

طريقة تثبيت نظام ROS على الجهاز الافتراضي VB Virtualbox manager في Windows 10

How to install Ros on VB Virtualbox manager in Windows 10

فالبدايه نحن بحاجة الى جهاز افتراض مثل VB Virtualbox manager بعد ذلك نحمل عليه نظام Ubuntu 20.04 LTS بعد ذلك نثبت نظام ROS عليه .

Initially we need download a virtual machine such as VB Virtualbox manager after that we download Ubuntu 20.04 LTS after that we install the ROS system on it .

أولا : يجب عليك تحميل VB Virtualbox manager من خلال هذا الرابط

First: You must download VB Virtualbox manager through this link

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

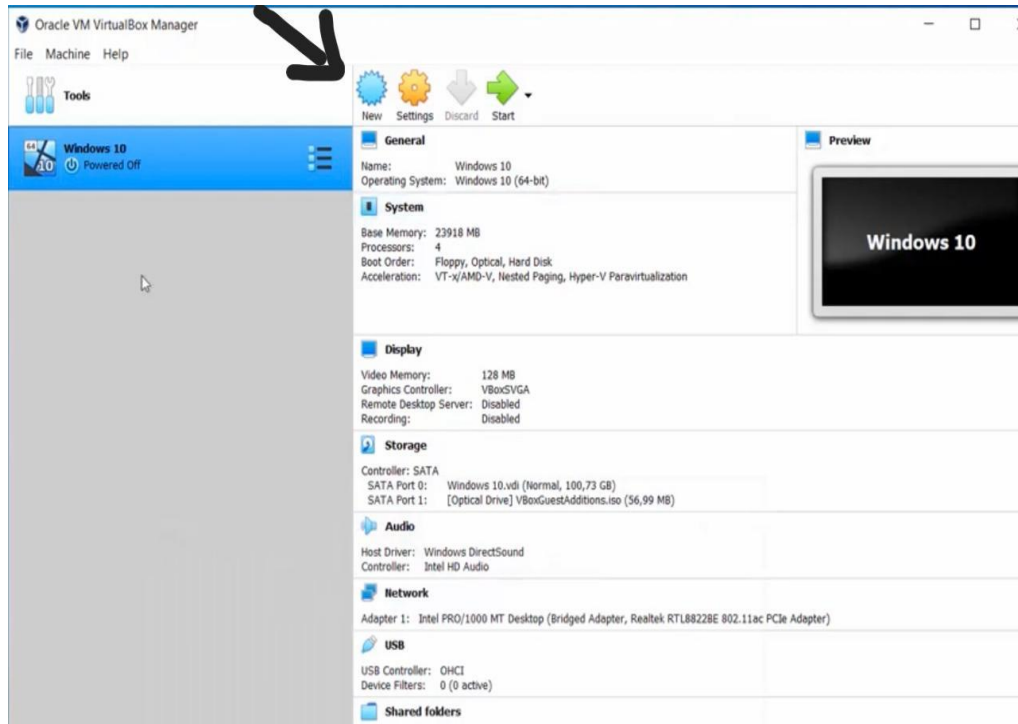
بعد ذلك يجب عليك تحميل نظام Ubuntu 20.04 LTS من خلال هذا الرابط

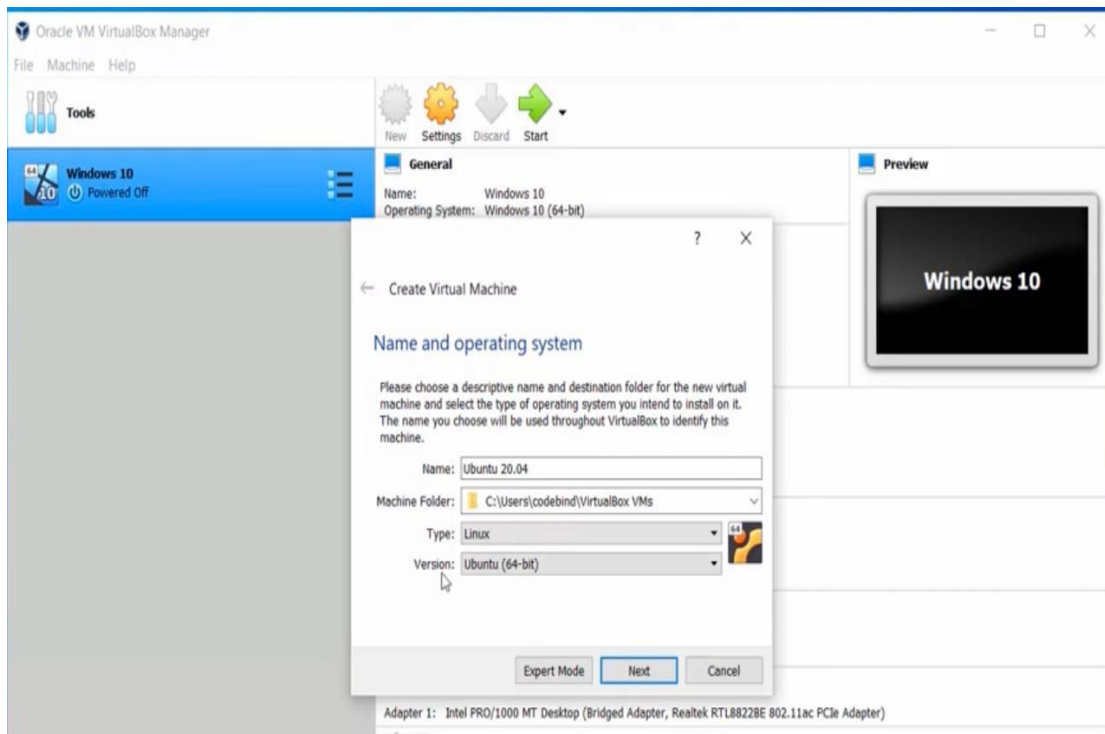
After that you should download Ubuntu 20.04 LTS via this link

<https://ubuntu.com/download/desktop>

الان ... اول خطوه تفتح VB Virtualbox manager وتضغط على NEW. تطلع صفحة مثل الصوره فالاصل
تكتب اسم المشغل الي تبغاه و مكانه و نوعه اختار Linux و إصداره اختار Ubuntu 32 bit or 64 bit

