

CS-GY 6083- Software Installation Guide

Oracle Database on Virtual Box (MAC OS)

ORACLE VIRTUAL BOX and DATABASE VM SOFTWARE DOWNLOAD/INSTALL/SETUP [MAC Computers]

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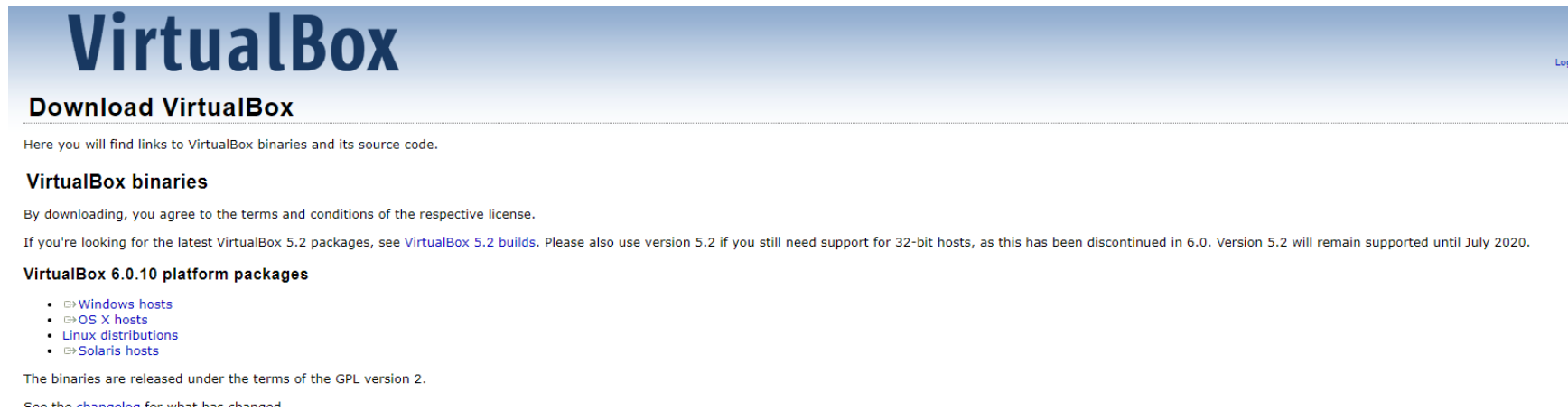
This document describes how to download, install, and configure Oracle Virtual Box and how to download, import, and configure Database application (Oracle database and related tools). When you download, use latest version to download. The screenshots in documents may be of previous version.

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>



The screenshot shows the VirtualBox website's download page. At the top, the 'VirtualBox' logo is displayed in a large, dark blue font. Below the logo, the heading 'Download VirtualBox' is followed by a subtext: 'Here you will find links to VirtualBox binaries and its source code.' The section 'VirtualBox binaries' includes a disclaimer about terms and conditions and a note about the latest 5.2 packages. Under 'VirtualBox 6.0.10 platform packages', there is a list of links for Windows, OS X, Linux, and Solaris hosts. At the bottom, it mentions the GPL version 2 and a link to the changelog.

VirtualBox

Download VirtualBox

Here you will find links to VirtualBox binaries and its source code.

VirtualBox binaries

By downloading, you agree to the terms and conditions of the respective license.

If you're looking for the latest VirtualBox 5.2 packages, see [VirtualBox 5.2 builds](#). Please also use version 5.2 if you still need support for 32-bit hosts, as this has been discontinued in 6.0. Version 5.2 will remain supported until July 2020.

VirtualBox 6.0.10 platform packages

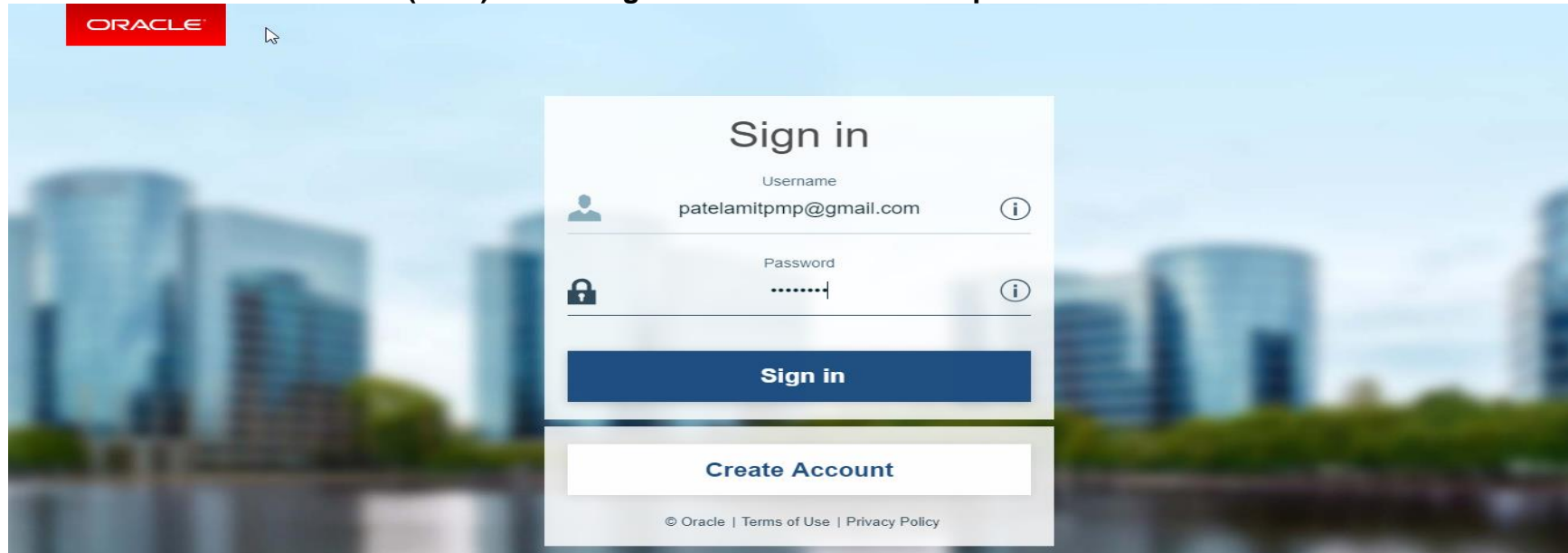
- [Windows hosts](#)
- [OS X hosts](#)
- [Linux distributions](#)
- [Solaris hosts](#)

The binaries are released under the terms of the GPL version 2.

See the [changelog](#) for what has changed.

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.

The image shows a screenshot of an Oracle login interface. In the top left corner, there is a red rectangular button with the word "ORACLE" in white capital letters. To its right, a mouse cursor is visible. The background of the entire page is a blurred image of a city skyline with blue buildings and green trees under a clear sky. Centered on the screen is a white rectangular modal box. At the top of this modal, the text "Sign in" is displayed in a large, dark grey font. Below this, there are two input fields. The first field is labeled "Username" in a small grey font and contains the text "patelamitpmp@gmail.com". To the left of the text is a small grey icon of a person, and to the right is a small grey circle containing an "i". The second field is labeled "Password" in a small grey font and contains seven dots followed by a cursor. To the left of the dots is a small grey icon of a padlock, and to the right is a small grey circle containing an "i". Below these two fields is a solid blue rectangular button with the text "Sign in" in white. Underneath the blue button is a white rectangular button with the text "Create Account" in blue. At the very bottom of the modal, in a small grey font, is the text "© Oracle | Terms of Use | Privacy Policy".

ORACLE

Sign in



Username

|



Password



Sign in

Create Account

© Oracle | [Terms of Use](#) | [Privacy Policy](#)

Registration form fields:

- Email Address *
- Password *
- Retype password *
- Country * (USA)
- Name * (First or Given Name, Last Name)
- Job Title *
- Work Phone * (+1)
- Company Name *
- Address *
- City *
- State/Province * (-Select-)
- ZIP/Postal Code *

☐ Yes, send me marketing communications on Oracle Products, Services and Events.

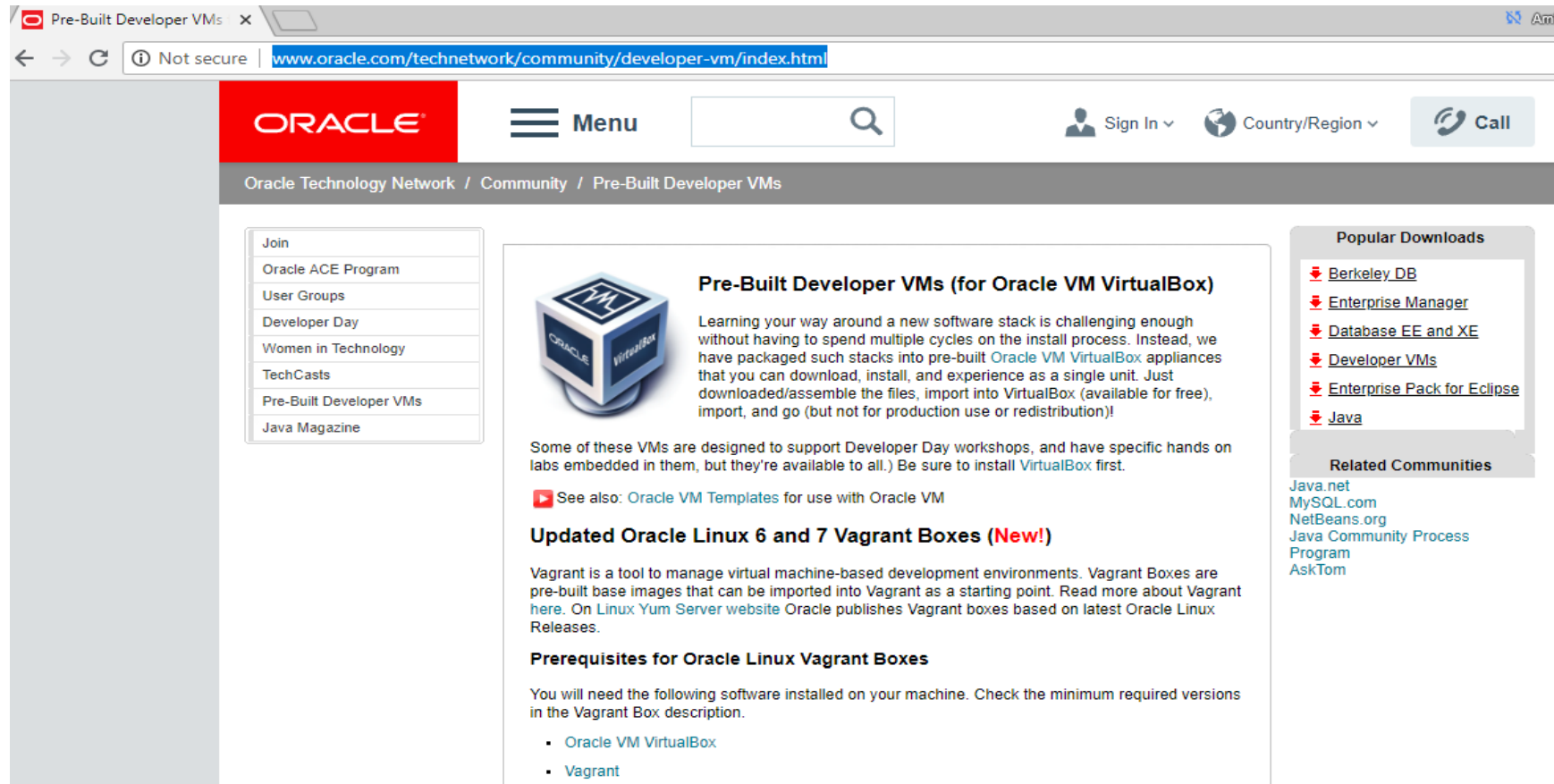
After the download, the downloaded file will appear as follow.

Developer Day 2010-10-10_09 .ova	7.77 GB	Open Virtualization Format Archive
VirtualBox-6.0.0-127566-OSX.dmg	158.8 MB	Disk Image

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>



The screenshot shows a web browser window with the URL www.oracle.com/technetwork/community/developer-vm/index.html. The page features the Oracle logo, a navigation menu, and a search bar. The main content area is titled "Pre-Built Developer VMs (for Oracle VM VirtualBox)" and includes a video player showing a VirtualBox interface. Below the video, there is text explaining the purpose of these VMs and a link to "See also: Oracle VM Templates for use with Oracle VM". The page also lists "Updated Oracle Linux 6 and 7 Vagrant Boxes (New!)" and "Prerequisites for Oracle Linux Vagrant Boxes". On the right side, there are sections for "Popular Downloads" and "Related Communities".

Join

- Oracle ACE Program
- User Groups
- Developer Day
- Women in Technology
- TechCasts
- Pre-Built Developer VMs
- Java Magazine

Pre-Built Developer VMs (for Oracle VM VirtualBox)

Learning your way around a new software stack is challenging enough without having to spend multiple cycles on the install process. Instead, we have packaged such stacks into pre-built Oracle VM VirtualBox appliances that you can download, install, and experience as a single unit. Just downloaded/assemble the files, import into VirtualBox (available for free), import, and go (but not for production use or redistribution)!

