

## Linux Setup for BLG413E-System Programming Course

The material to be used in the course was tested on the Lubuntu 13.04 “Raring Ringtail” release, 32 bit version. Although most of the practical information in the material can be applied to any Ubuntu-based system, you might encounter problems when working on a different version.

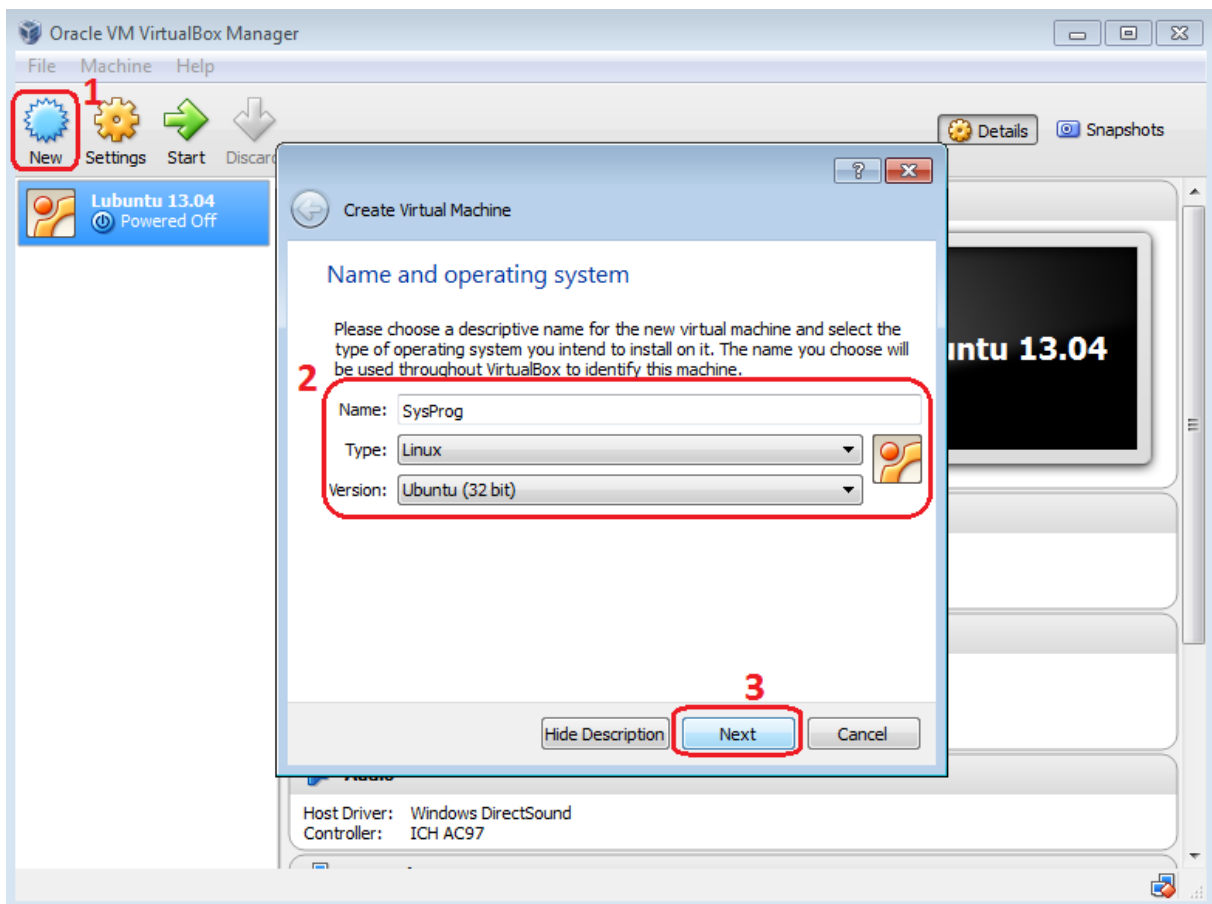
On a standard Lubuntu installation, you will need the following extra packages for the course: manpages-dev, nasm, g++, gdb, patch, strace, ltrace, linux-headers-\$(uname -r), linux-source, kernel-package, fakeroot, libncurses5-dev and libfuse-dev. You can install these packages using the following command:

