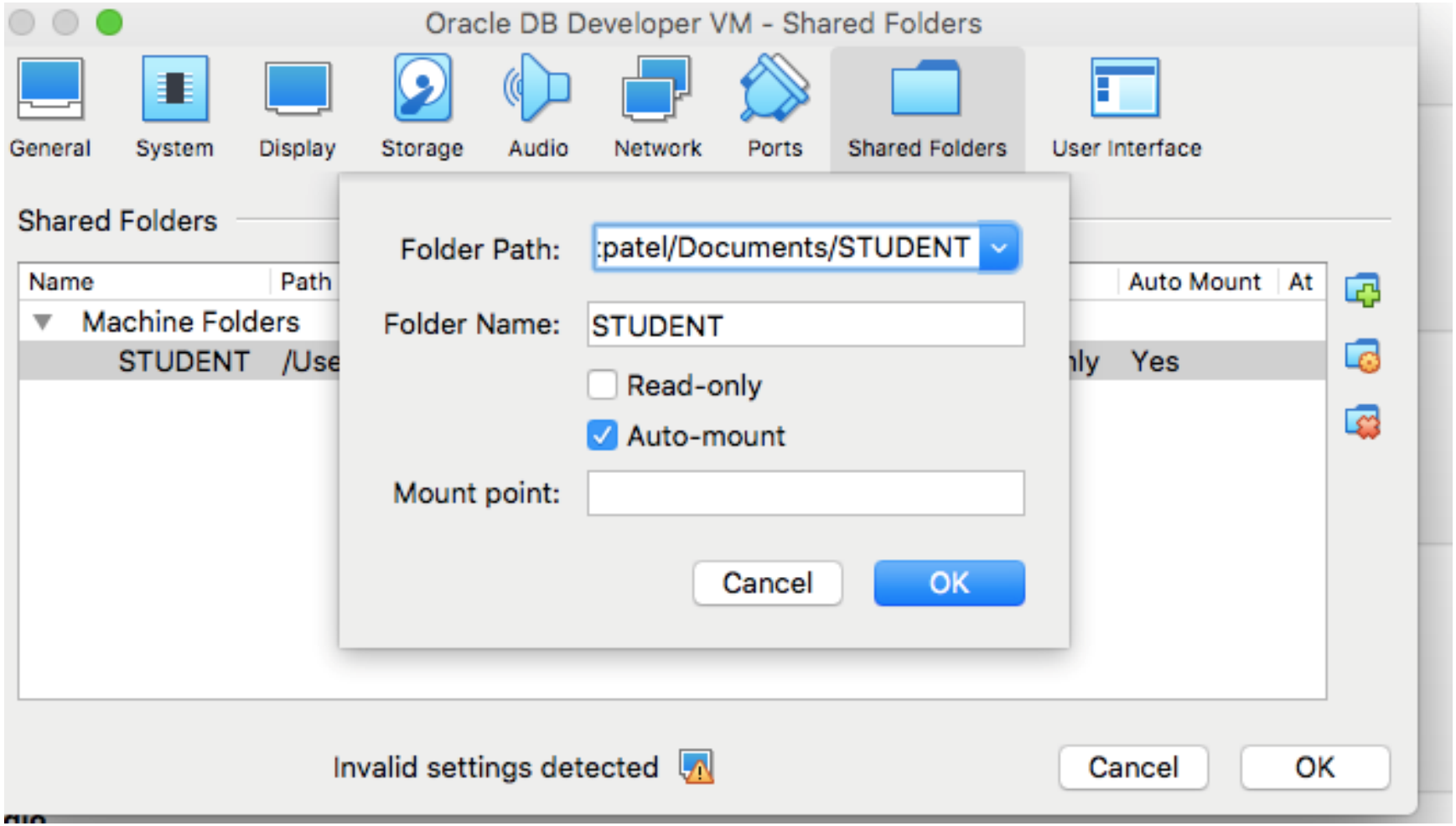
Click on “+” sign and select “Folder Path” as “Other”



