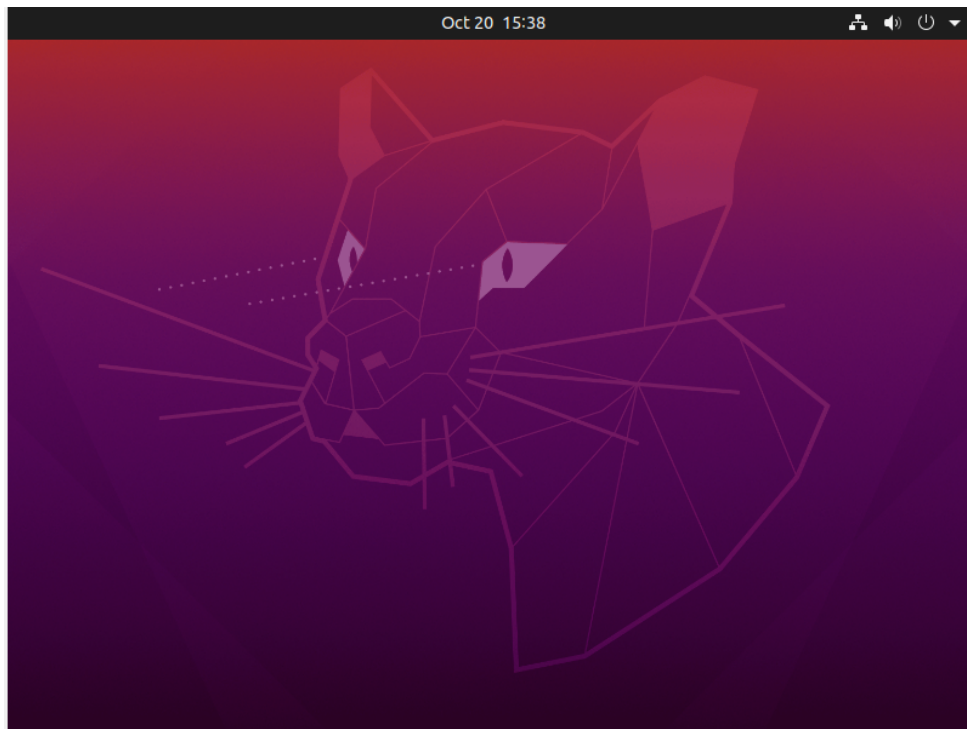


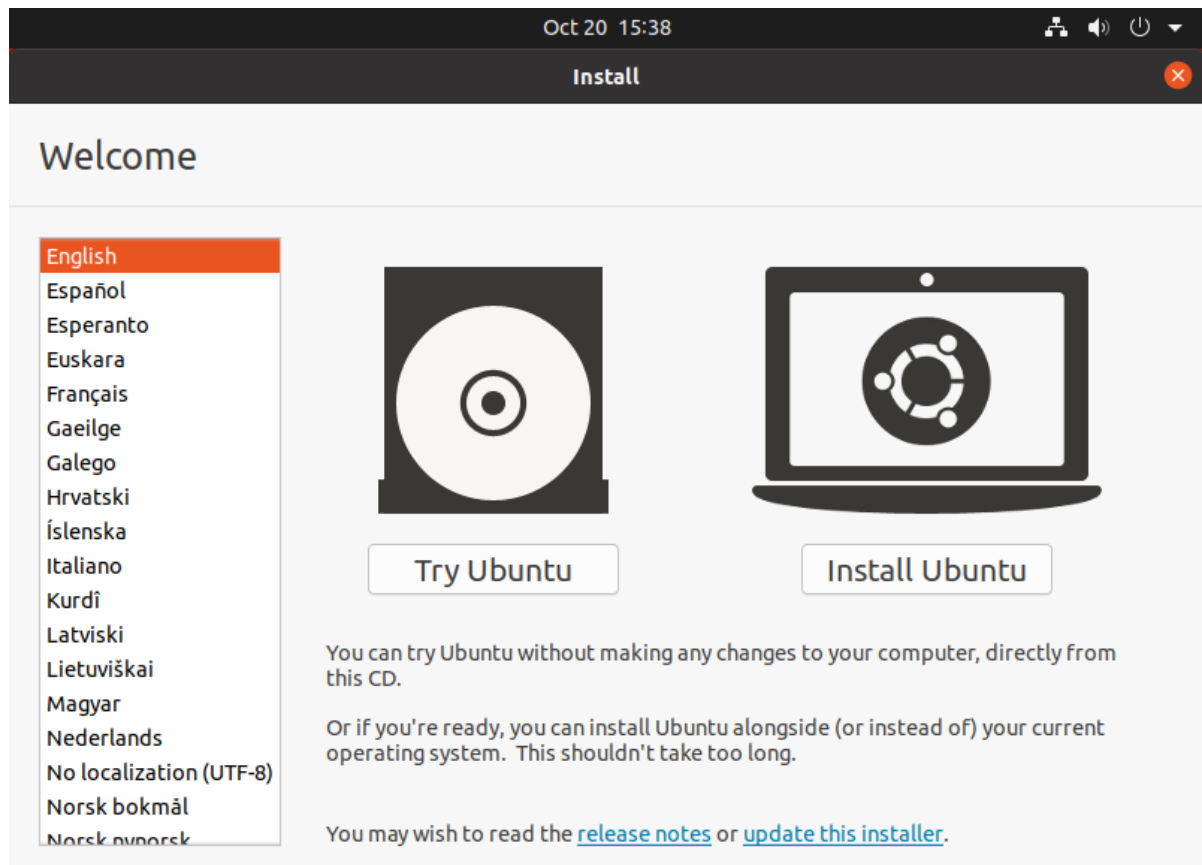
In order to install a windows and ubuntu dual boot, we need to have windows already installed (windows 7 in this case).