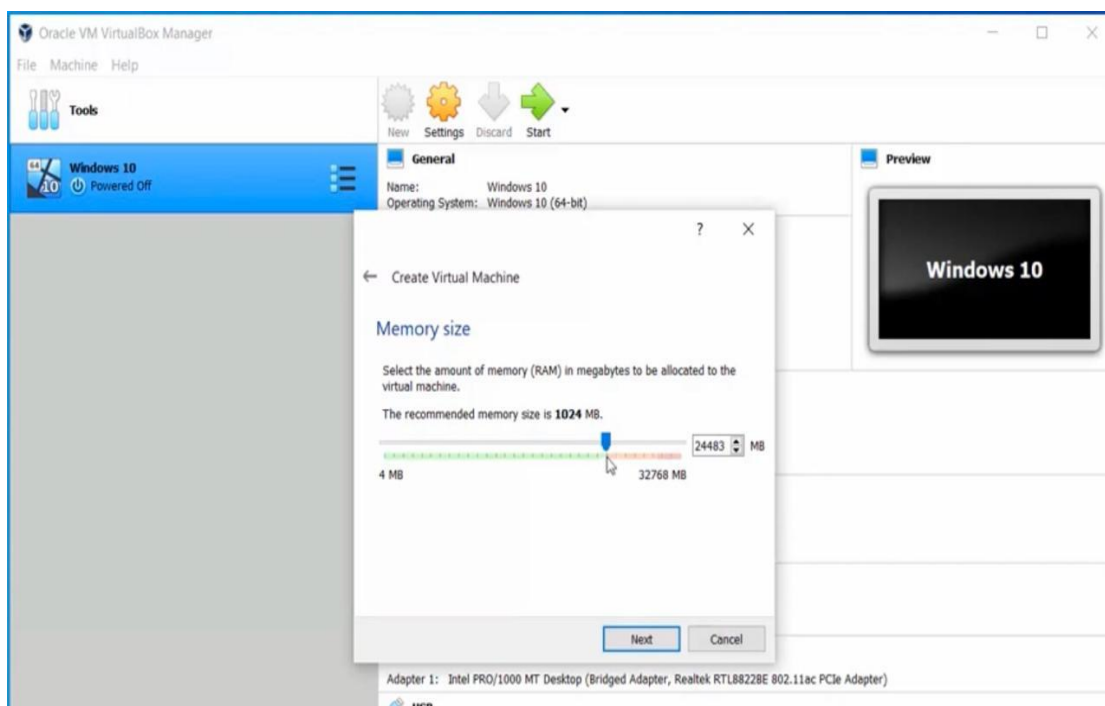
Now .. the first step opens VB Virtualbox manager and press NEW. It like a page below
Write the name of the operating system, its location, the type Select Linux and the version.
Choose Ubuntu 32 bit or 64 bit

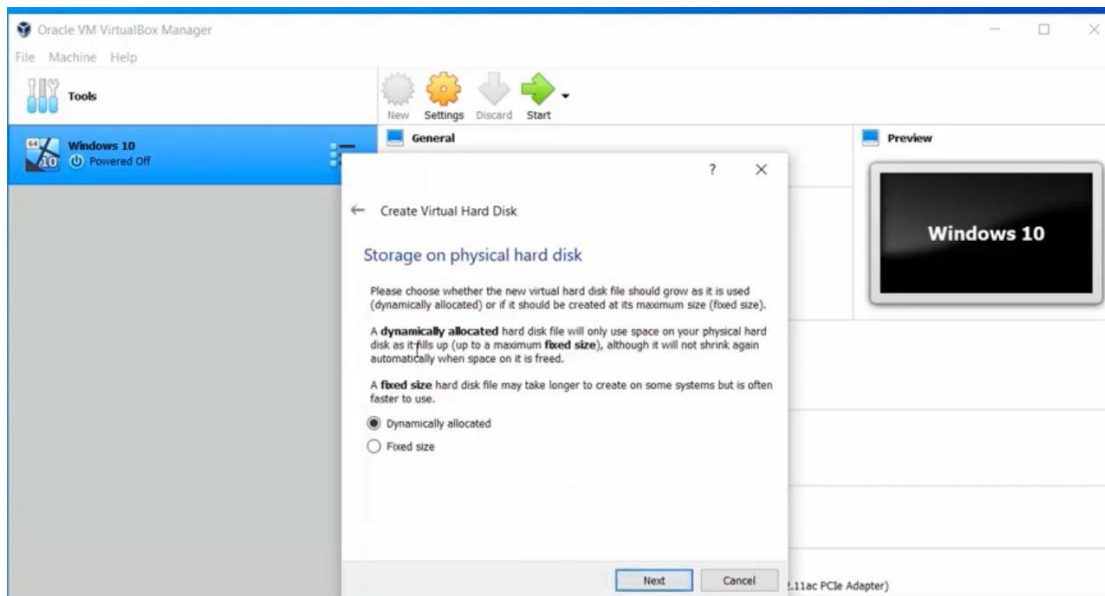
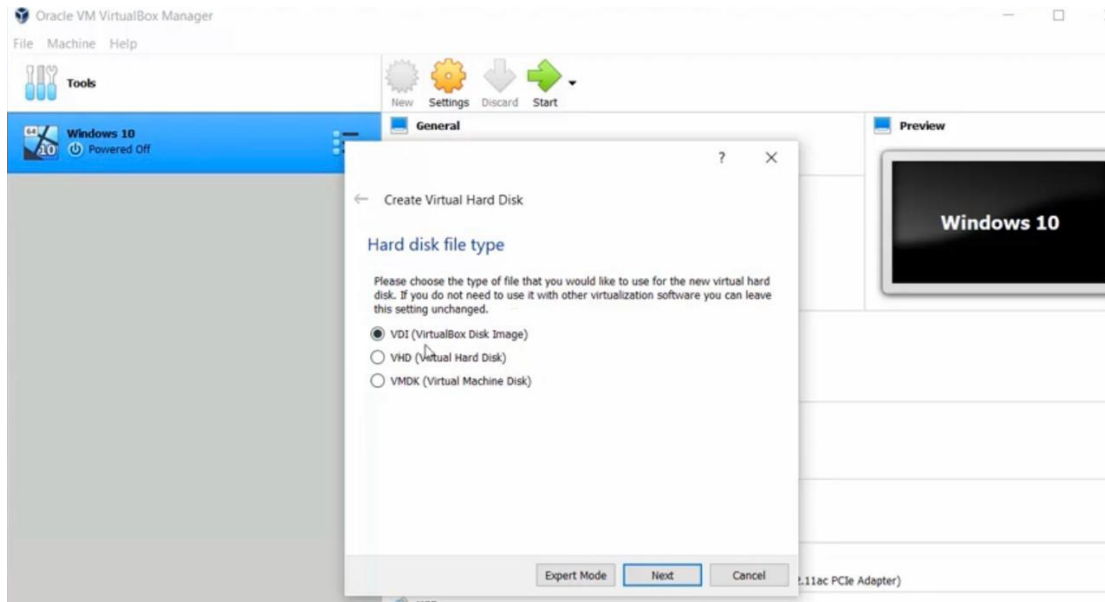
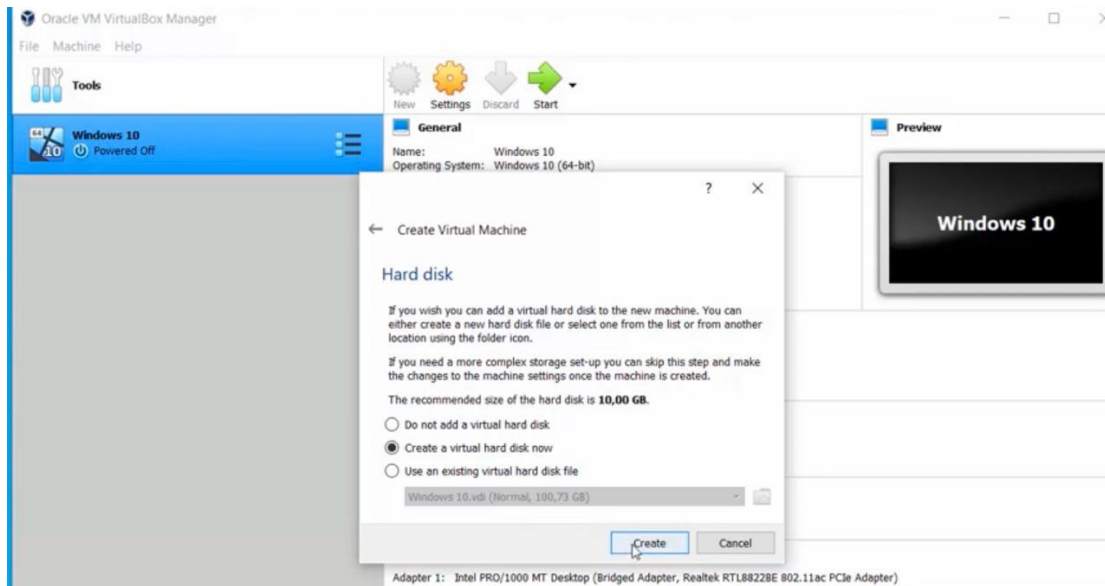