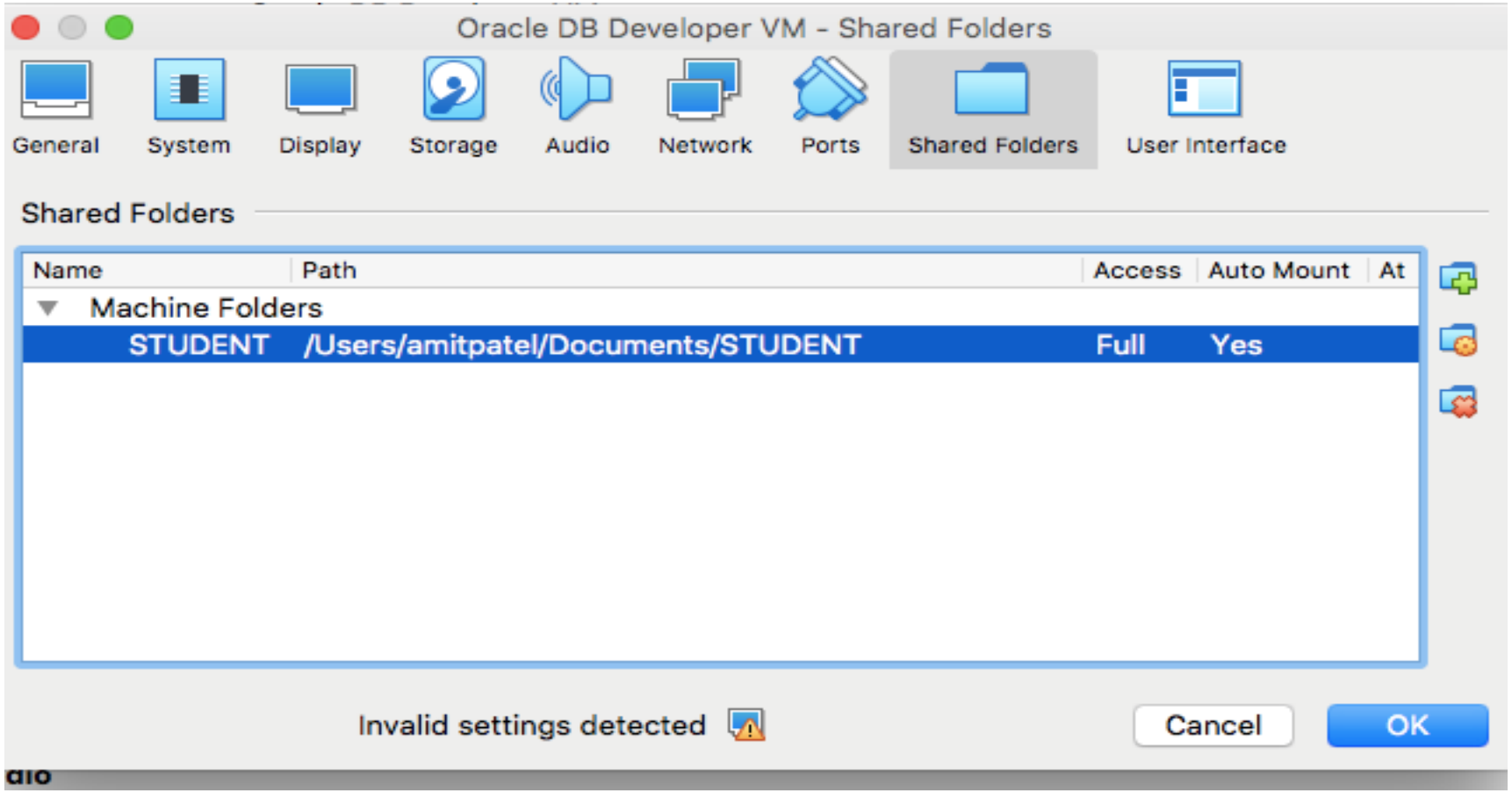
Navigate folder path to directory where you have created a folder "STUDENT"