Then we need to use an Ubuntu ISO and we boot the machine. It will automatically lead us to the ubuntu installer.

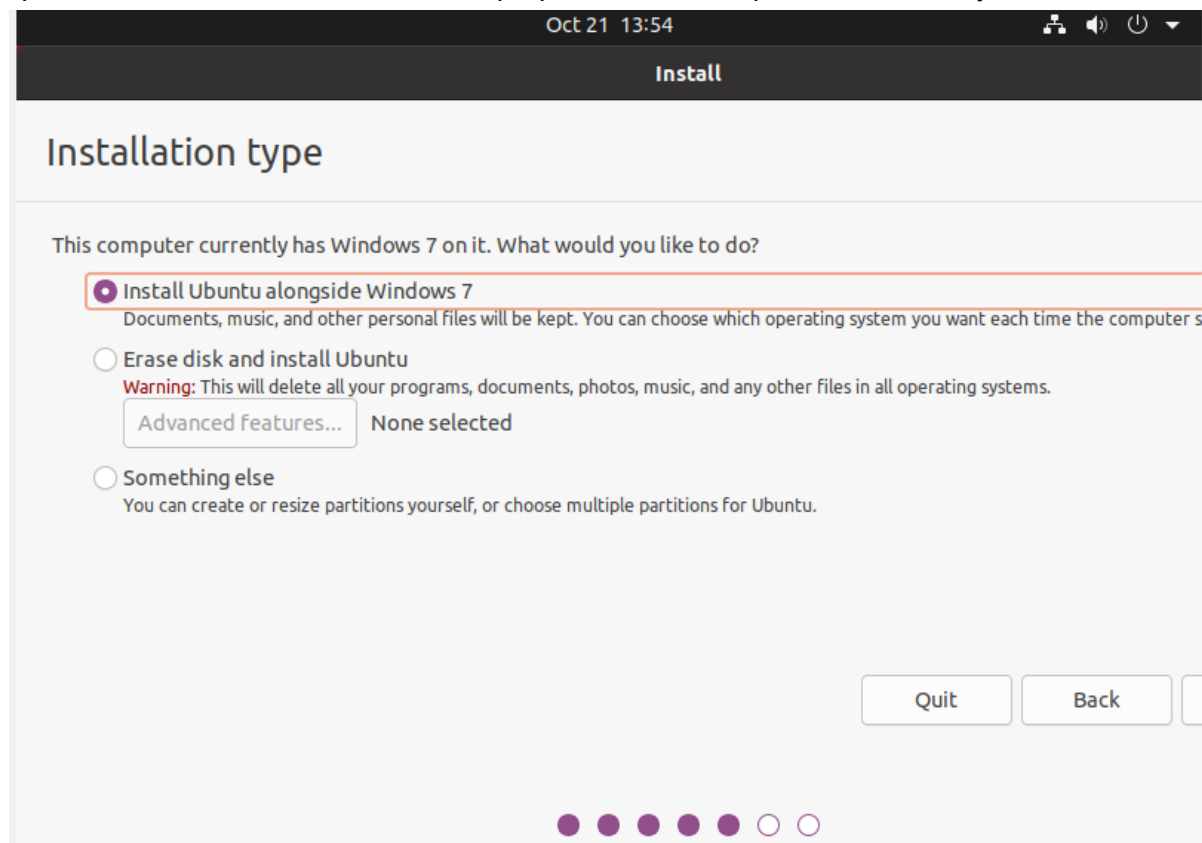