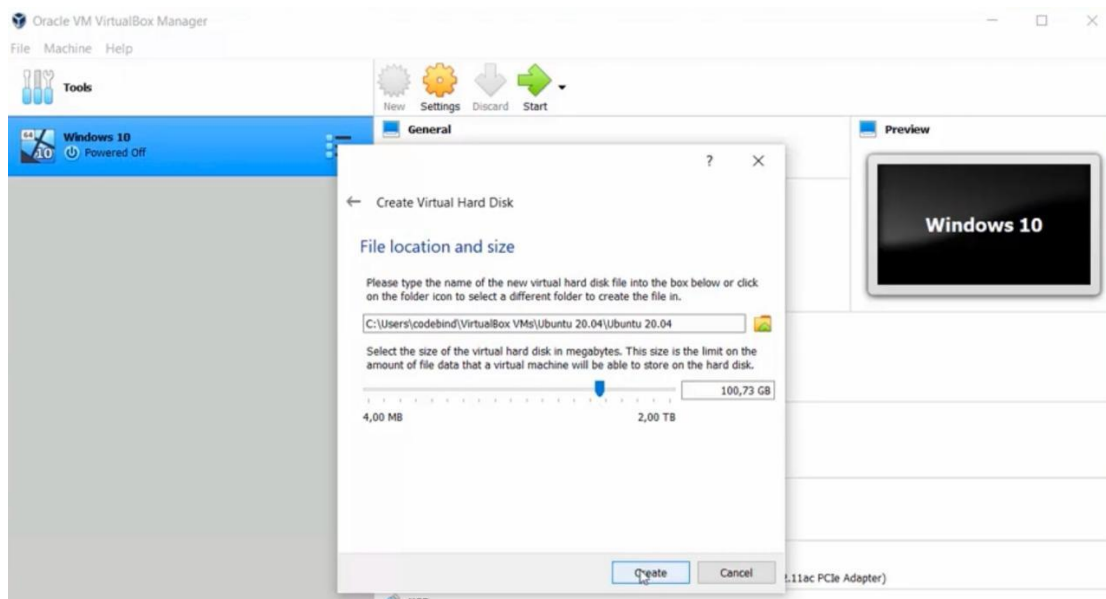


بعد ذلك اتبع الخطوات بالصور التاليه ...