Documents
Search
Favorites
Recents
iCloud Drive
Applications
Desktop
Documents
Downloads
OneDrive
Devices
Remote Disc
VirtualBox
VirtualBox
Shared
brwe4d53d7...
Name
Date Modified
Size
Course_Slides_MASY1GC3500101
Sep 29, 2018 at 1:33 PM
Course_Slides_MASY...T203339Z-001.zip
Sep 29, 2018 at 4:33 PM
258 byte
DataModeler
Nov 7, 2018 at 9:23 PM
MASAY1GC3500101
Nov 3, 2018 at 7:31 PM
MASY1-GC3500-100-Spring2019
Today at 12:52 AM
MASY1-GC3500101
Nov 3, 2018 at 8:13 PM
MASY1-GC350010...9T202307Z-001.zip
Sep 29, 2018 at 4:33 PM
46.2 M
NYU_Admin
Sep 29, 2018 at 4:37 PM
NYU_Admin-20180929T202237Z-001.zip
Sep 29, 2018 at 4:22 PM
3.1 M
NYU_Resources
Sep 29, 2018 at 4:36 PM
NYU_Resources-201...T202155Z-001.zip
Sep 29, 2018 at 4:22 PM
4.1 M
Pearson
Sep 29, 2018 at 4:36 PM
Pearson-20180929T202057Z-001.zip
Sep 29, 2018 at 4:21 PM
70.4 M
STUDENT
Today at 1:09 PM
New Folder
Cancel
Open

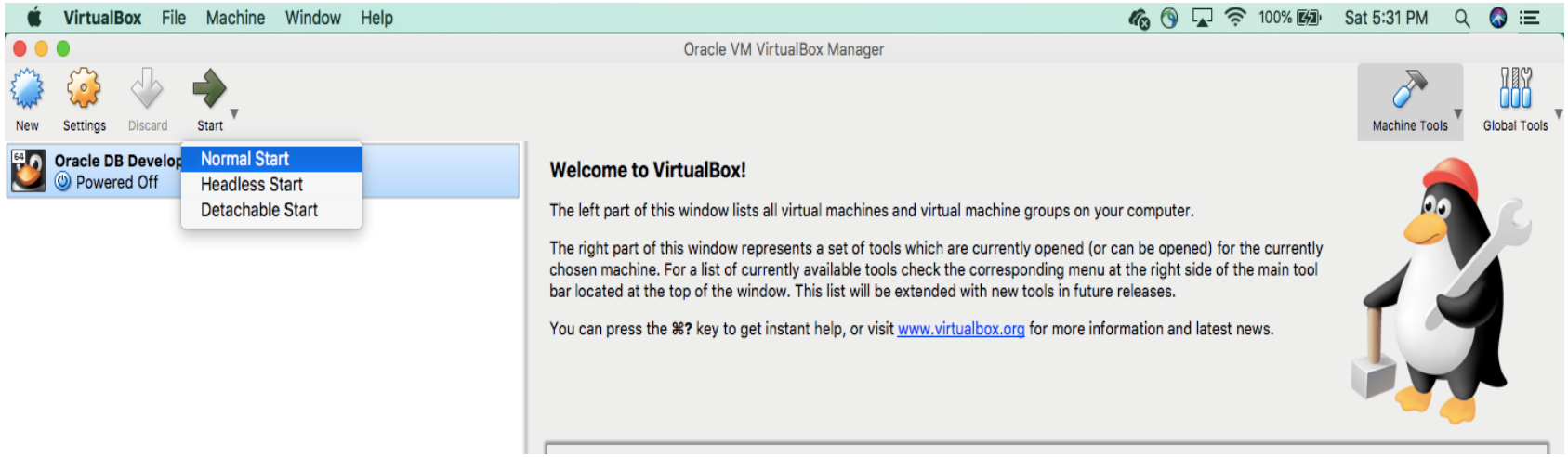
Make sure that “Read-Only” check box is not selected and then check mark “Auto-Mount” as below screenshot.