Some of these VMs are designed to support Developer Day workshops, and have specific hands on labs embedded in them, but they're available to all.) Be sure to install VirtualBox first.

▶ See also: [Oracle VM Templates](#) for use with Oracle VM

Updated Oracle Linux 6 and 7 Vagrant Boxes (New!)

Vagrant is a tool to manage virtual machine-based development environments. Vagrant Boxes are pre-built base images that can be imported into Vagrant as a starting point. Read more about Vagrant [here](#). On [Linux Yum Server website](#) Oracle publishes Vagrant boxes based on latest Oracle Linux Releases.

Prerequisites for Oracle Linux Vagrant Boxes

You will need the following software installed on your machine. Check the minimum required versions in the Vagrant Box description.

- Oracle VM VirtualBox
- Vagrant

Popular Downloads

- [Berkeley DB](#)
- [Enterprise Manager](#)
- [Database EE and XE](#)
- [Developer VMs](#)
- [Enterprise Pack for Eclipse](#)
- [Java](#)

Related Communities

- [Java.net](#)
- [MySQL.com](#)
- [NetBeans.org](#)
- [Java Community Process Program](#)
- [AskTom](#)

Further Development VMs based on Vagrant/VirtualBox

On GitHub Oracle created an official software Vagrant Boxes Repository official software Vagrant Boxes Repository, dedicated to Oracle Products running on top of Oracle Linux. Between them you can find ready-to-run VMs with Docker, Container-Registry, Kubernetes, Oracle Database, LAMP (Linux, Apache, MySQL and PHP) and Preview Releases for Oracle Linux.

Further Virtual Machines, available on this page:

- | | |
|--|---|
| <ul style="list-style-type: none">▪ Oracle OpenStack for Oracle Linux 2.0.2 Hands-on-Lab▪ Oracle Enterprise Data Quality 12.1.3 VM▪ Oracle Database 12c (12.1.0.2) Upgrade and Migration Hands-on Lab▪ Oracle WebCenter Portal VM▪ Oracle Data Integrator 12c VM▪ Oracle Big Data Lite VM▪ Network Applications VM▪ Database App Development VM | <ul style="list-style-type: none">▪ Oracle Linux 6 Admin VM▪ Solaris 11 Admin VM▪ Solaris 10 Admin VM▪ OBIEE Sample Application v511▪ SOA Suite 12.1.3.0.1 VM▪ Enterprise PHP Development VM |
|--|---|

Click on Database App Development VM

Network Applications VM VM	<ul style="list-style-type: none"> ▪ Oracle Linux ▪ Oracle Java JDK ▪ Oracle Database XE ▪ Oracle Enterprise Pack for Eclipse 	Downloads and Instructions
Database App Development VM	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ 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)

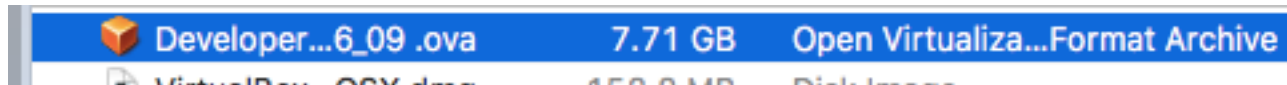
Step 3. Import your VM: **File > Import Appliance** to launch Appliance Import Wizard. Click **Choose...** to browse to the directory you re-assembled all the files in and select the **OTN_Developer_Day_VM.ova** then click **Next>** to begin importing the virtual machine. It will prompt you to agree 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.

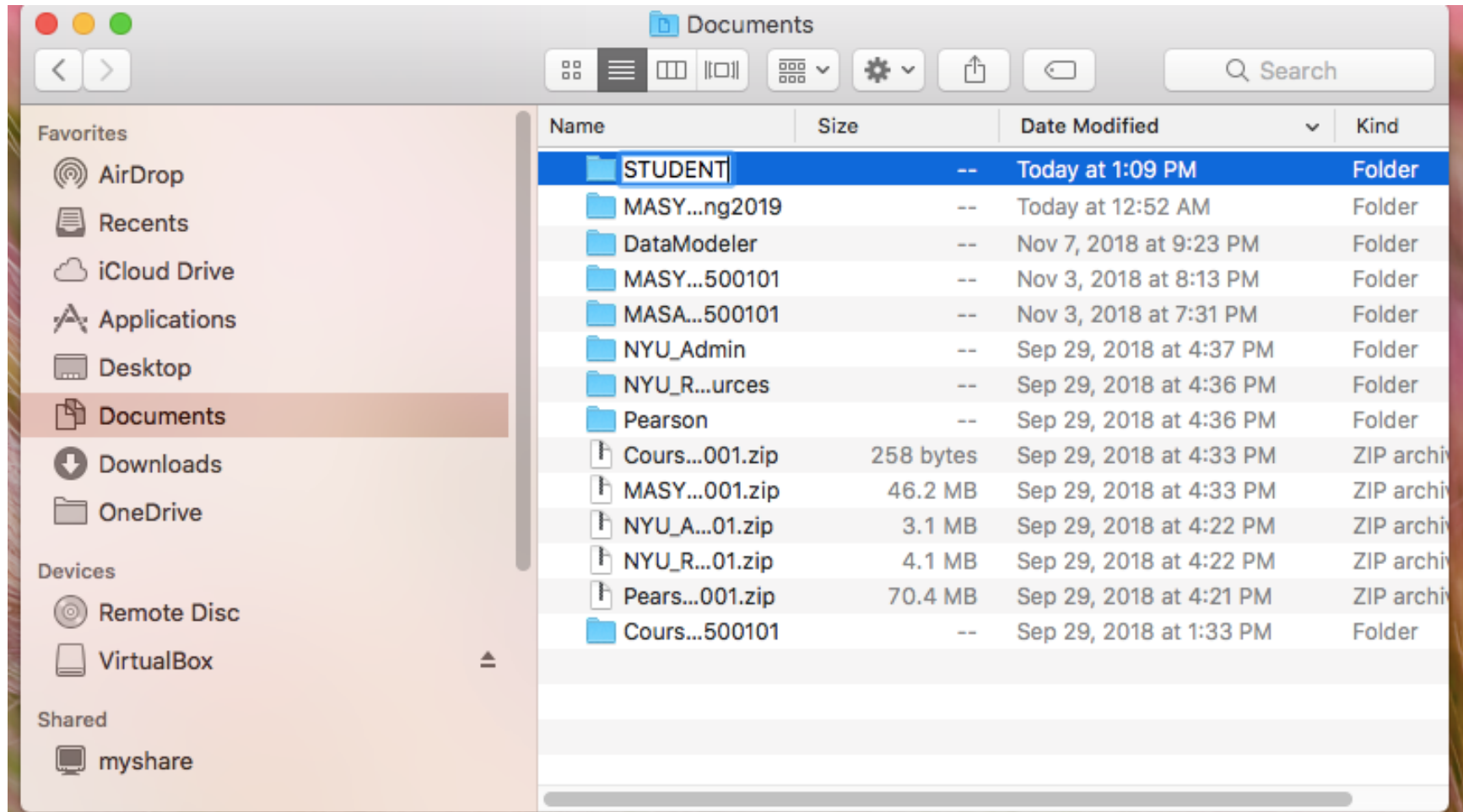
If you have any questions about this process, post a message to our [Virtualization Discussion Forum](#) (use hashtag "developerday"). Otherwise, you are now ready to complete the Hands-on Database Application Development HOLs at the workshop or at your desk. See you there!

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

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



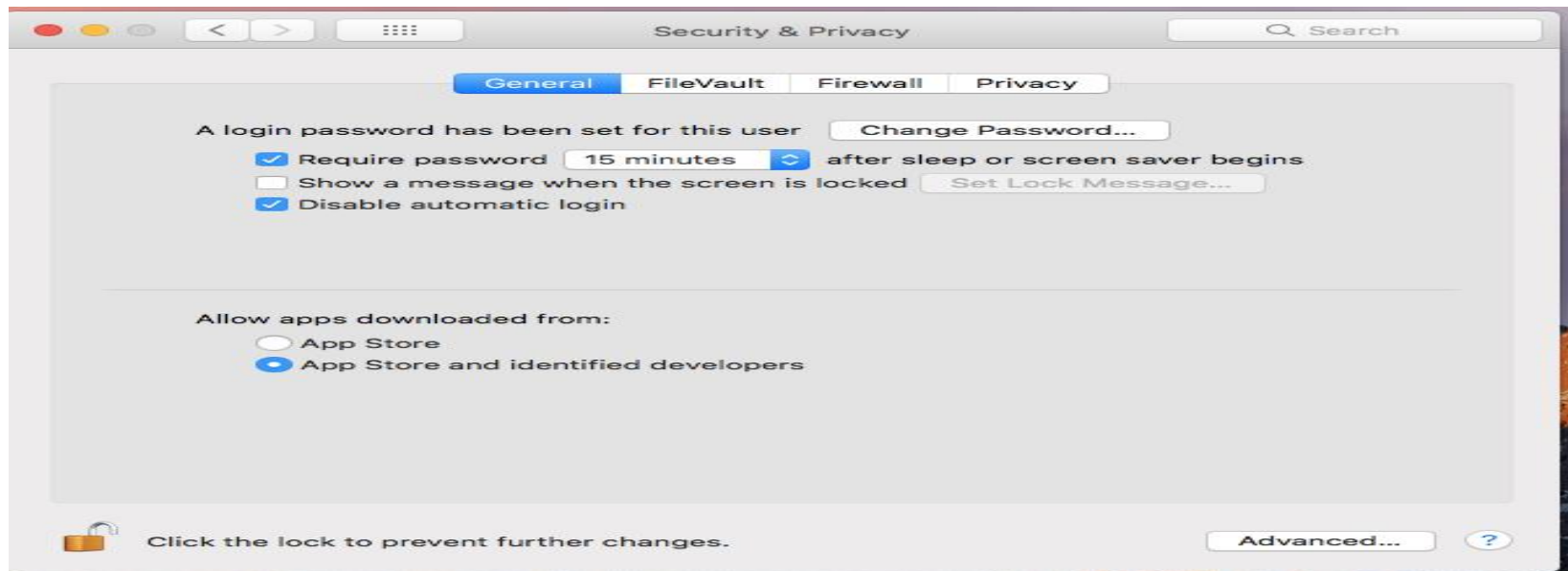
Create a folder “STUDENT” under “Documents” folder of your laptop/desktop.



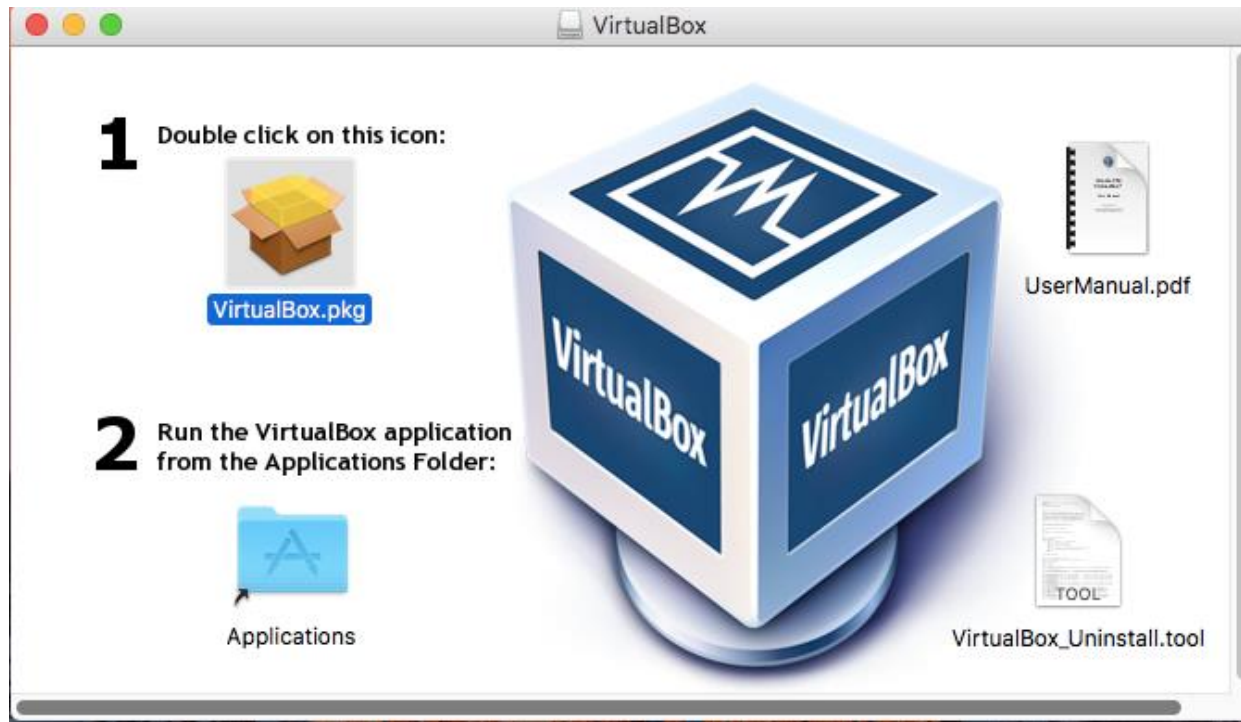
C) Install and set up Oracle Virtual Box and Oracle DB applications.