After that follow the steps with the following pictures

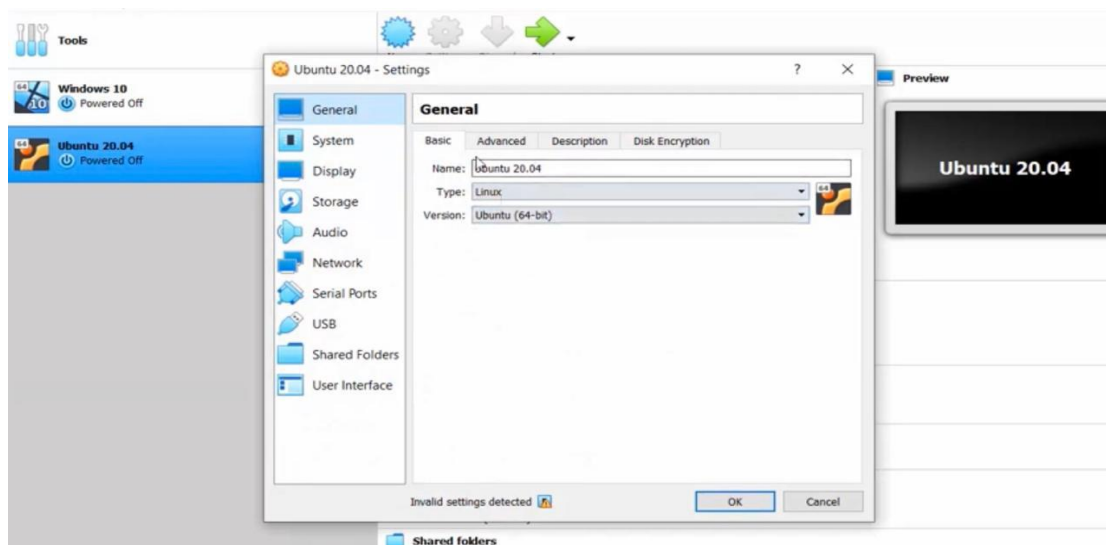
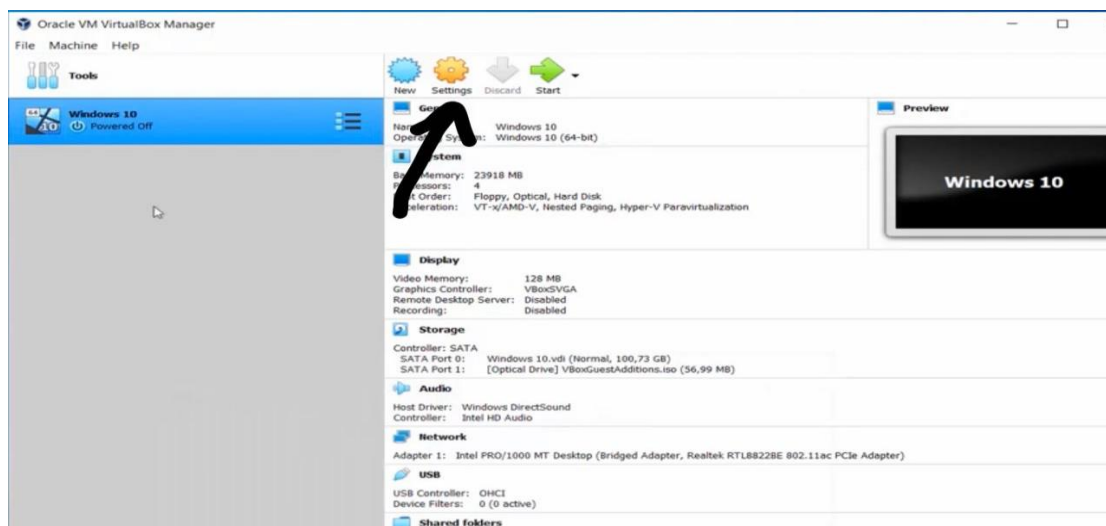


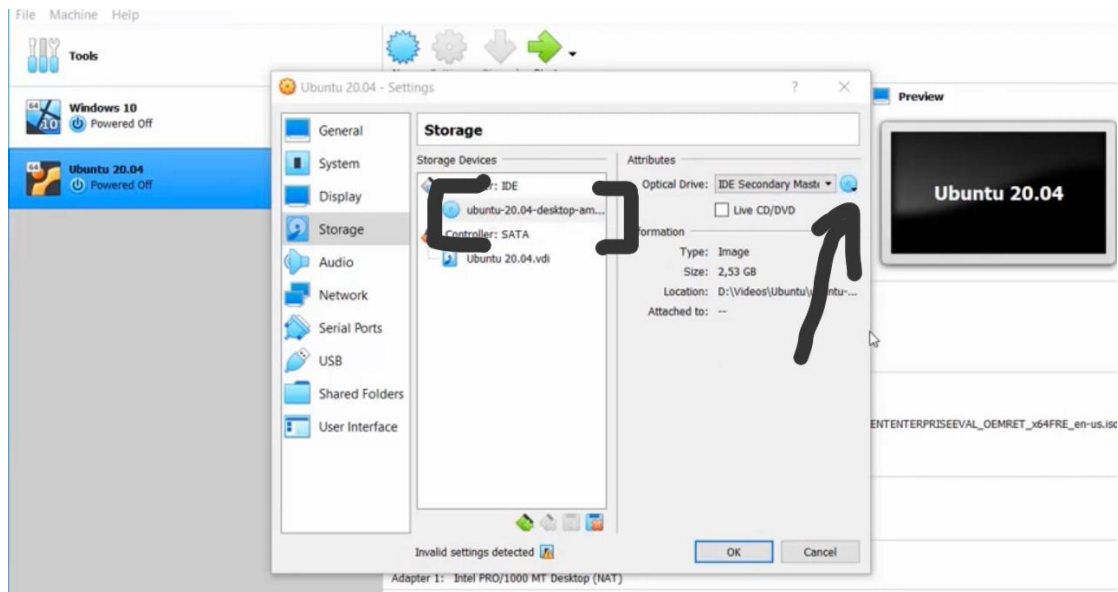




بعد ذلك اضغط على الاعدادات و اتبع الخطوات فالصور لرفع ملف Ubuntu 20.04 LTS ISO

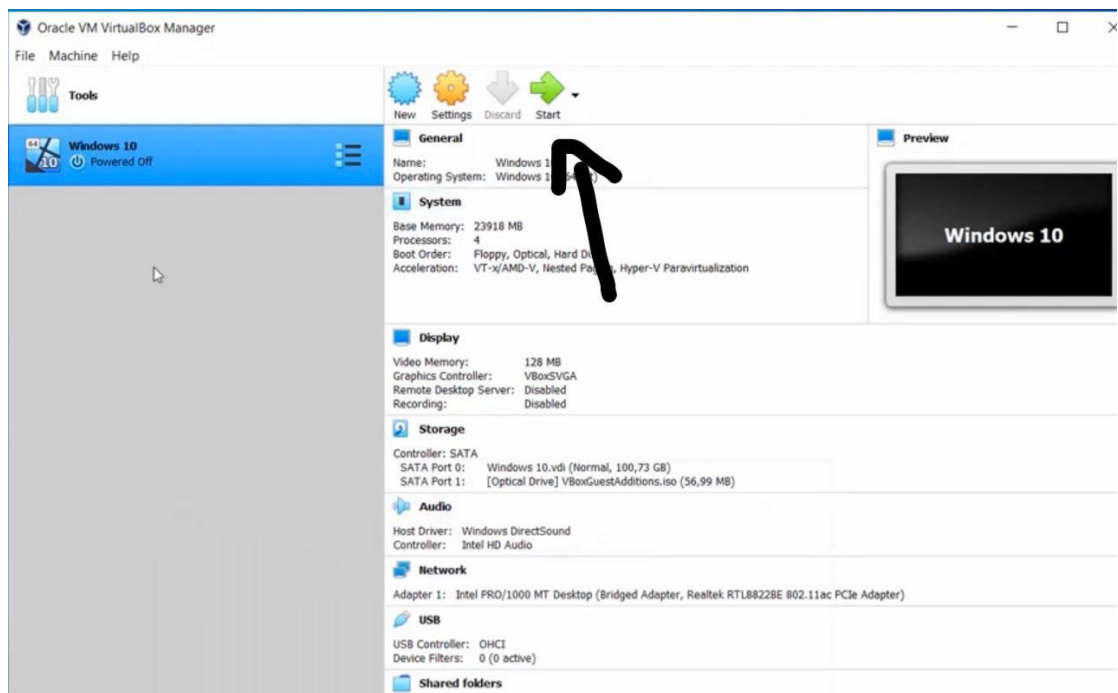
After that click on settings and follow the steps as pictures to upload Ubuntu 20.04 LTS file