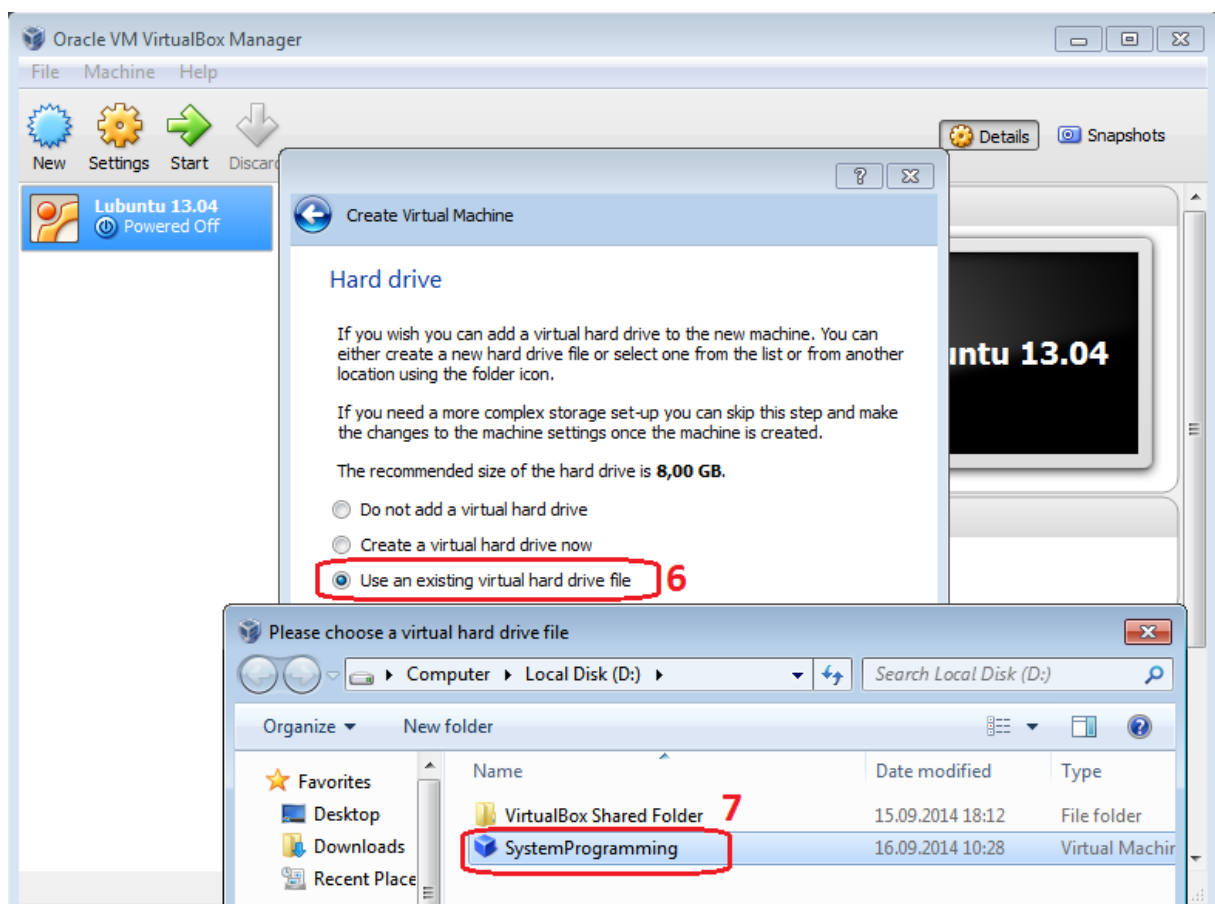
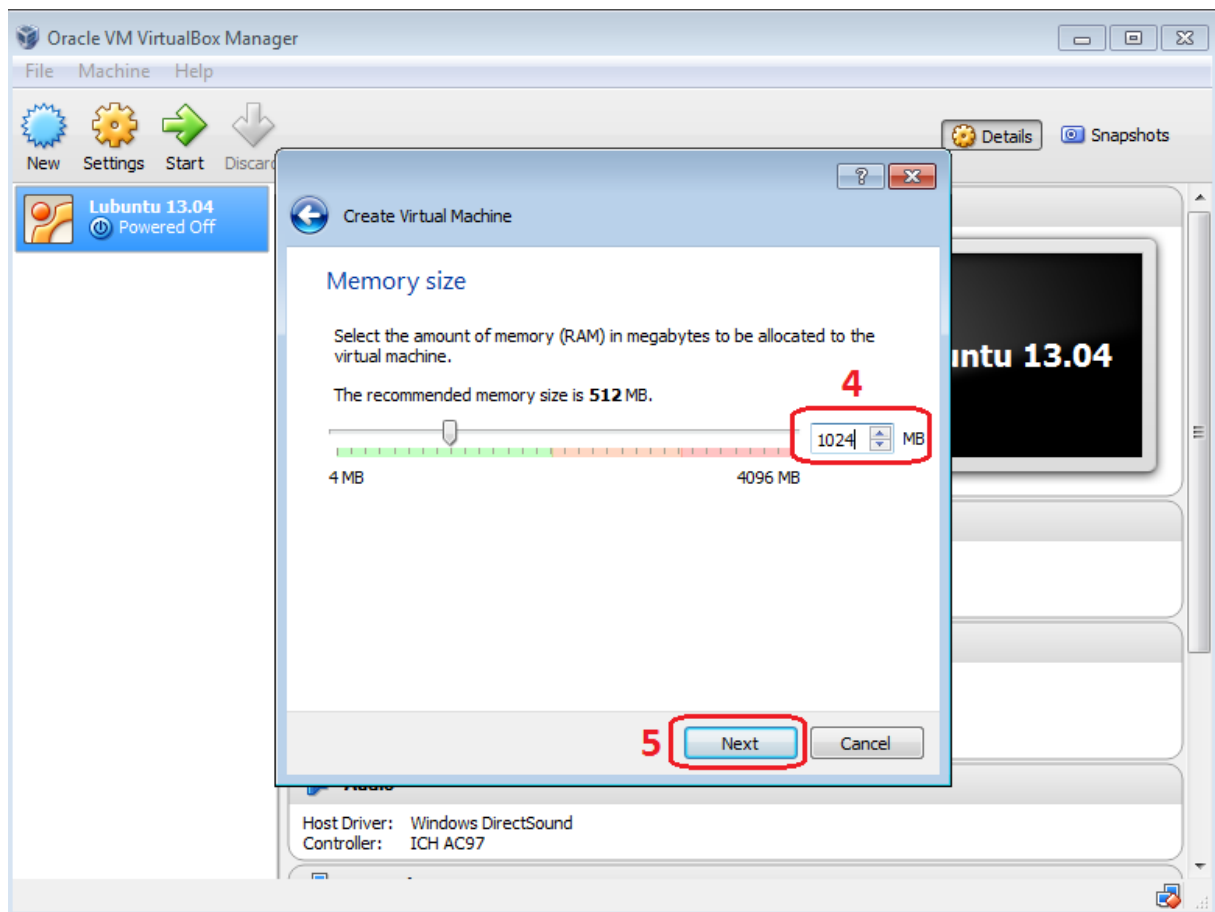
```
sudo apt-get install nasm g++ manpages-dev ...
```