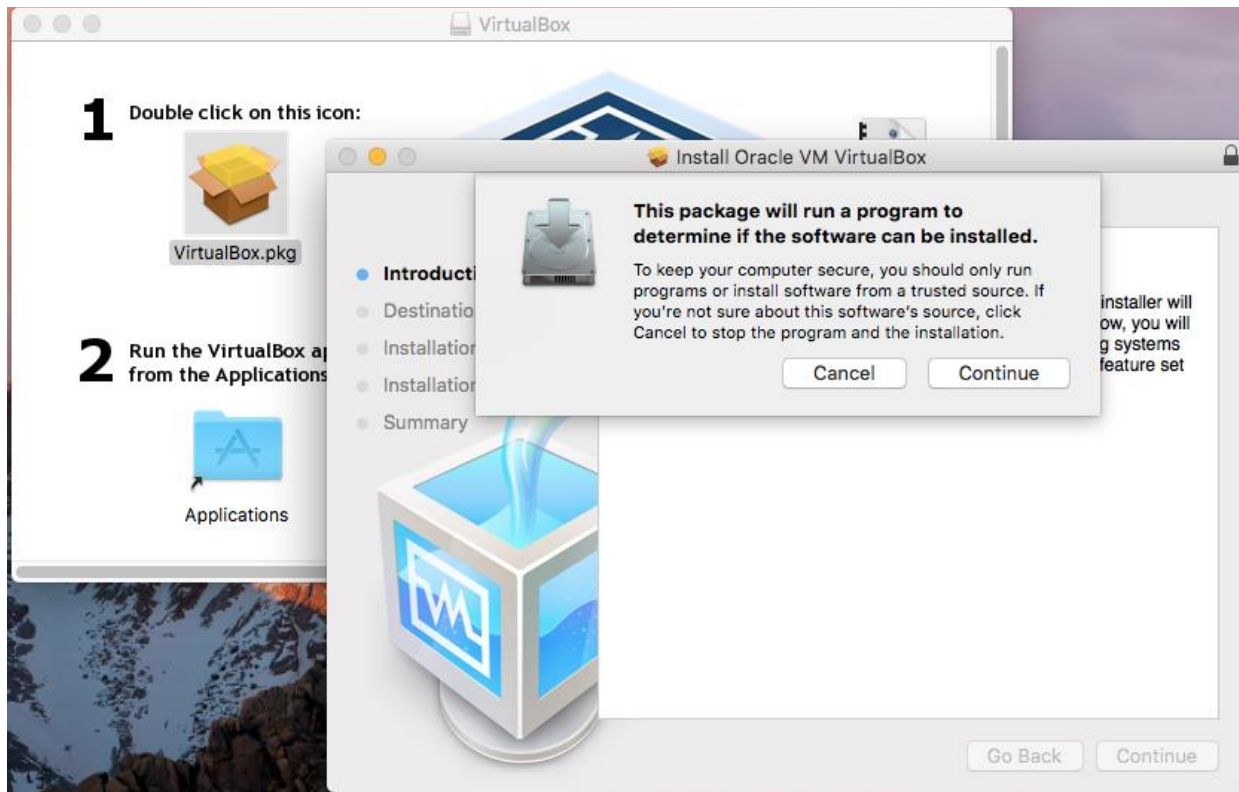
On your MAC laptop/desktop go to,
System Preference → Security & Privacy → General

Please make sure that under “Allow app download from” option “App Store and identified developer” has been selected.

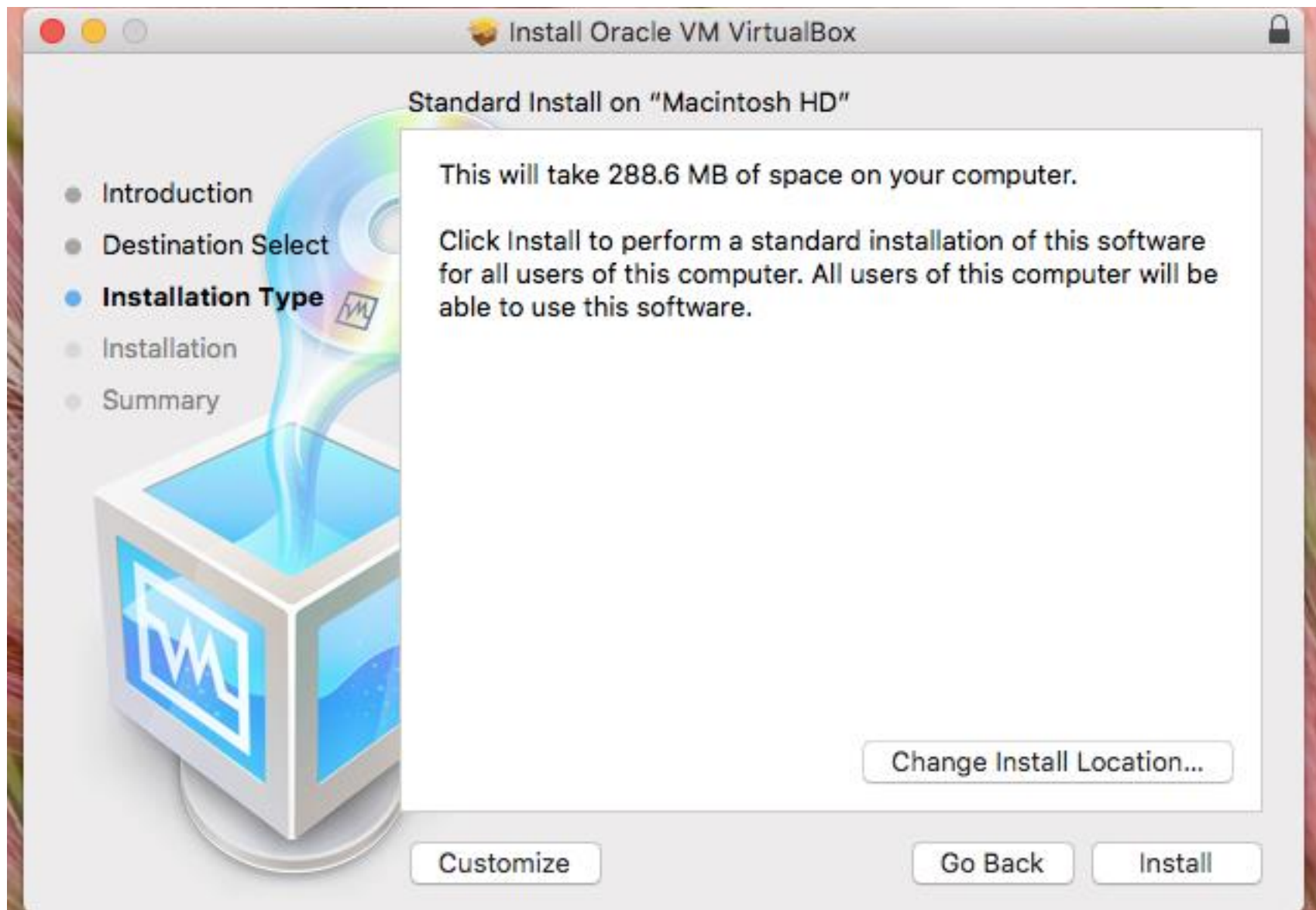


Double click on downloaded “VirtualBox-6.0.0-127566-OSX.dmg” and then double click on VirtualBox.pkg under label 1.