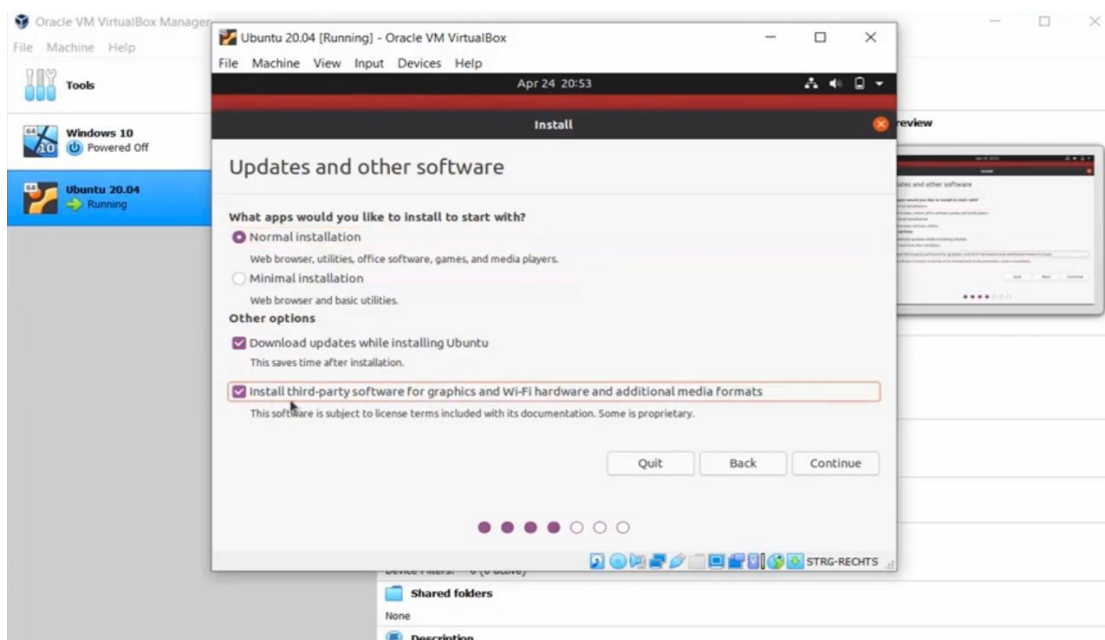
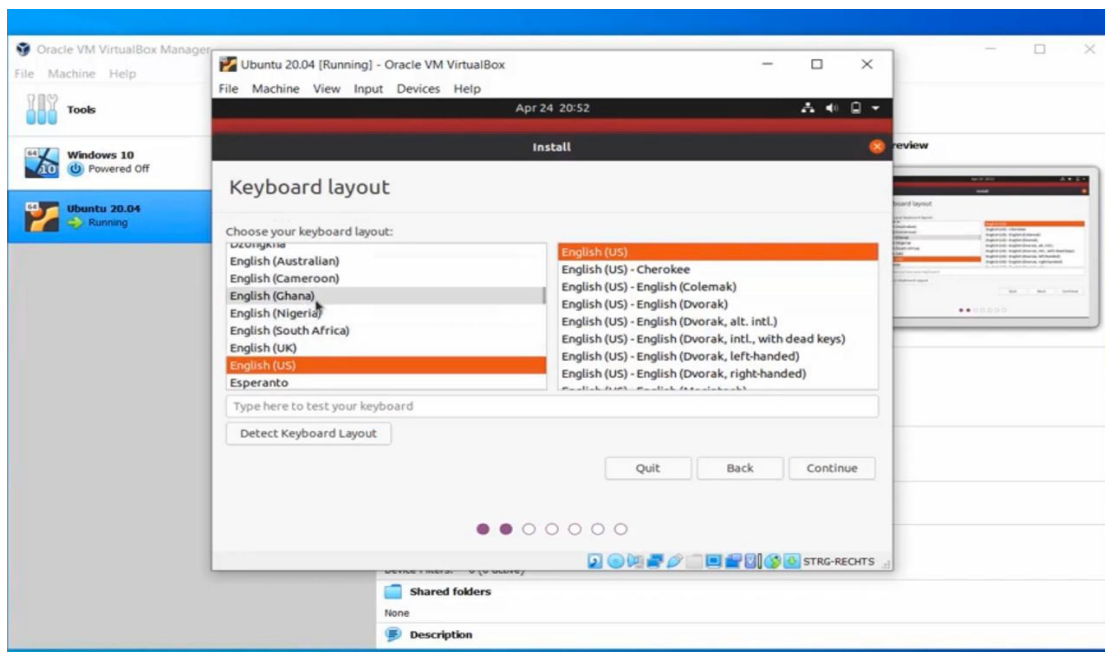
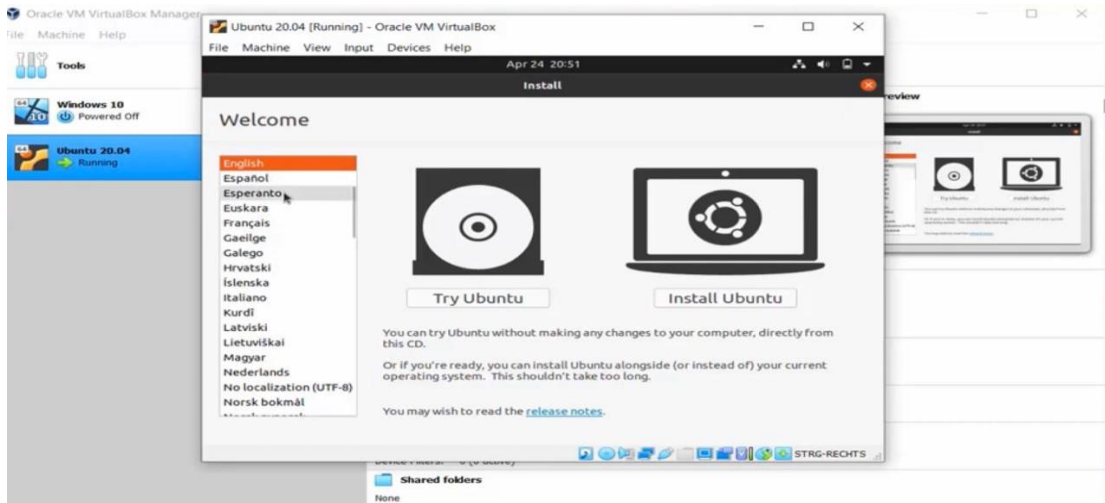