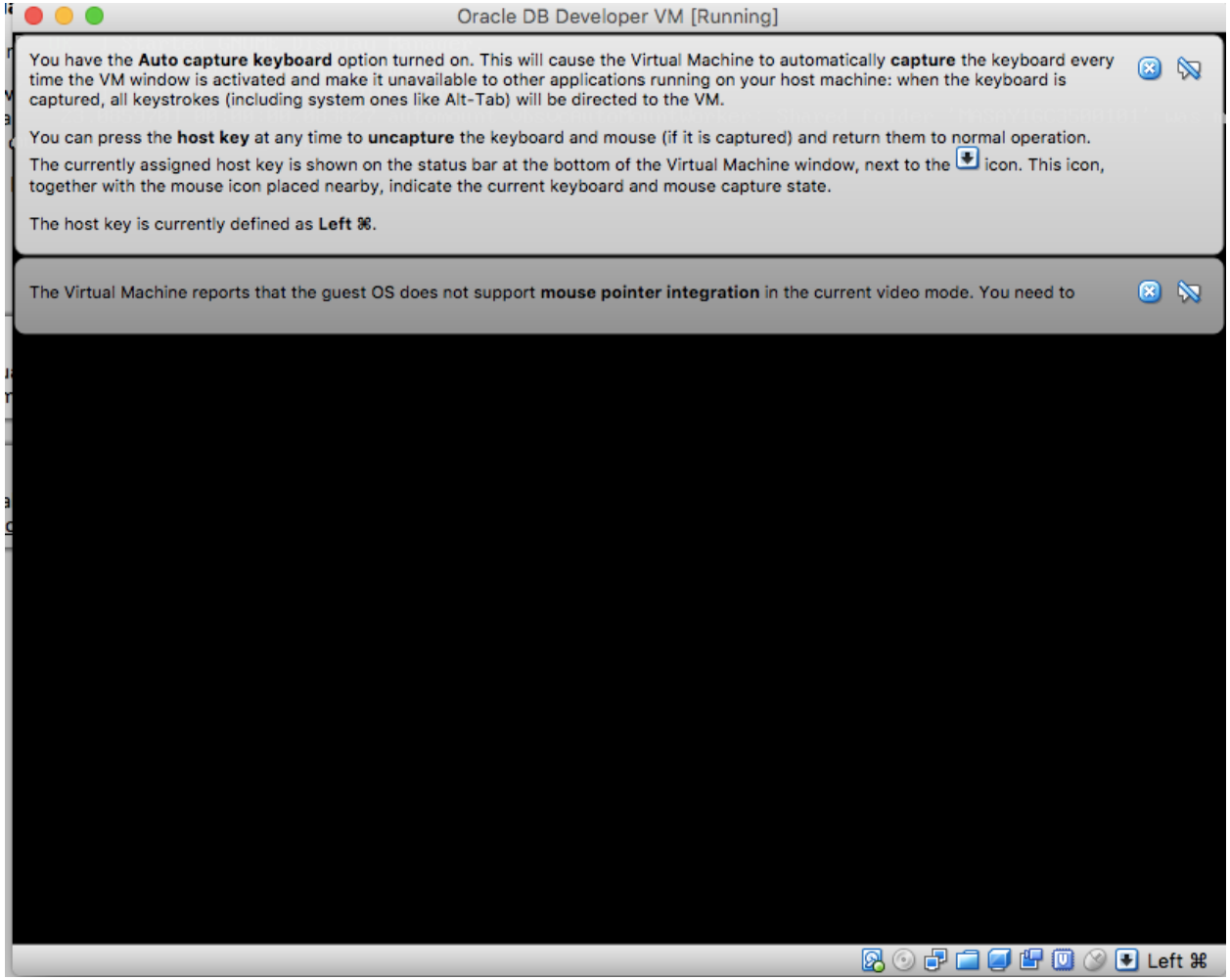
Check “Auto-Mount” and then click OK



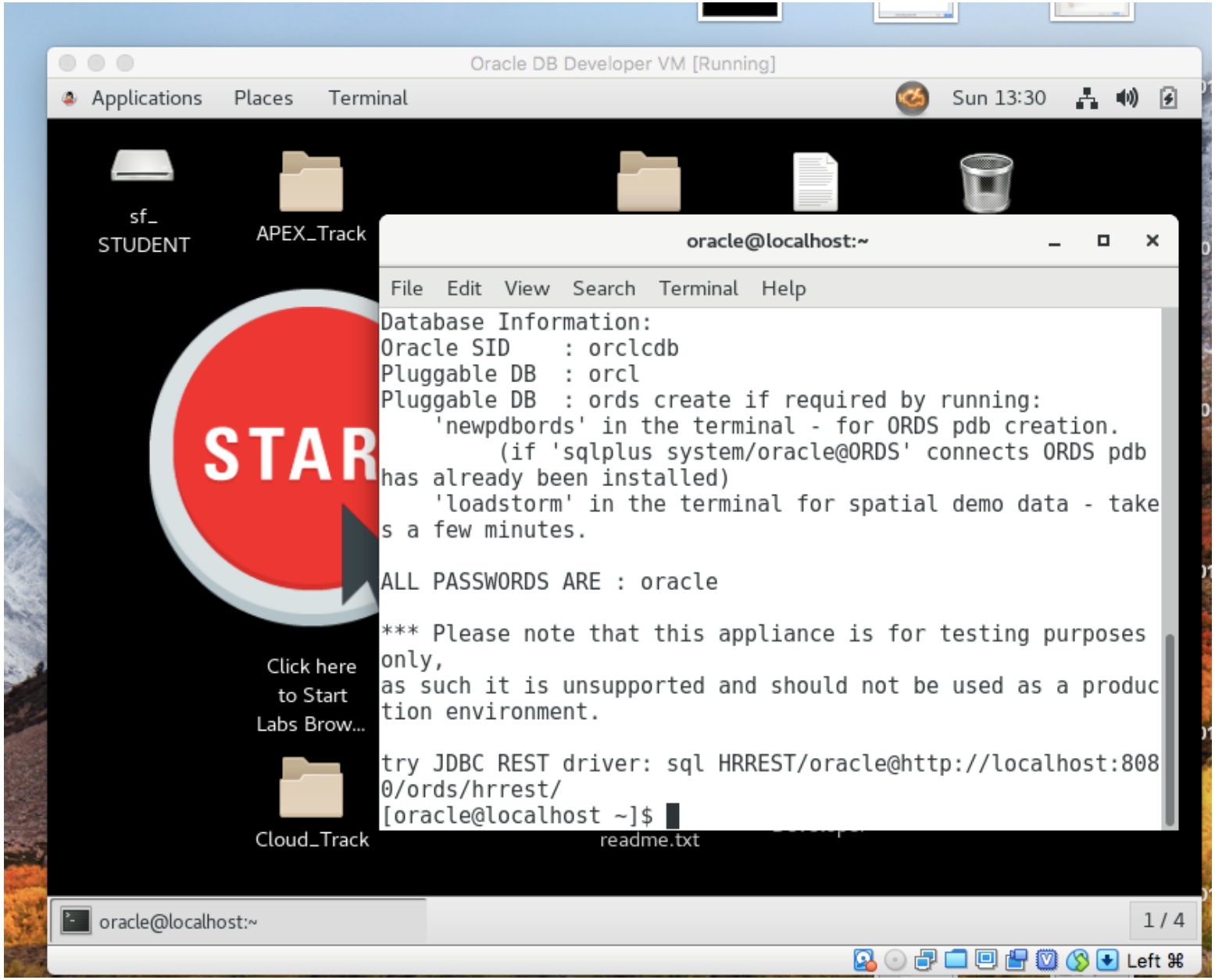
Notice Machine Folders (STUDENT), Auto-Mount (Yes), and Access (Full) appear as above screenshot and then click OK



Highlight “Oracle DB Developer” and then under “Start” option select “Normal Start”



Click on "x" warning for mouse capture information pop-ups and wait for Oracle DB Developer VM start to complete. Once started, it will appear as below screenshot.