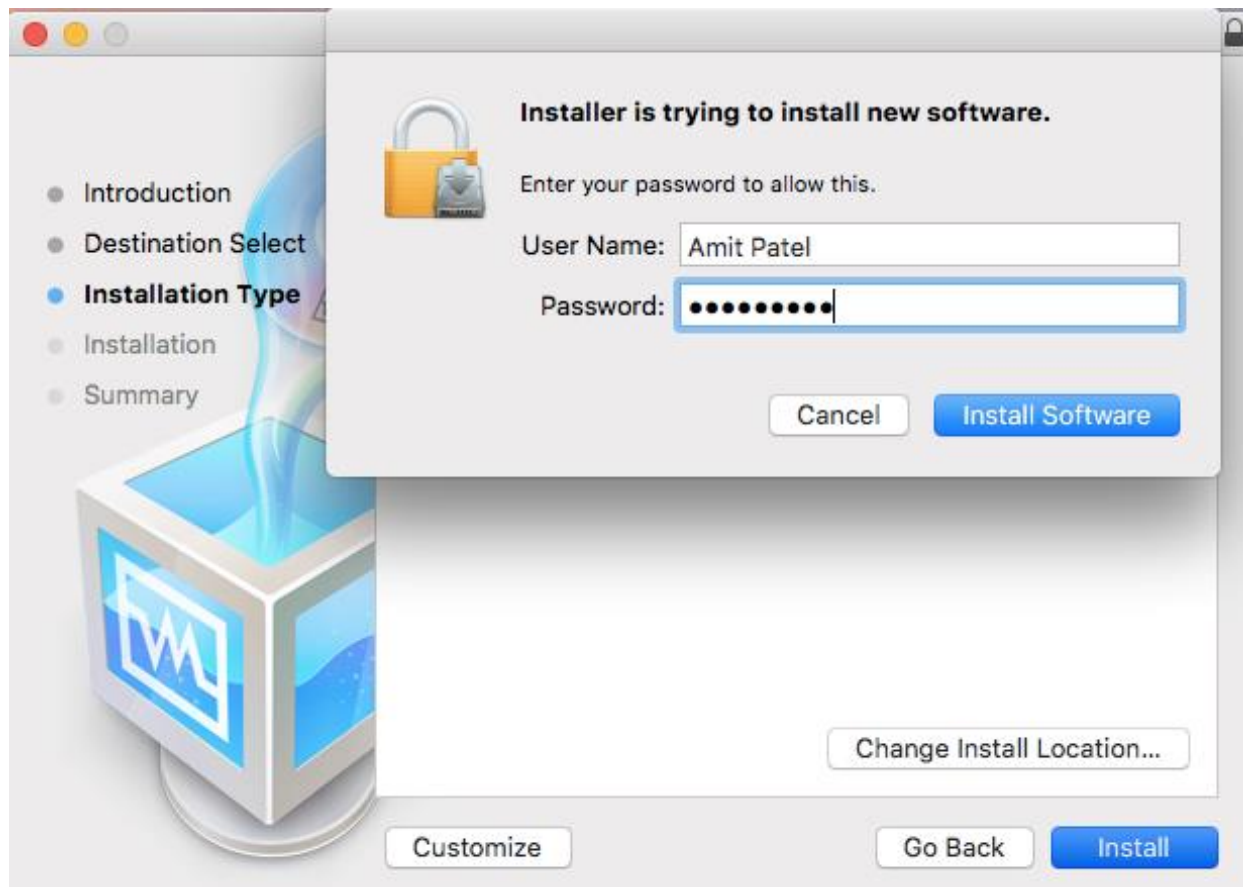




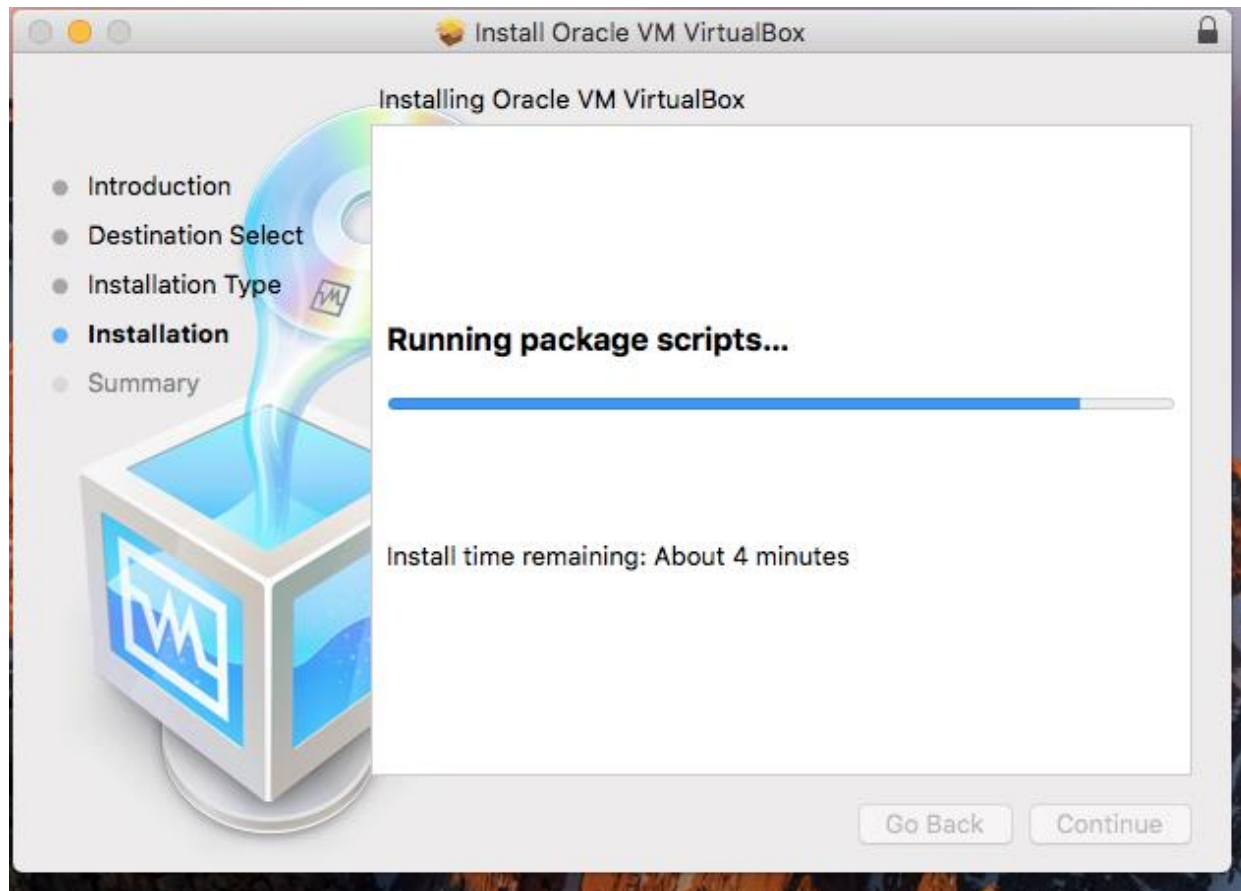
Click on Continue

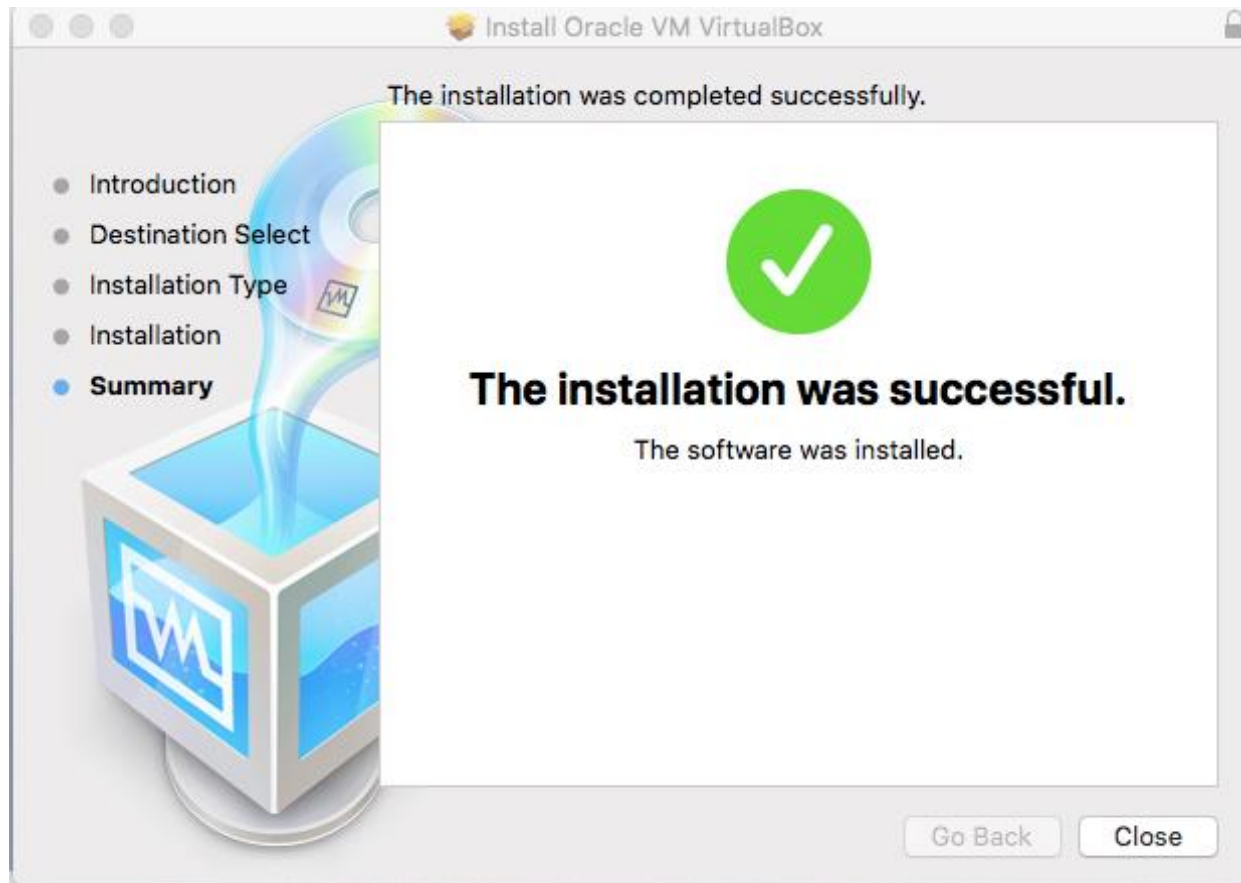


Click on Install



Enter your MAC laptop/desktop login credentials

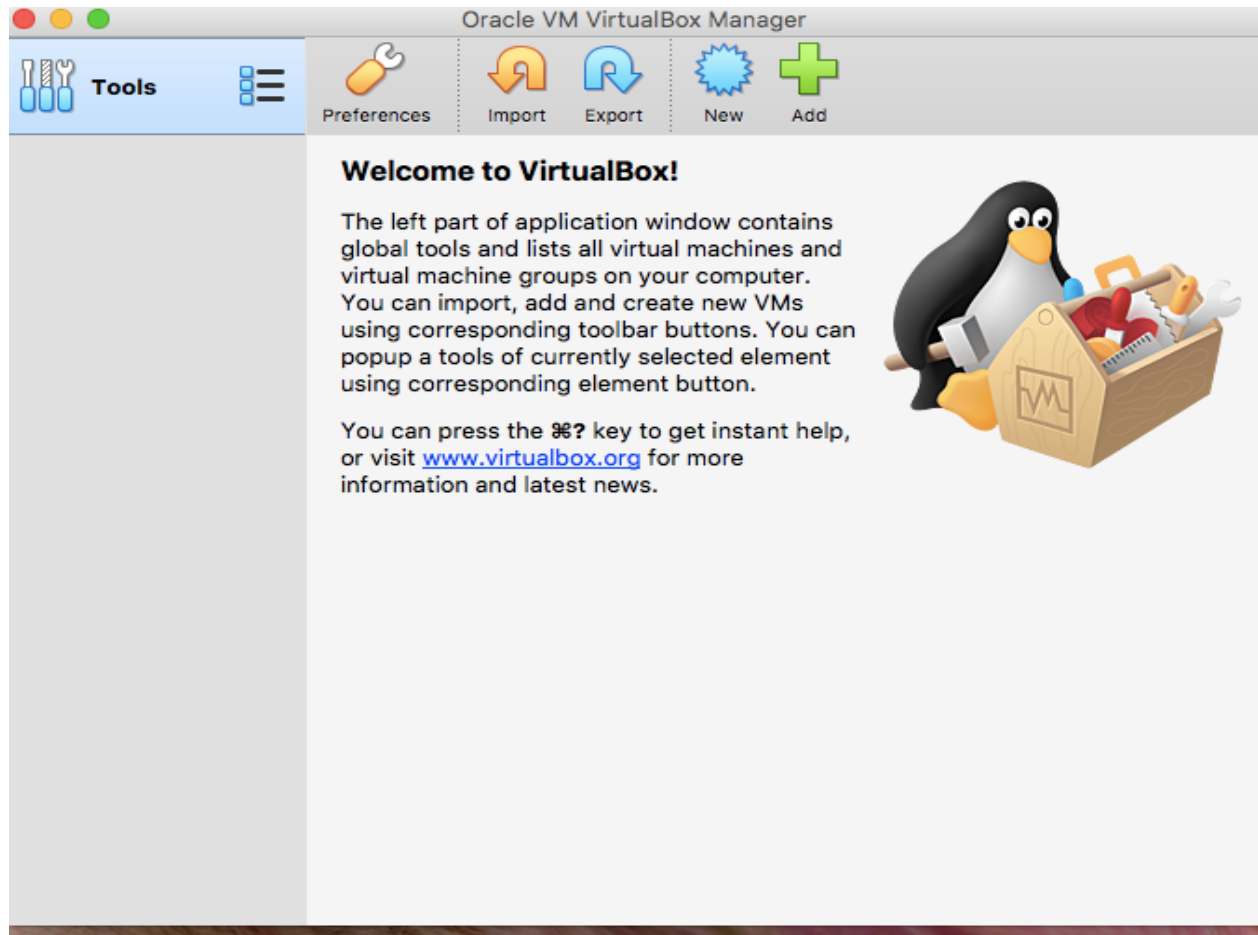




Click on Close

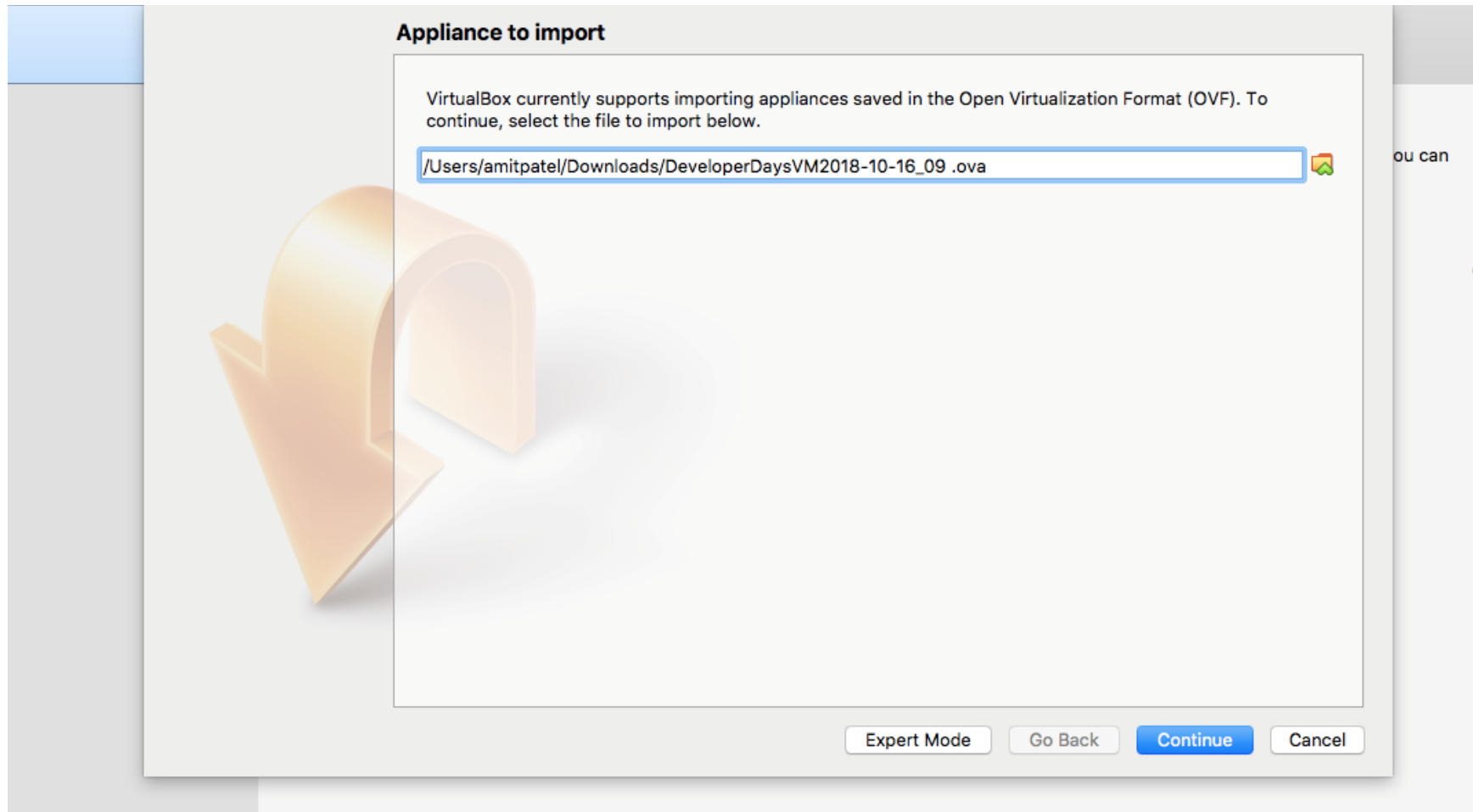
On you MAC desktop/laptop, click on Launchpad and double click on VirutalBox icon.