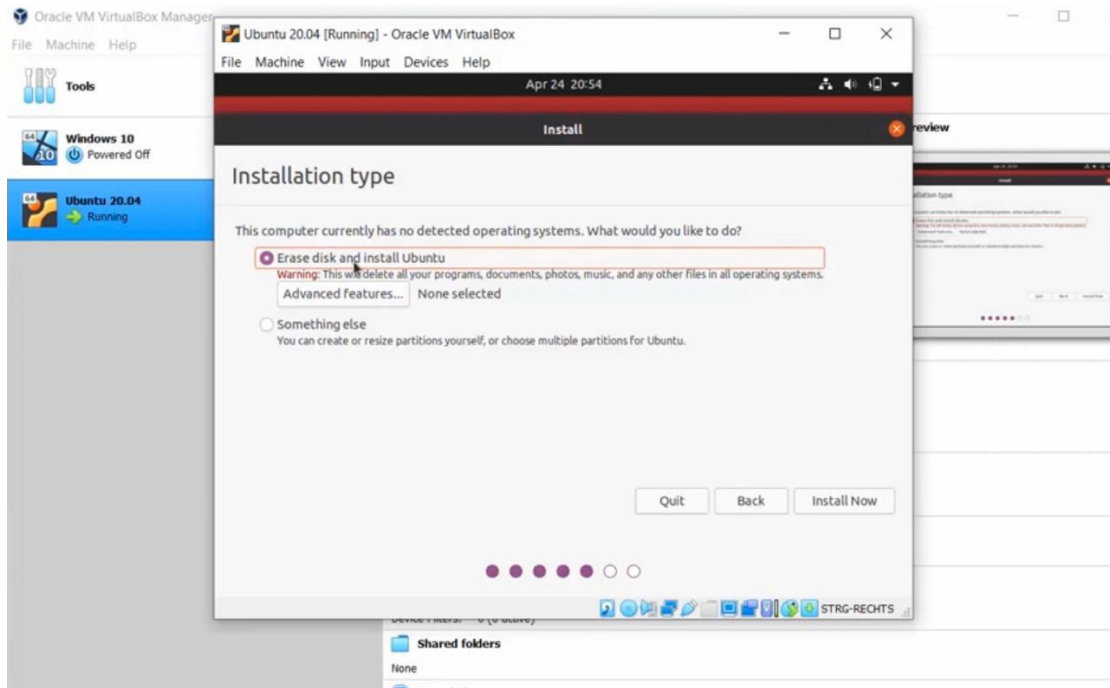


بعد ذلك اضغط على Start و اتبع الخطوات فالصور التاليه ..