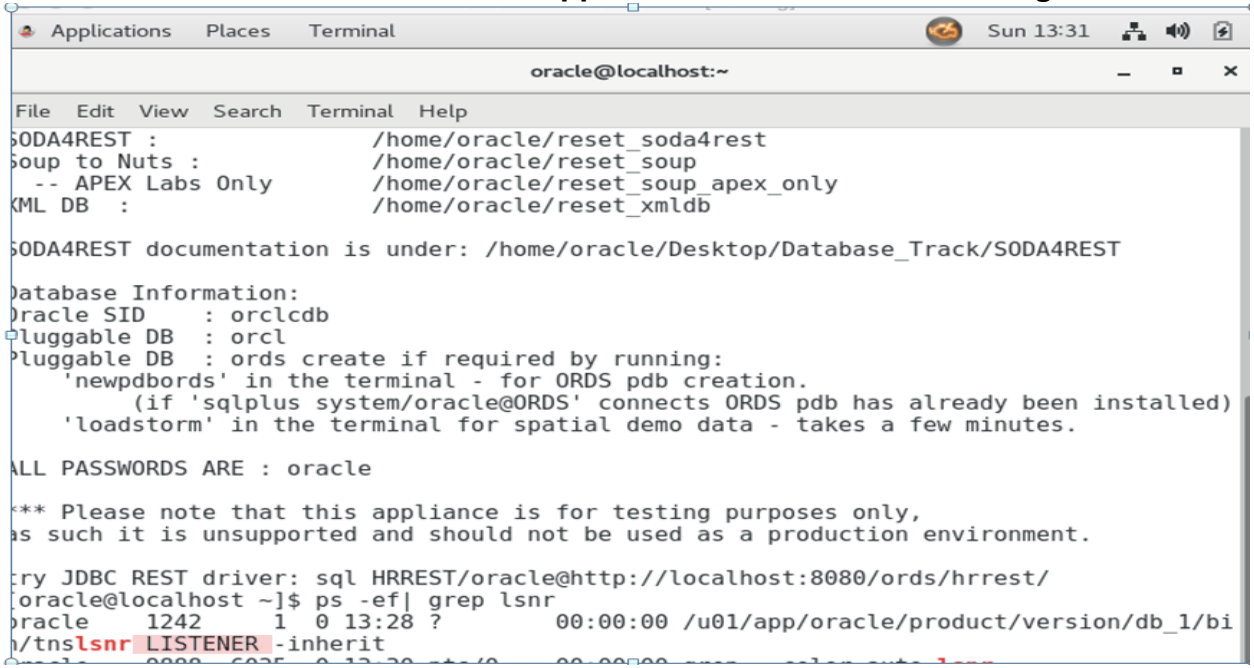

Oracle DB Developer VM [Running]
Applications
Places
Terminal
Sun 13:30
sf_
STUDENT
APEX_Track
oracle@localhost:~
File Edit View Search Terminal Help
Database Information:
Oracle SID : orclcdb
Pluggable DB : orcl
Pluggable DB : ords create if required by running:
'newpdbords' in the terminal - for ORDS pdb creation.
(if 'sqlplus system/oracle@ORDS' connects ORDS pdb has already been installed)
'loadstorm' in the terminal for spatial demo data - takes a few minutes.
ALL PASSWORDS ARE : oracle
*** Please note that this appliance is for testing purposes only,
as such it is unsupported and should not be used as a production environment.
try JDBC REST driver: sql HRREST/oracle@http://localhost:8080/ords/hrrest/
[oracle@localhost ~]$
Click here to Start Labs Brow...
Cloud_Track
readme.txt
oracle@localhost:~
1 / 4
Left ⌘

Notice that "ALL PASSWORDS ARE: oracle". This means that all built in Oracle user accounts (SYS, SYSTEM etc.) for installed database "orclcdb" are having password "oracle". The Oracle_SID is the name of the database and for this install, the name of the database is "orclcdb" as it appears in above screenshot.