Click on "Import"

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









Click on “Continue”

Appliance settings

These are the virtual machines contained in the appliance and the suggested settings of the imported VirtualBox machines. You can change many of the properties shown by double-clicking on the items and disable others using the check boxes below.

Virtual System 1

	Name	Oracle DB Developer VM
	Product	Oracle RDBMS 18.3, Application Express 18.2, REST Data Services ...
	Product-URL	http://otn.oracle.com
	Vendor	Oracle
	Vendor-URL	http://www.oracle.com
	Version	September_2018

You can modify the base folder which will host all the virtual machines. Home folders can also be individually (per virtual machine) modified.

 /Users/amitpatel/VirtualBox VMs

MAC Address Policy:

Additional Options: ☒ Import hard drives as VDI

Appliance is not signed

Restore Defaults

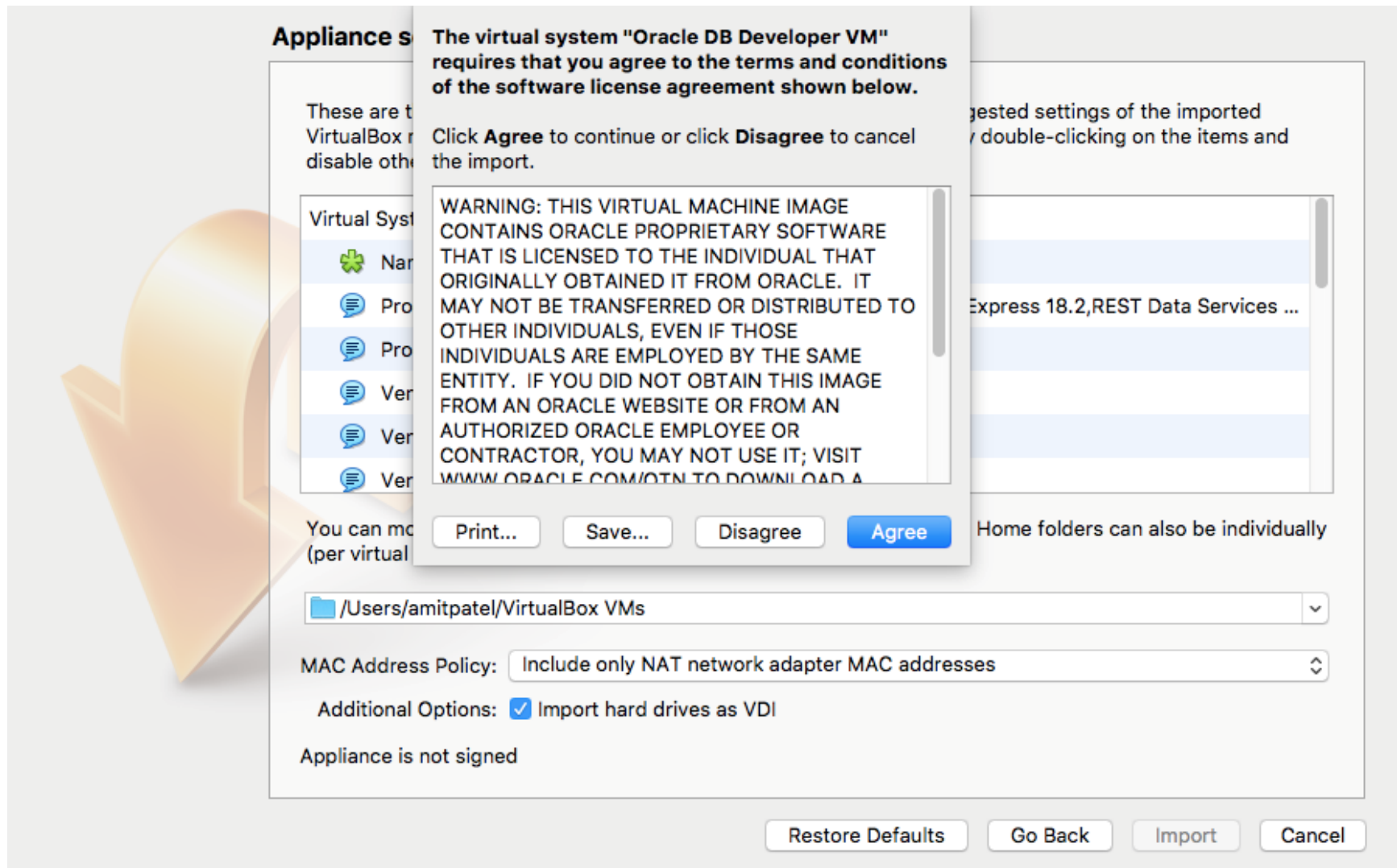
Go Back

Import

Cancel

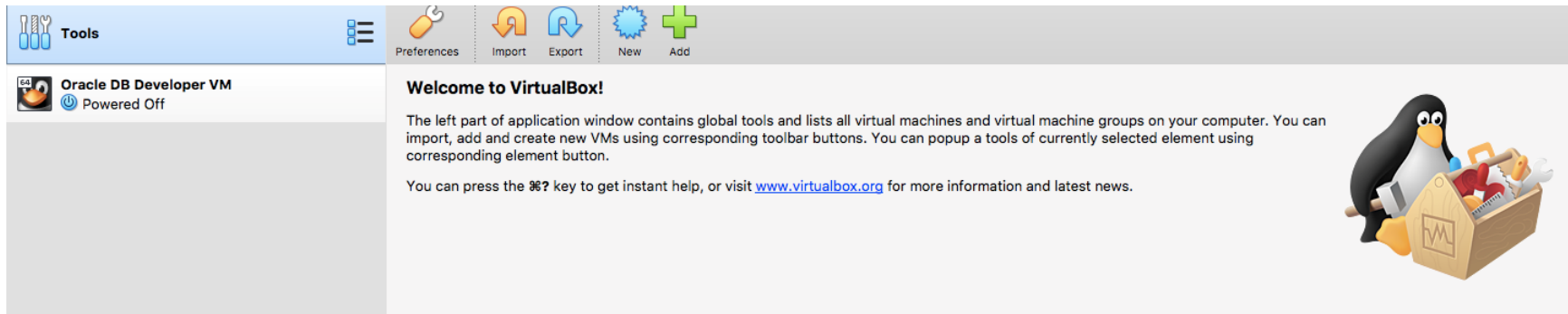
ou car

Click on "Import"

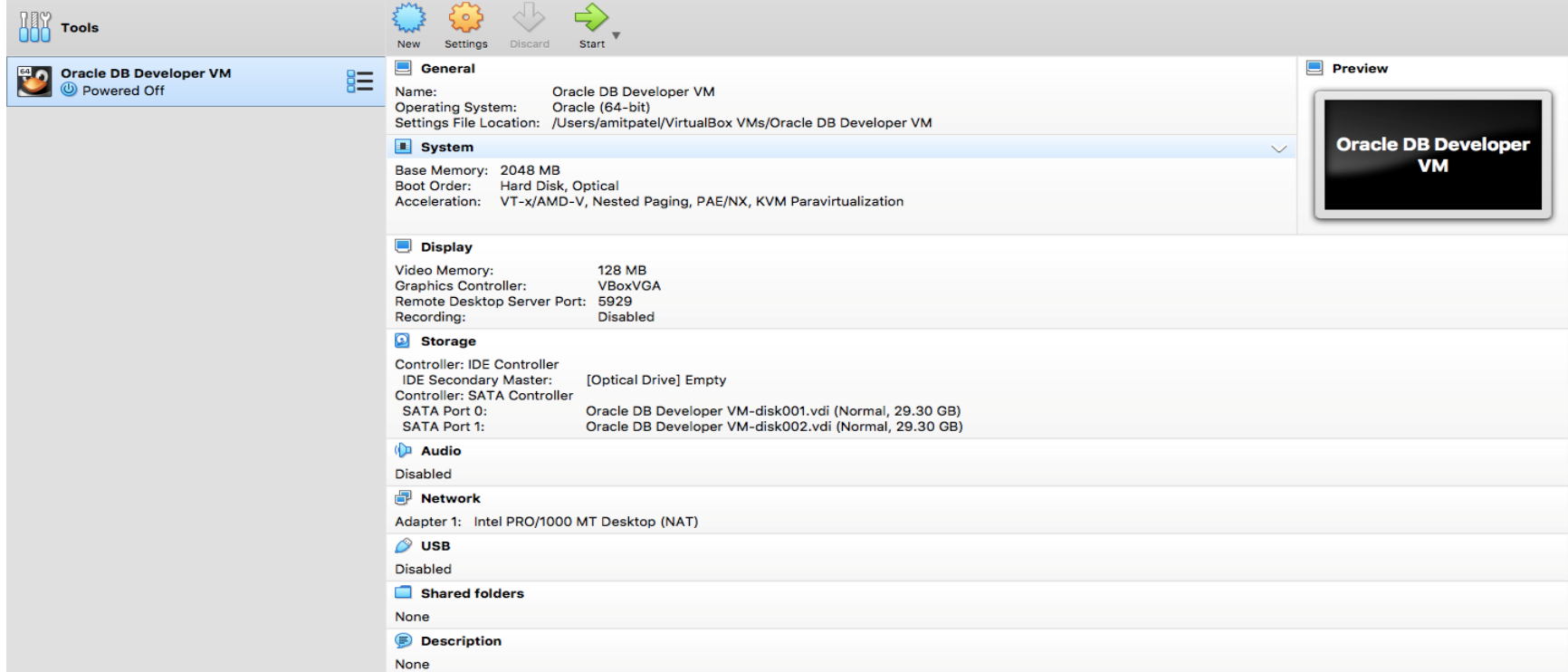


Accept the agreement by clicking “Agree”

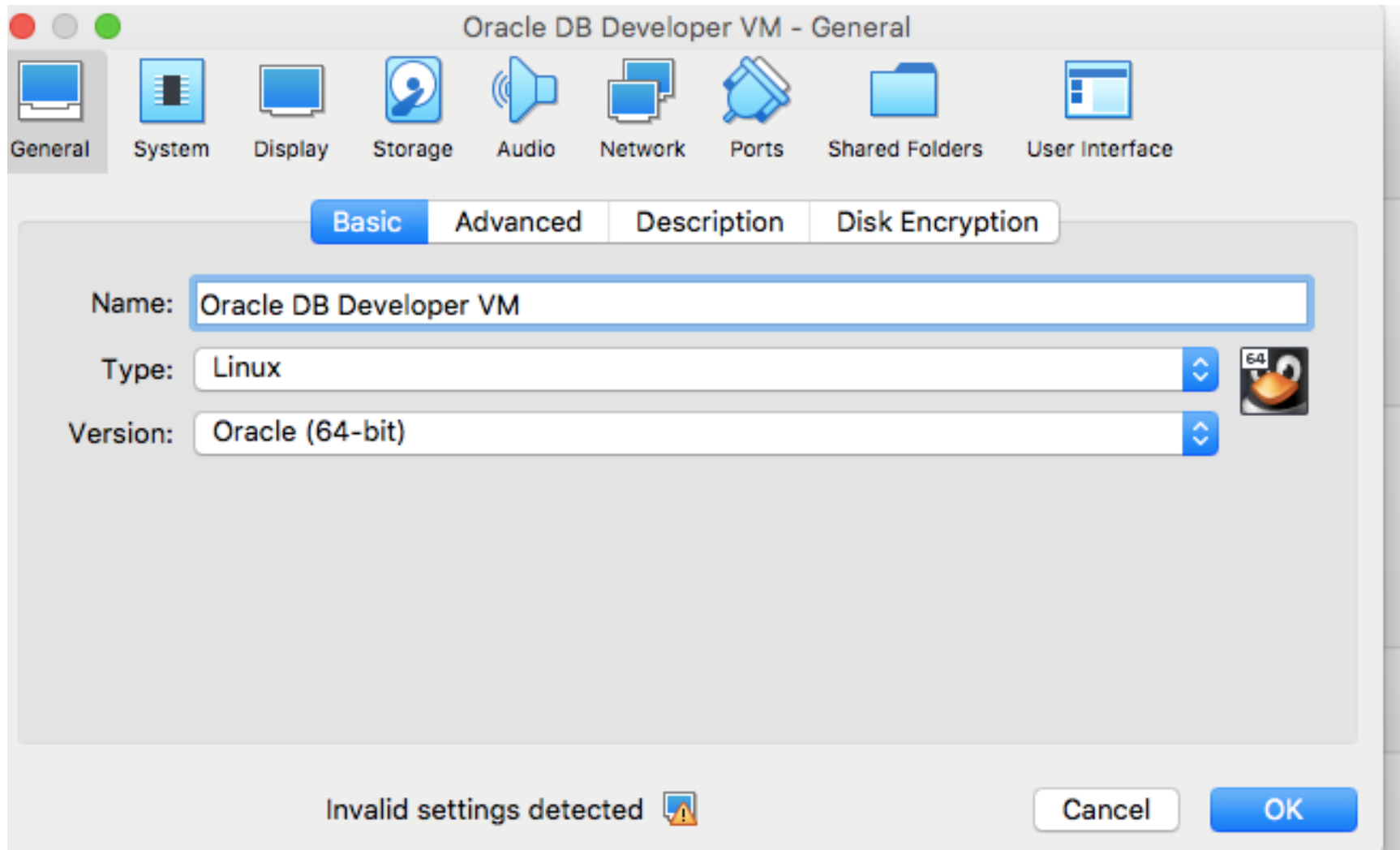
After the import, Virtual box appear like below screenshot with “Oracle DB Developer VM” in Powered Off state.