The recommended way of setting up the system is to use a virtual machine for [VirtualBox](#) or [VMware Player](#). A virtual disk image that contains all the necessary packages can be downloaded from (inside the campus): <http://ortanca.cs.itu.edu.tr/downloads/>

**Note:** On the virtual disk image, the **username** and **password** of the administrative account are both set as “itucs”.

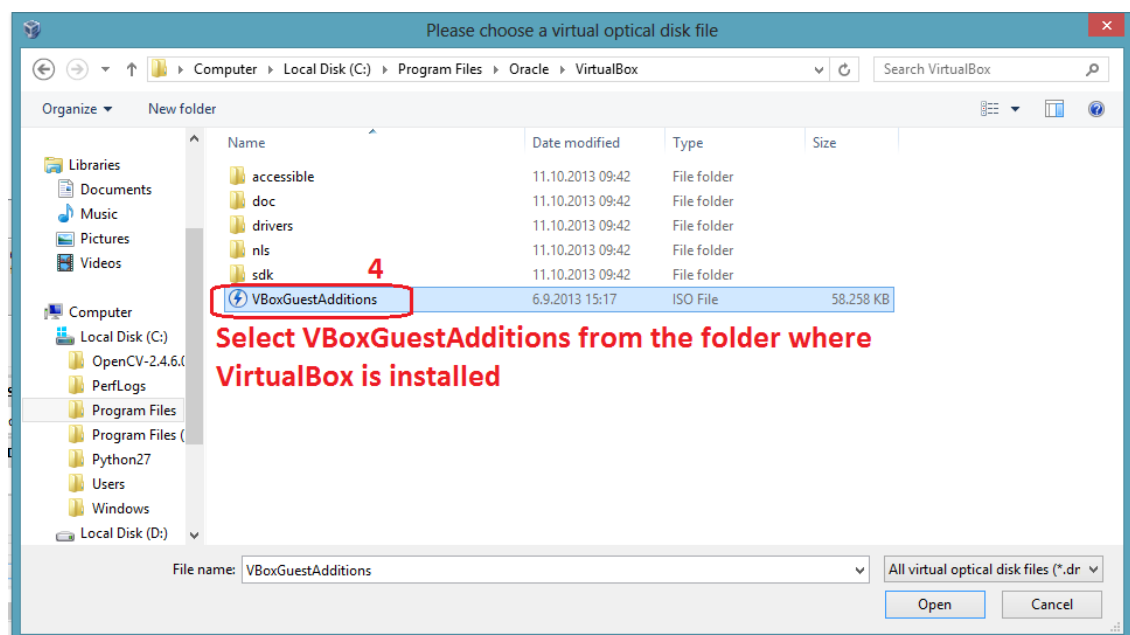
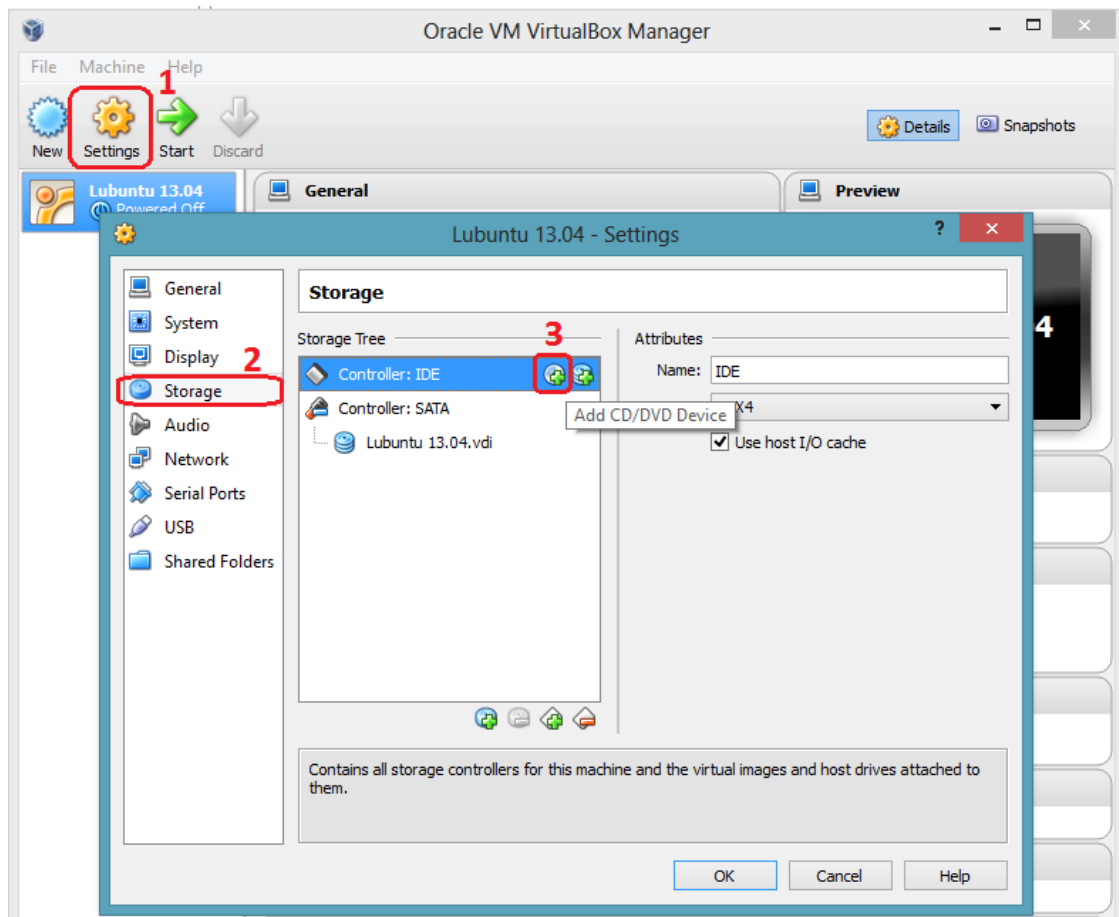
### Setting Up The Virtual Machine Using the Provided Image