After that click on start and follow the steps in the following pictures

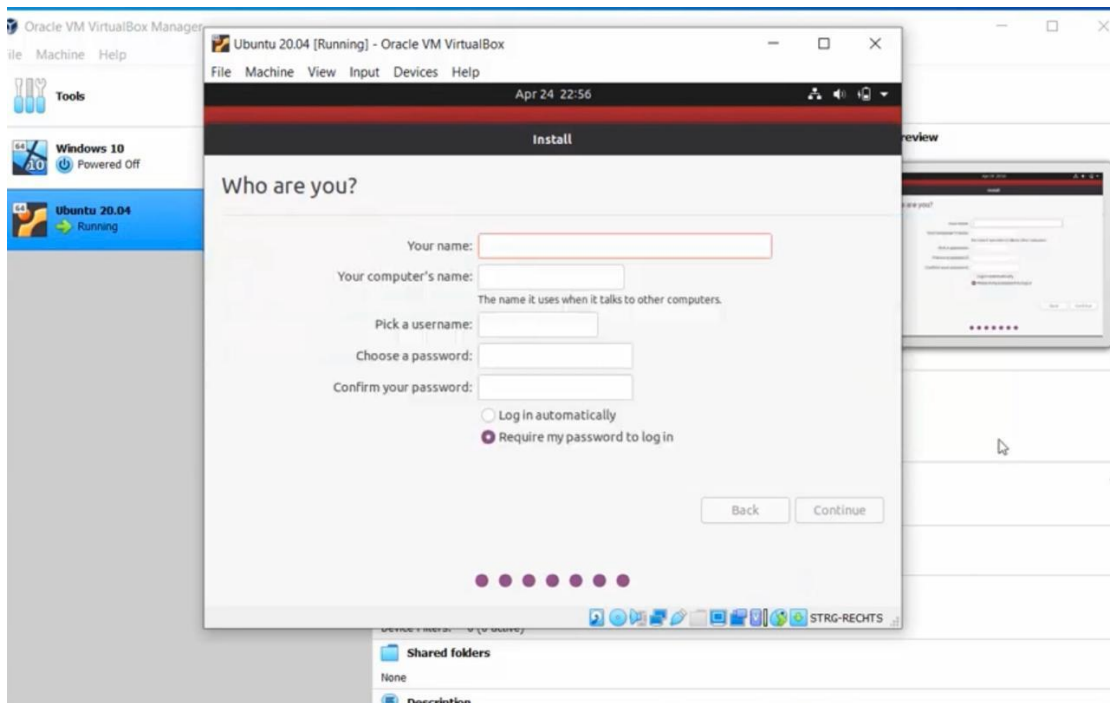






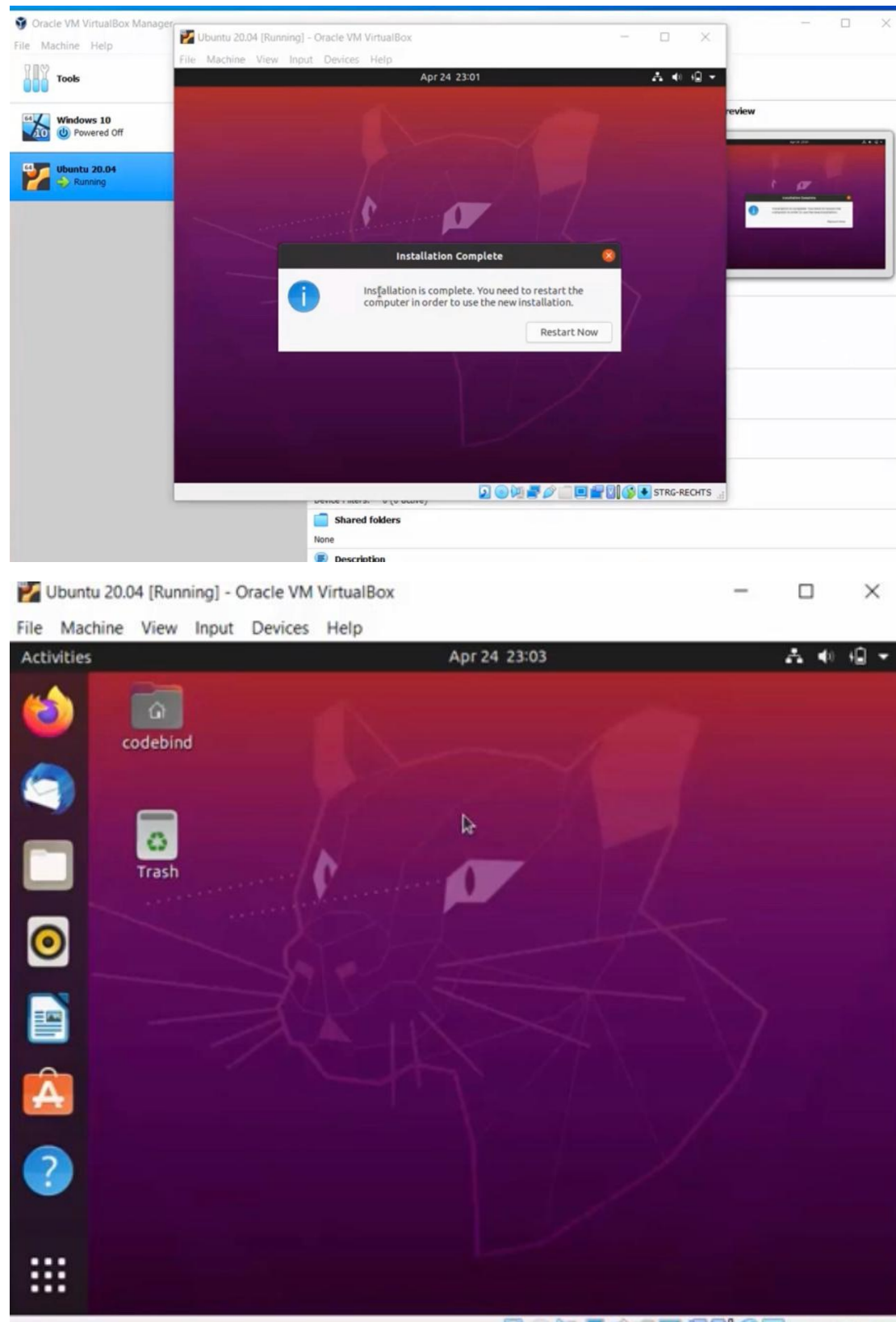
في هذه الصورة تكتب اسم المستخدم الخاص بك و كلمة السر..

In this picture you write your username and password.



هنا تضغط على إعادة التشغيل ليثبت نظام Ubuntu وبعد ذلك يصبح النظام جاهز

Here you press Restart to install Ubuntu and after that the system is ready

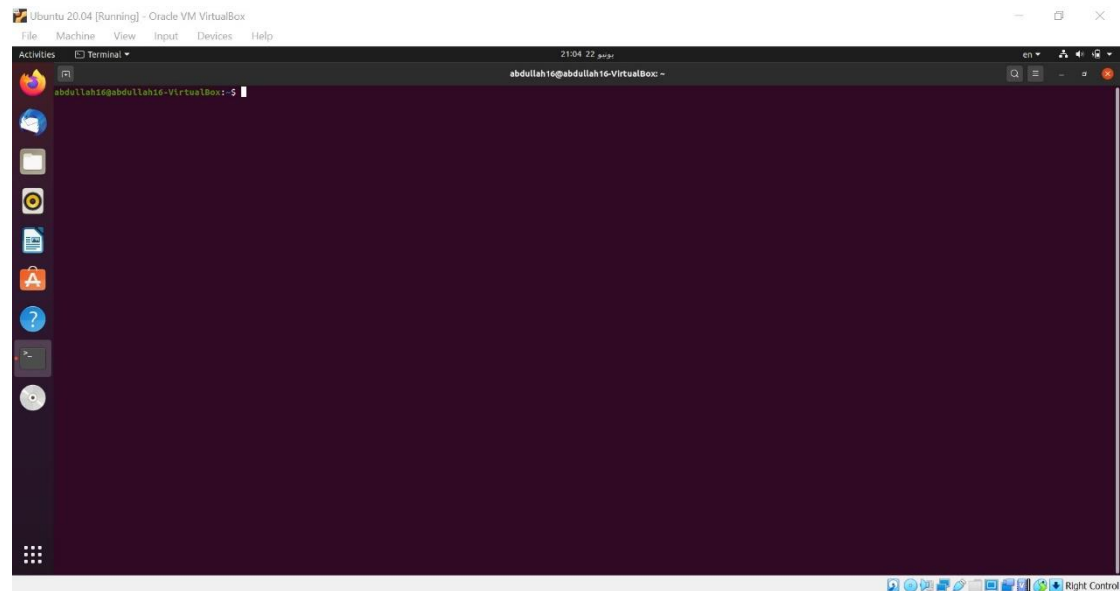


الآن متبقي تثبيت نظام ROS و يجب ان يكون اخر اصدار له وهو Noetic المتوافق مع اخر اصدار ل Ubuntu

Now the ROS system remains installed and must be the latest version which is Noetic compatible with the latest version of Ubuntu