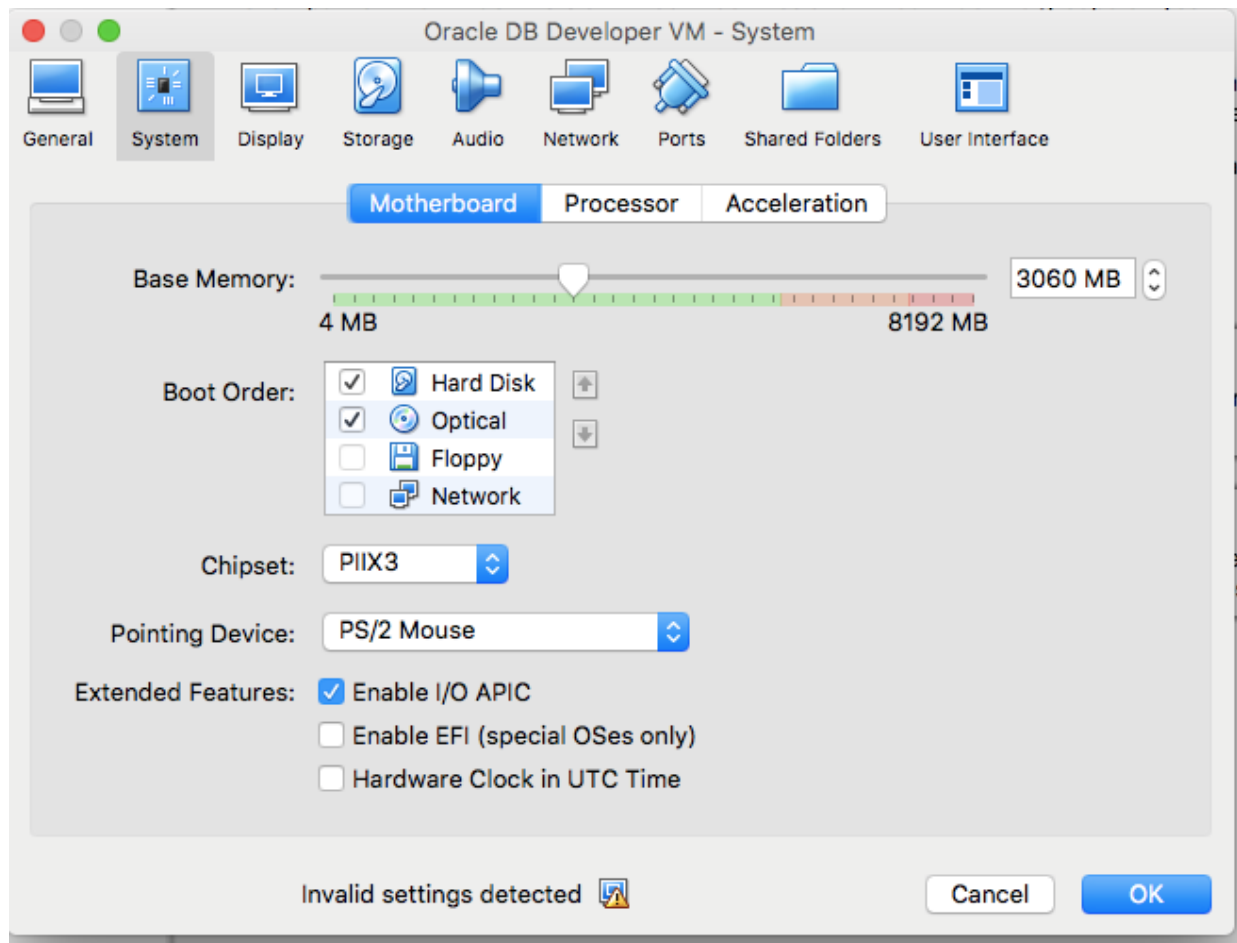
Select “Oracle DB Developer VM” and right click on it.



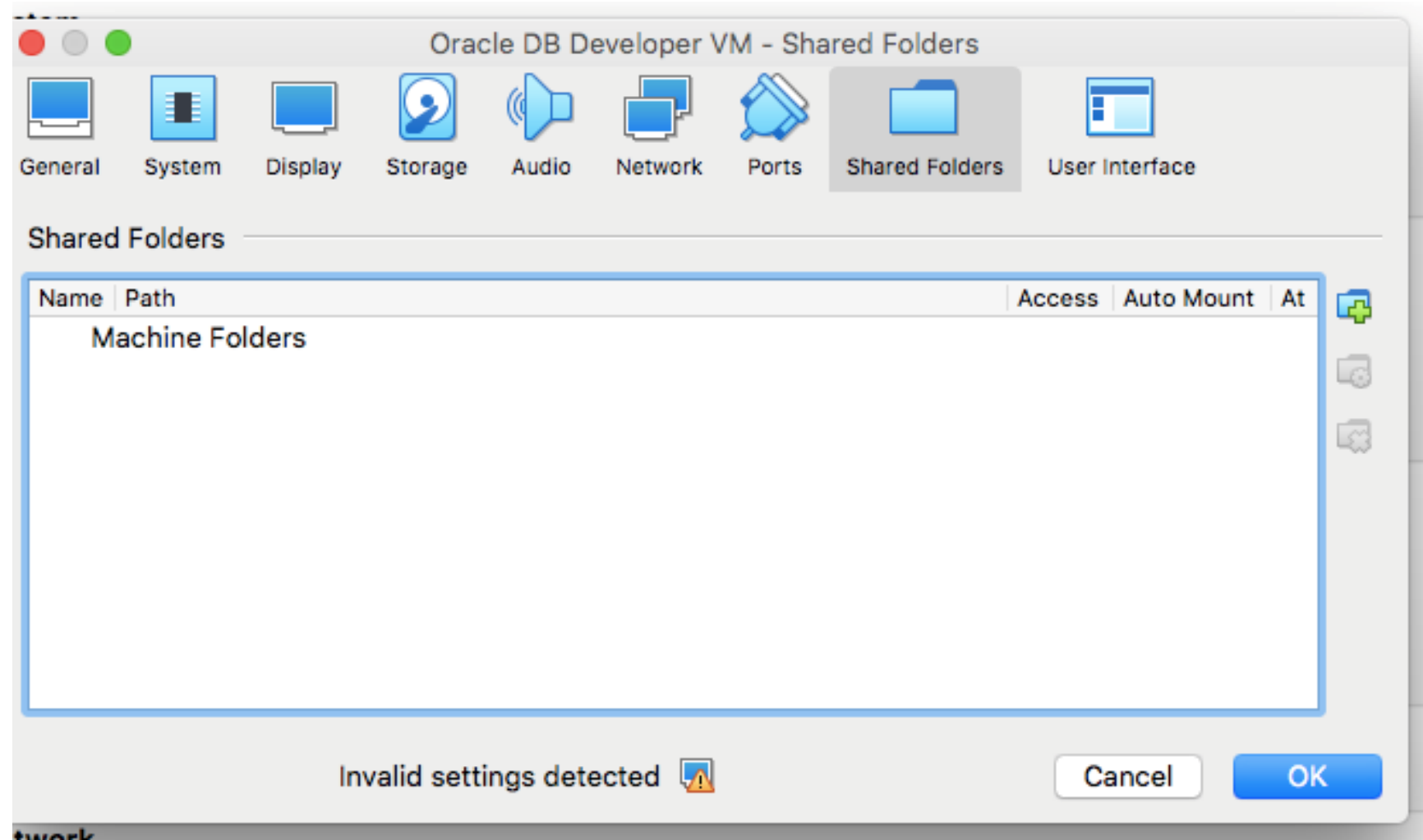
Click on “Basic” and notice Name, Type, and Version values as appear as below screenshot.



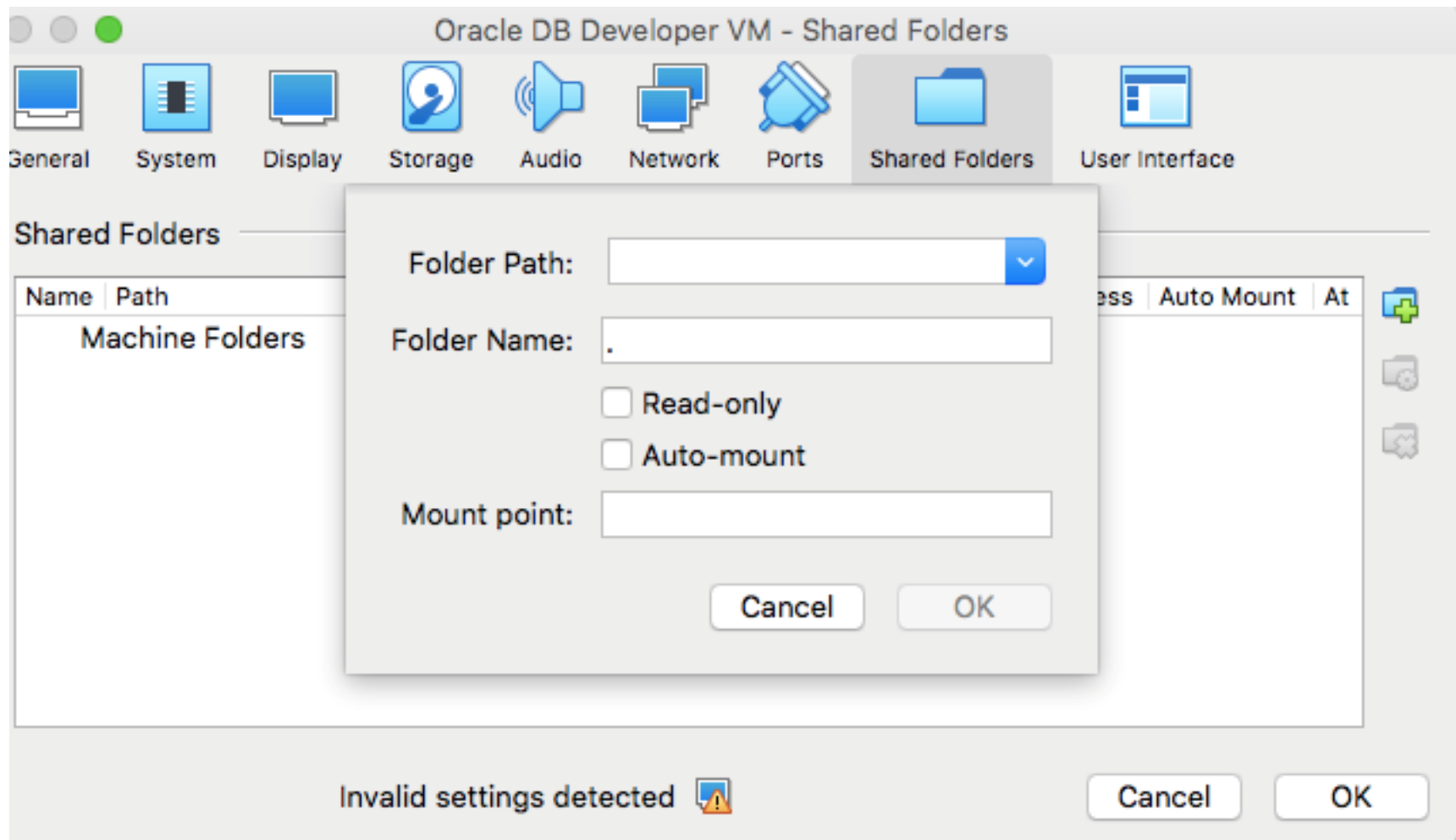
Click on “System” tab and set the base memory bar to about 40% of total memory of your laptop/desktop (In this example, total memory is 8192MB and Base Memory bar is set to 3060MB) and click OK