**Note:** The system provided in the virtual disk image cannot be used for connecting to the internet. Therefore, you need to set up a **shared folder** to exchange files between your hosting operating system and the virtual operating system. The required steps for setting up a shared folder using **VirtualBox** is as follows:

1. Install Guest Additions



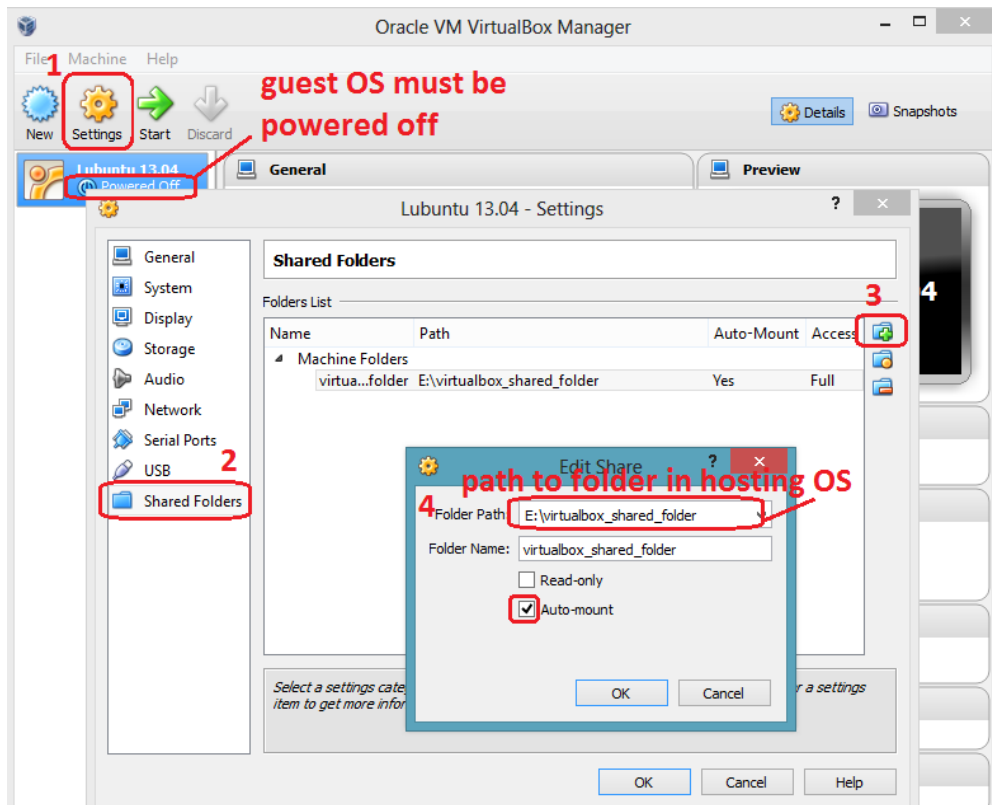
Open Ubuntu 13.04 and type the following commands using LXTerminal to install Guest Additions

```
cd /media/itucs/VBOXADDITIONS_*  
sudo sh VBoxLinuxAdditions.run
```

2. Add your user to vboxsf group in Ubuntu

```
sudo adduser itucs vboxsf
```

3. Create a shared folder as follows:



4. After all the steps are successful, your shared folder will be available under `/media`