فالبدايه نقوم بفتح terminal ... Ctrl+alt+T

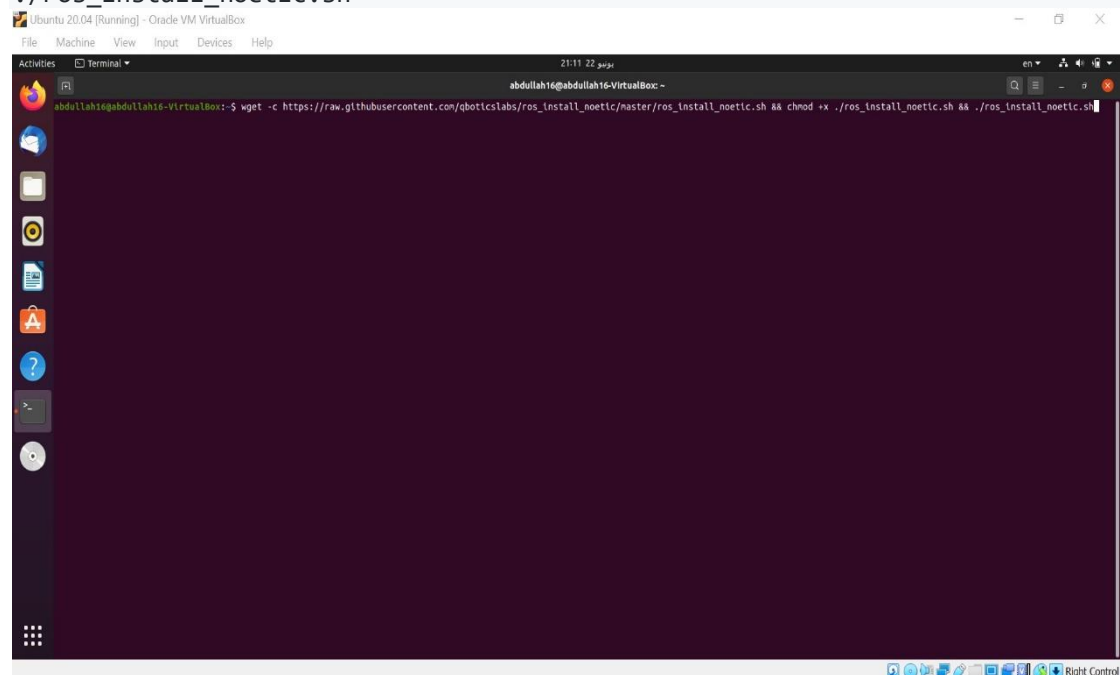
To start with, we open terminal ... Ctrl + alt + T



بعد ذلك نكتب هذا الكود ونضغط enter بيطلب منك ادخال كلمة السر ... ندخلها لاني لا تظهر ونضغط enter

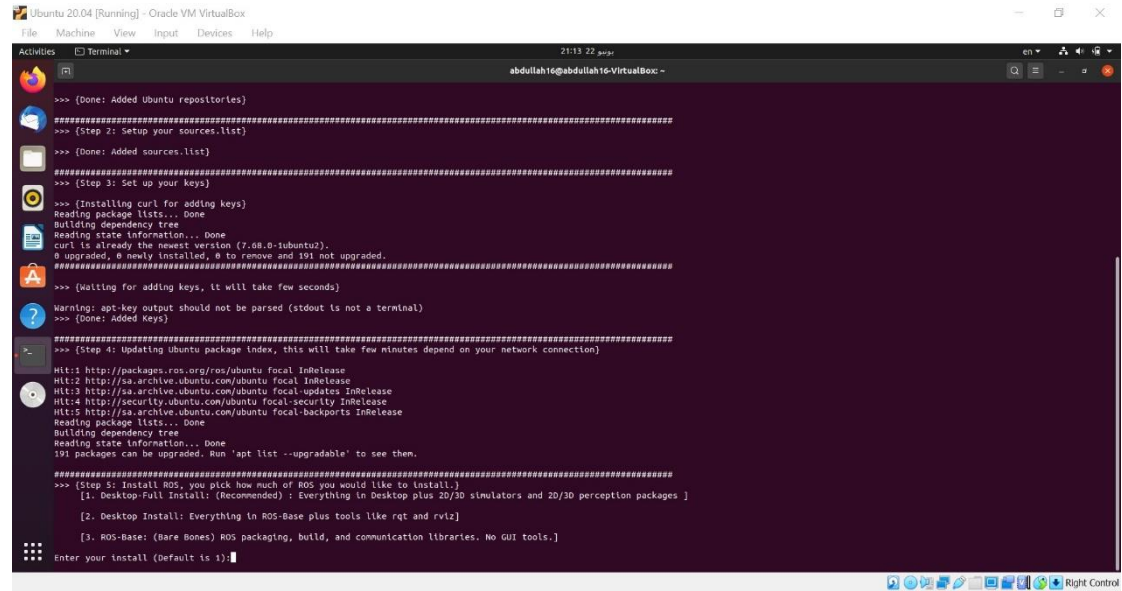
Then write this code and press enter. It asks you to enter the password ... we enter it because it does not appear and press enter

```
wget -c  
https://raw.githubusercontent.com/qboticslabs/ros_install_noetic/master/ros_install_noetic.sh && chmod +x ./ros_install_noetic.sh &&  
./ros_install_noetic.sh
```



نتنظر بعض الوقت الى ان يصل لهذه الصورة و يطلب منك ادخال ١ بعدها نضغط enter و ننتظر حتى ينتهي تثبيت desktop_full بكامل الخصائص

We wait for some time until it reaches this image and asks you to enter 1, then press enter and wait until the desktop_full installation is complete with all the features



```
Ubuntu 20.04 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
21:13 22 يونيو
abdullah16@abdullah16-VirtualBox: ~
>>> [Done: Added Ubuntu repositories]
>>> [Step 2: Setup your sources.list]
>>> [Done: Added sources.list]
>>> [Step 3: Set up your keys]
>>> [Installing curl for adding keys]
Reading package lists... Done
Building dependency tree
Reading state information... Done
curl is already the newest version (7.68.0-ubuntu2).
0 upgraded, 0 newly installed, 0 to remove and 191 not upgraded.
>>> [Waiting for adding keys, it will take few seconds]
Warning: apt-key output should not be parsed (stdout is not a terminal)
>>> [Done: Added Keys]
>>> [Step 4: Updating ubuntu package index, this will take few minutes depend on your network connection]
Hit:1 http://packages.ros.org/ros/ubuntu focal InRelease
Hit:2 http://sa.archive.ubuntu.com/ubuntu focal InRelease
Hit:3 http://sa.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:5 http://sa.archive.ubuntu.com/ubuntu focal-backports InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
191 packages can be upgraded. Run 'apt list --upgradable' to see them.
>>> [Step 5: Install ROS, you pick how much of ROS you would like to install.]
[1. Desktop-Full Install: (Recommended) : Everything in Desktop plus 20/30 simulators and 20/30 perception packages ]
[2. Desktop Install: Everything in ROS-Base plus tools like rqt and rviz]
[3. ROS-Base: (Bare Bones) ROS packaging, build, and communication libraries. No GUI tools.]
Enter your install (Default is 1):
```

انتهى ...

تمنياتى لكم بالتوفيق

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