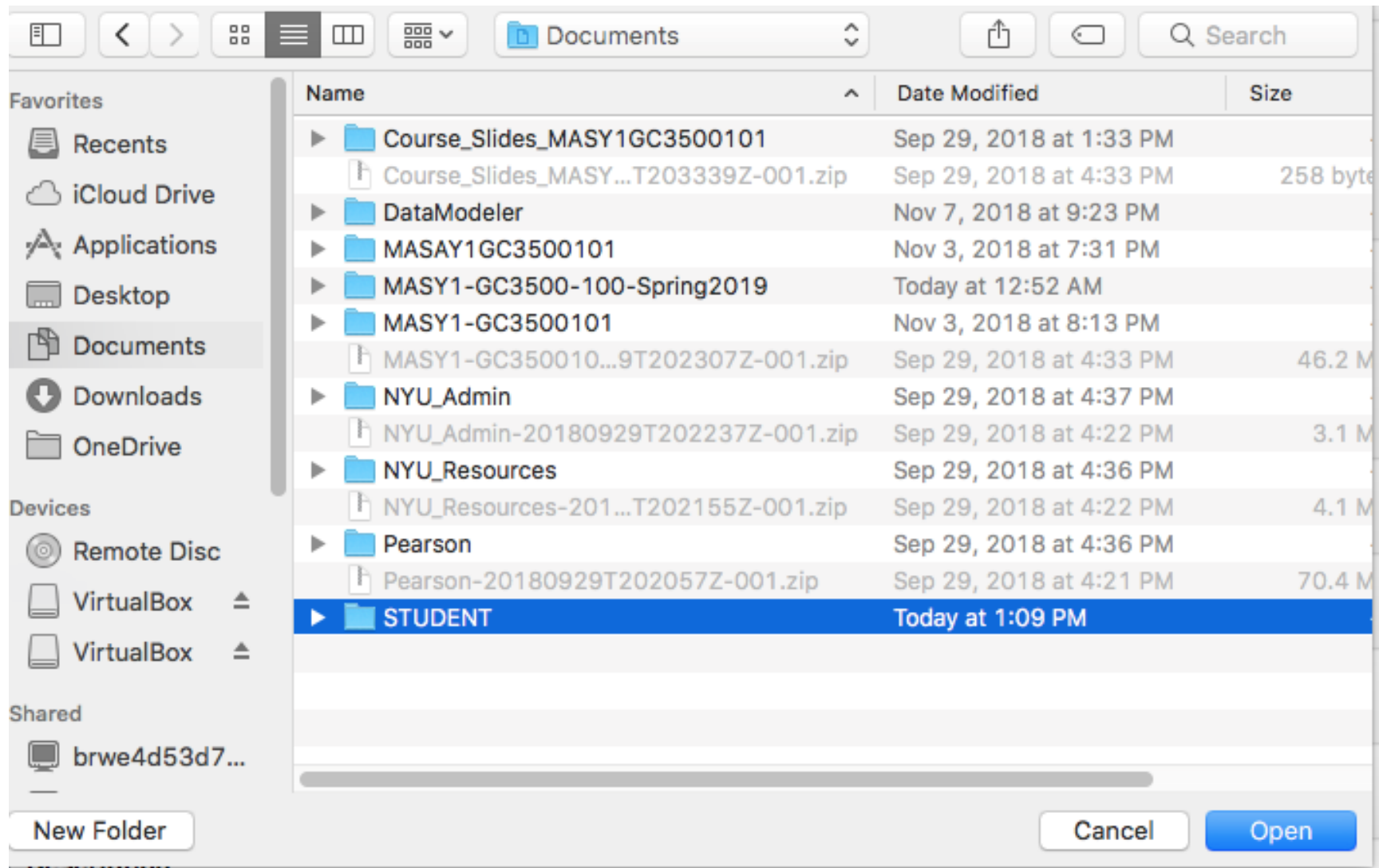
Click on “Shared Folders”



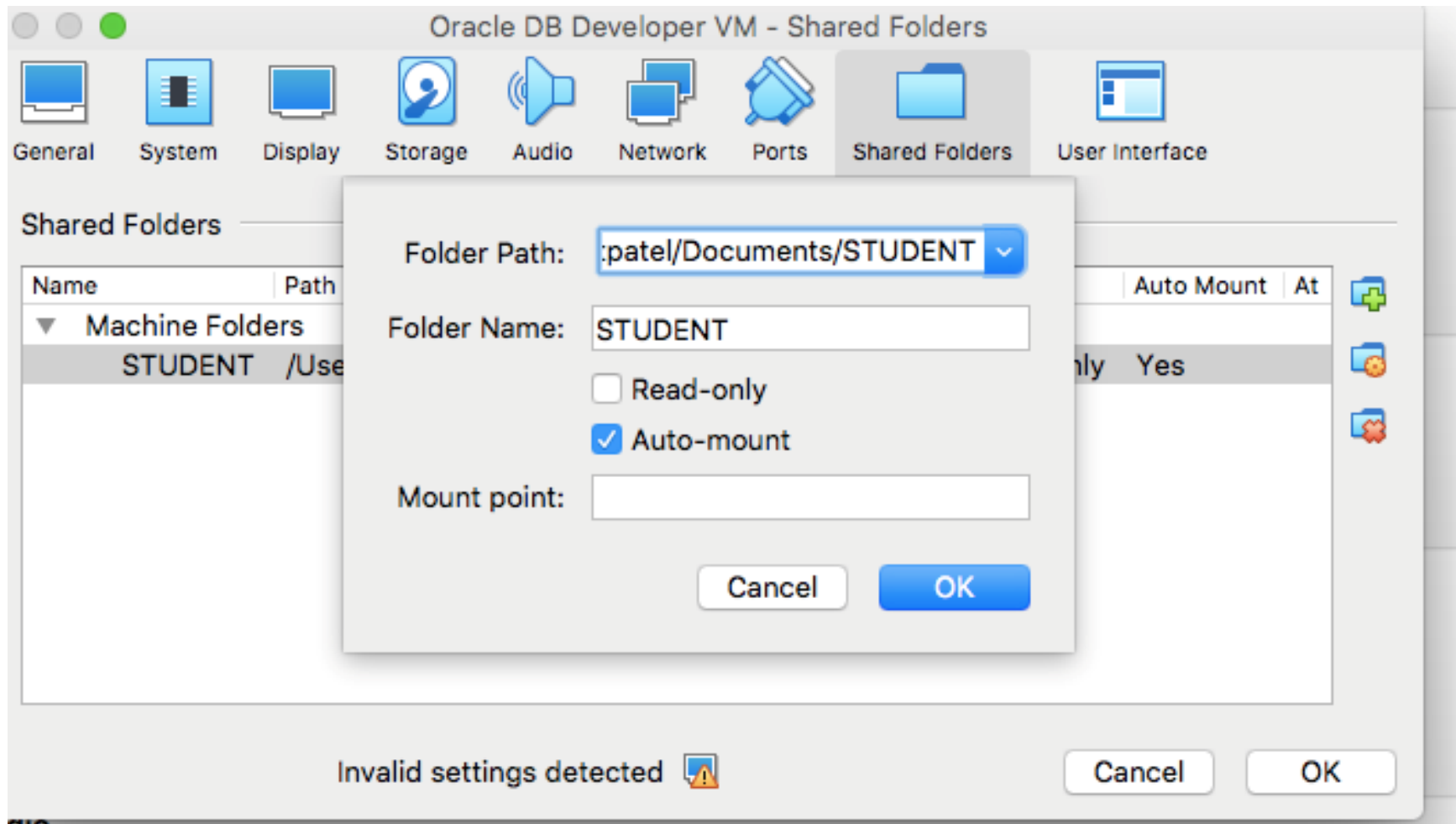
Click on “+” sign and select “Folder Path” as “Other”



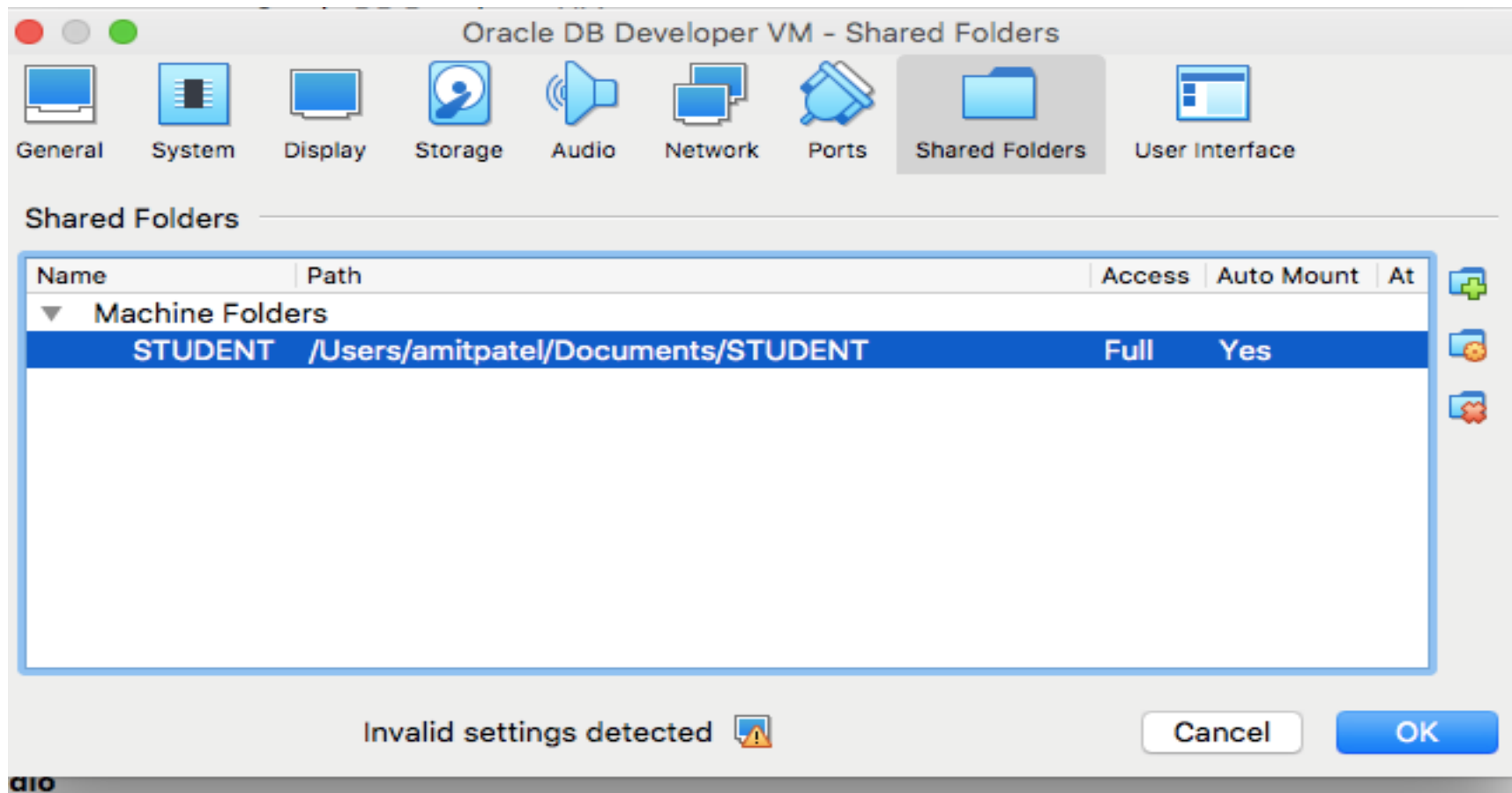
Navigate folder path to directory where you have created a folder "STUDENT"



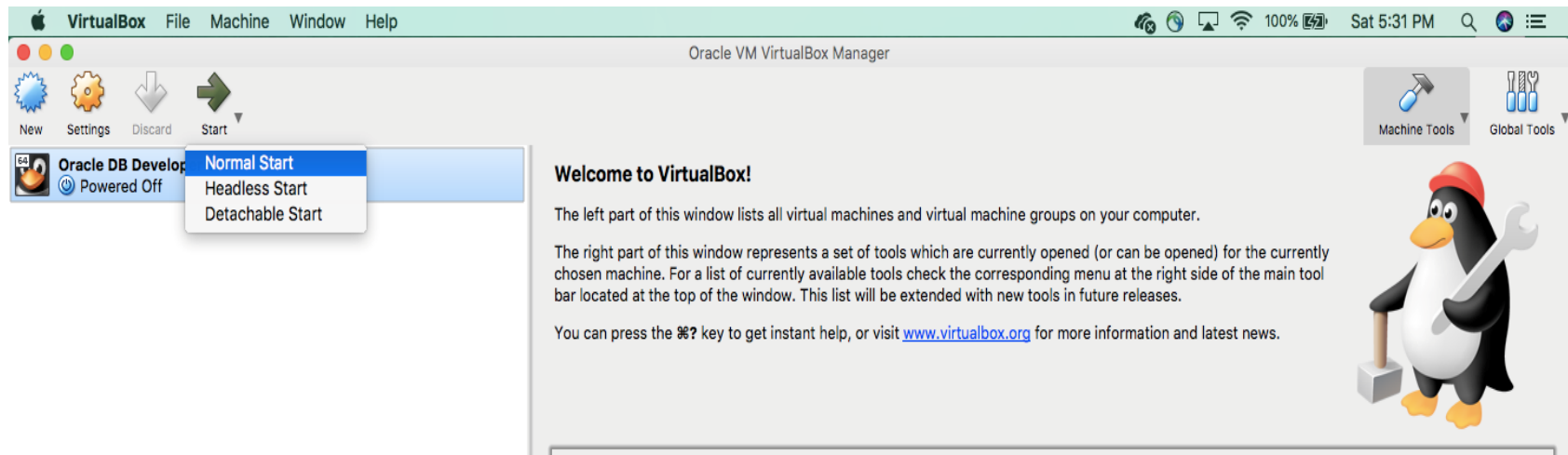
Make sure that “Read-Only” check box is not selected and then check mark “Auto-Mount” as below screenshot.