The window with label "oracle@localhost" is your Linux terminal. "$" sign is Linux prompt.

Type following commands on Linux terminal and press Enter, notice the result in next line.
(commands to type in are highlighted in RED)
[oracle@localhost ~]$ **ps-ef|grep lsnr**

The result of this command should appear as bottom of the following screenshot with word "LISTENER"



[oracle@localhost ~]$ **ps -ef|grep smon**

Result should appear as below.

```
[oracle@localhost ~]$ ps -ef|grep smon
oracle    4328     1  0 13:29 ?        00:00:00 ora_smon_orclcdb
oracle   11076  6035  0 13:31 pts/0    00:00:00 grep --color=auto smon
[oracle@localhost ~]$
```

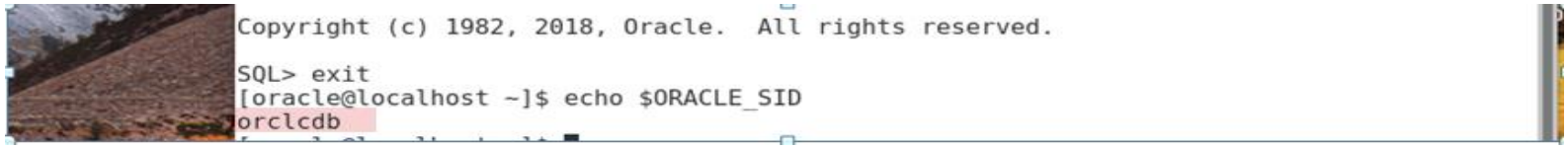
[oracle@localhost ~]$ **tnsping orcl**

Result should appear as below.

```
[oracle@localhost ~]$ tnsping orcl

TNS Ping Utility for Linux: Version 18.0.0.0.0 - Production on 06-JAN-2019 13:32:31

Copyright (c) 1997, 2018, Oracle.  All rights reserved.

Used parameter files:
/u01/app/oracle/product/version/db_1/network/admin/sqlnet.ora


Used TNSNAMES adapter to resolve the alias
Attempting to contact (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = 0.0.0.0)(PORT =
 1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = orcl)))
OK (0 msec)
[oracle@localhost ~]$
```