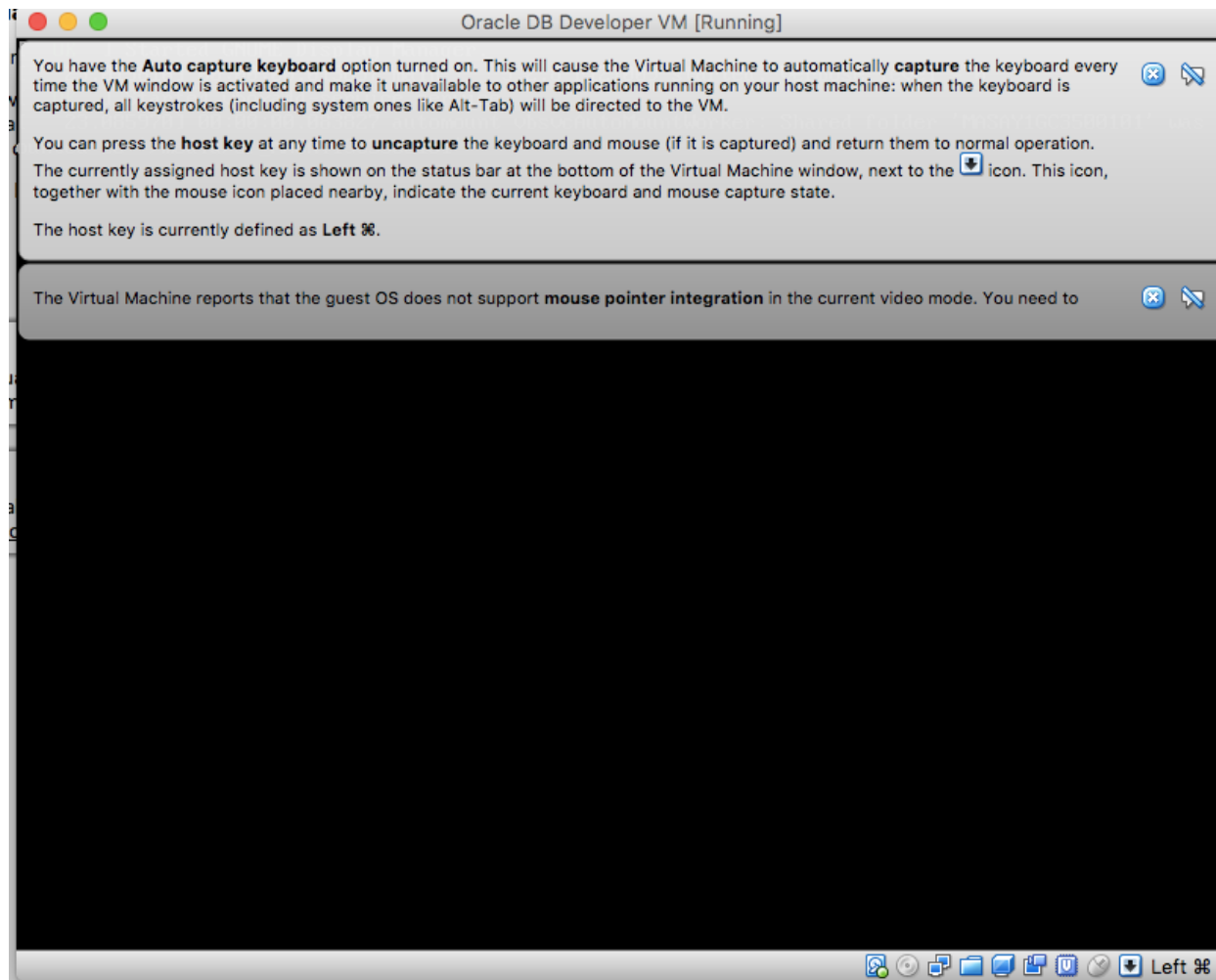
Check “Auto-Mount” and then click OK



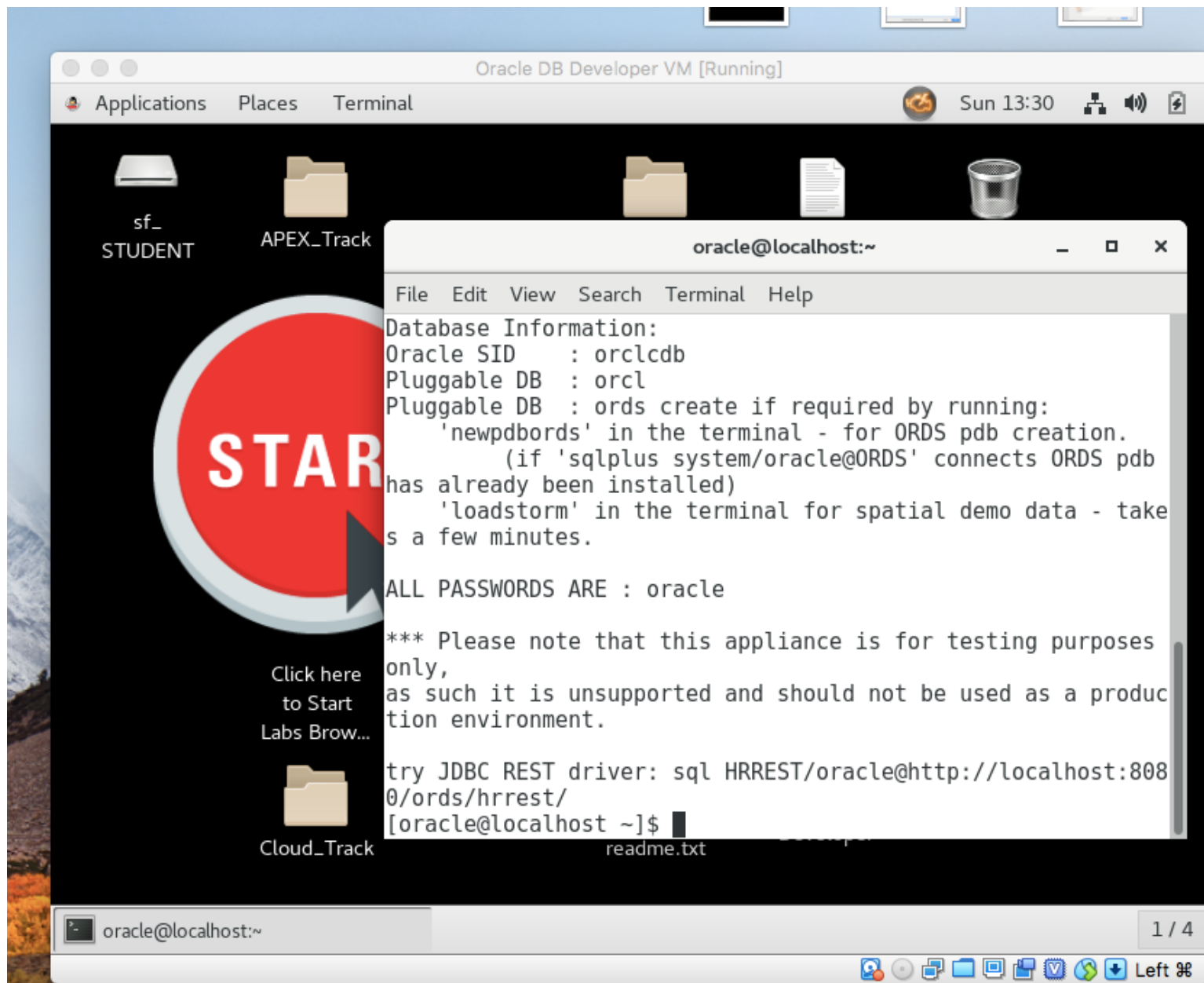
Notice Machine Folders (STUDENT), Auto-Mount (Yes), and Access (Full) appear as above screenshot and then click OK



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.



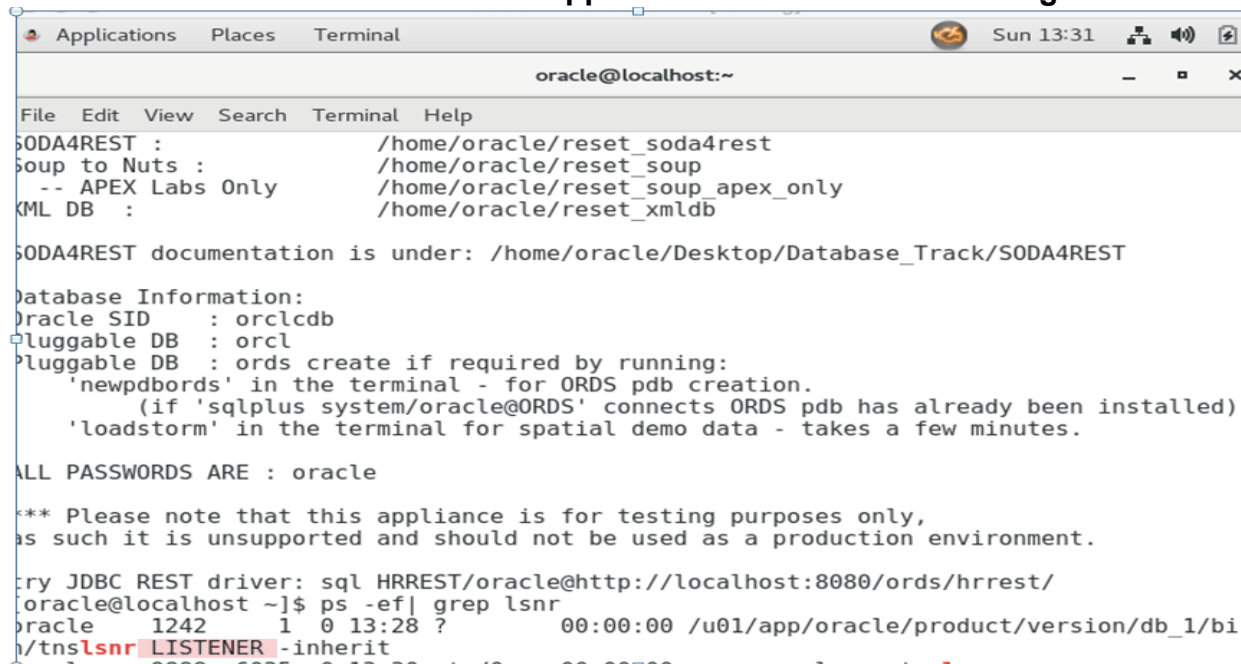
Notice that “ALL PASSWORDS ARE: oracle”. This means that all built in Oracle user accounts (SYS, SYSTEM etc.) for installed database “orclcdb” are having password “oracle”. The Oracle_SID is the name of the database and for this install, the name of the database is “orclcdb” as it appears in above screenshot.

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”



```
File Edit View Search Terminal Help
SODA4REST : /home/oracle/reset_soda4rest
Soup to Nuts : /home/oracle/reset_soup
-- APEX Labs Only /home/oracle/reset_soup_apex_only
XML DB : /home/oracle/reset_xmlldb

SODA4REST documentation is under: /home/oracle/Desktop/Database_Track/SODA4REST

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 ~]$ ps -ef| grep lsnr
oracle 1242 1 0 13:28 ? 00:00:00 /u01/app/oracle/product/version/db_1/bin/tnslsnr LISTENER -inherit
```

```
[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

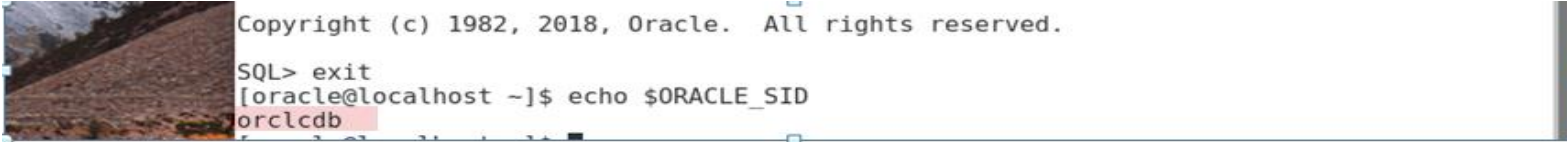
Copyright (c) 1997, 2018, Oracle. All rights reserved.

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, orclpdb. You need to know the name of the database in order to connect to the database)

A screenshot of a terminal window. The top line shows the copyright notice: "Copyright (c) 1982, 2018, Oracle. All rights reserved." Below that, the user enters "SQL> exit". The next line shows the user at the shell prompt: "[oracle@localhost ~]\$ echo \$ORACLE_SID". The output of the command is "orclpdb", which is highlighted with a red background. The terminal window has a dark background and a light-colored border.

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@orclpdb 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