[oracle@localhost ~]$ **echo $ORACLE_SID**

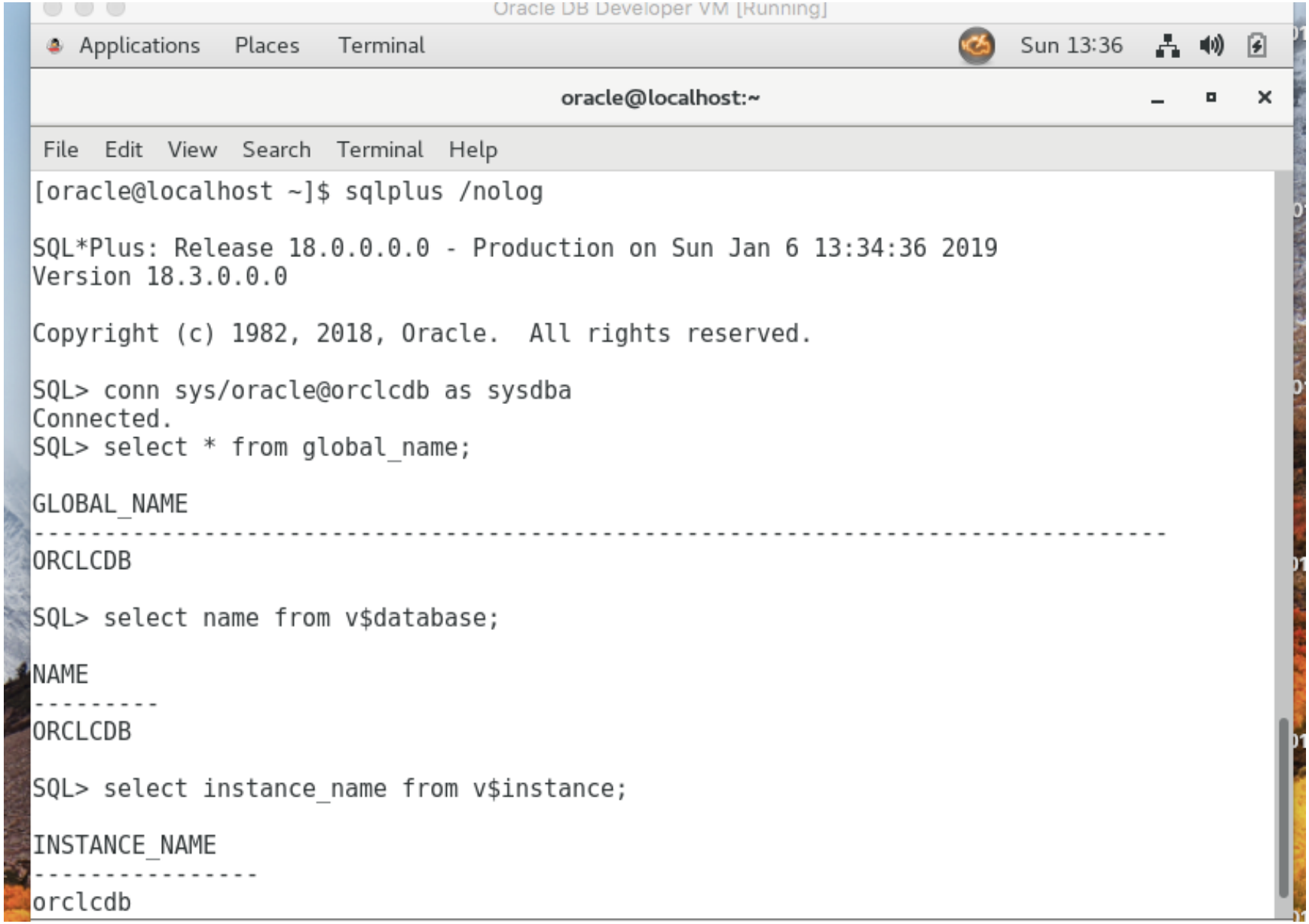
Result of echo $ORACLE_SID should appear as below, and it is the name of the database (name of the database in this install is, orclcdb. You need to know the name of the database in order to connect to the database)



Open a SQLPLUS session as below and then type commands in SQL> prompt, as appears in screenshot.

oracle@localhost ~]$ **sqlplus /nolog**

SQL> connect sys/oracle@orclcdb as sysdba
SQL>select * from global_name;
SQL>select name from v$database;
SQL>select instance_name from v$instance;
SQL> **exit**


Oracle DB Developer VM [Running]
Applications
Places
Terminal
Sun 13:36
oracle@localhost:~
File
Edit
View
Search
Terminal
Help
[oracle@localhost ~]$ sqlplus /nolog
SQL*Plus: Release 18.0.0.0.0 - Production on Sun Jan 6 13:34:36 2019
Version 18.3.0.0.0
Copyright (c) 1982, 2018, Oracle. All rights reserved.
SQL> conn sys/oracle@orclcdb as sysdba
Connected.
SQL> select * from global_name;
GLOBAL_NAME
ORCLCDB
SQL> select name from v$database;
NAME
ORCLCDB
SQL> select instance_name from v$instance;
INSTANCE_NAME
orclcdb

To power off the Virtual box, Click “red” window icon to close it and select “Power off the machine “ and click OK