We proceed with the ubuntu installation selecting settings like install ubuntu, Spanish keyboard...

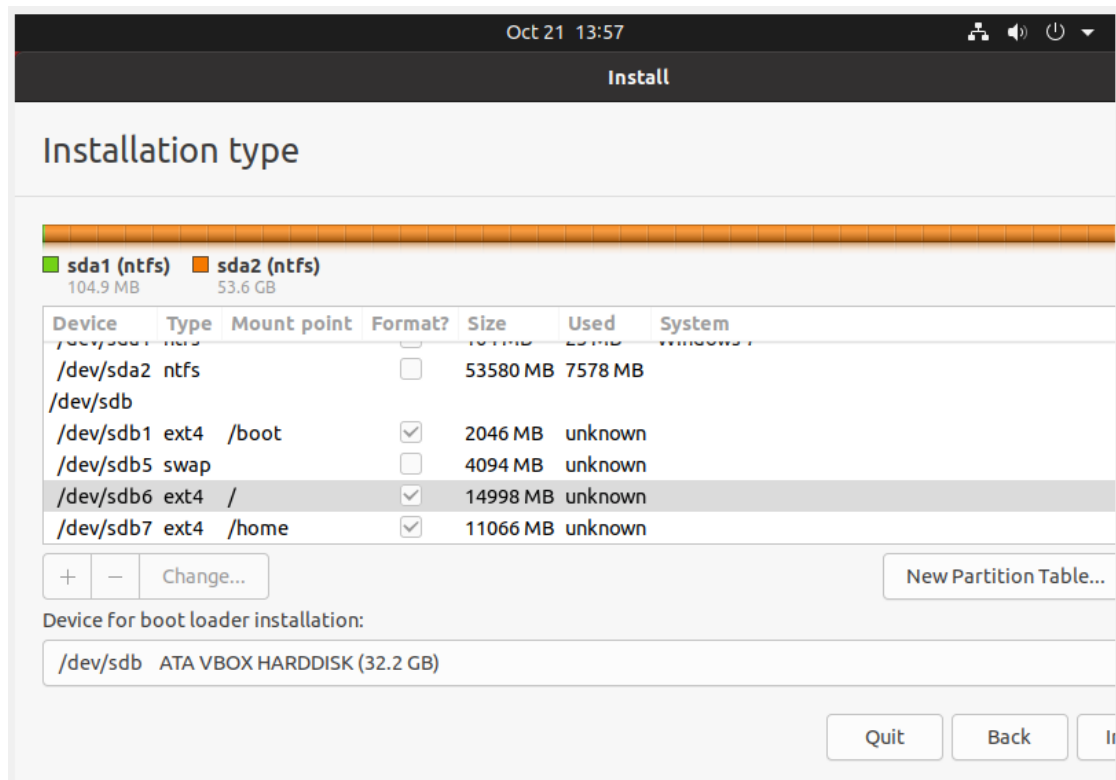




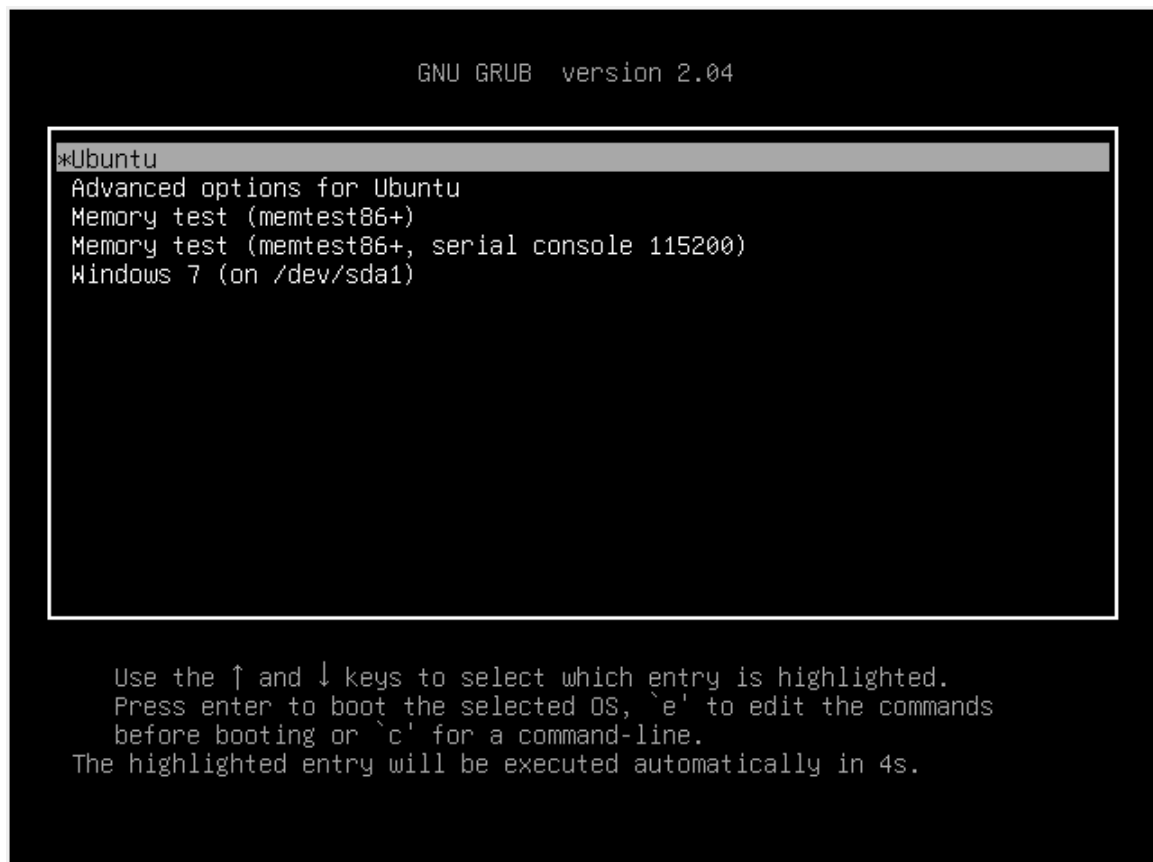
In order for us to make it through the installation, we are going to use the “Something else” option. This is made in order for us to prepare the ubuntu partitions correctly.



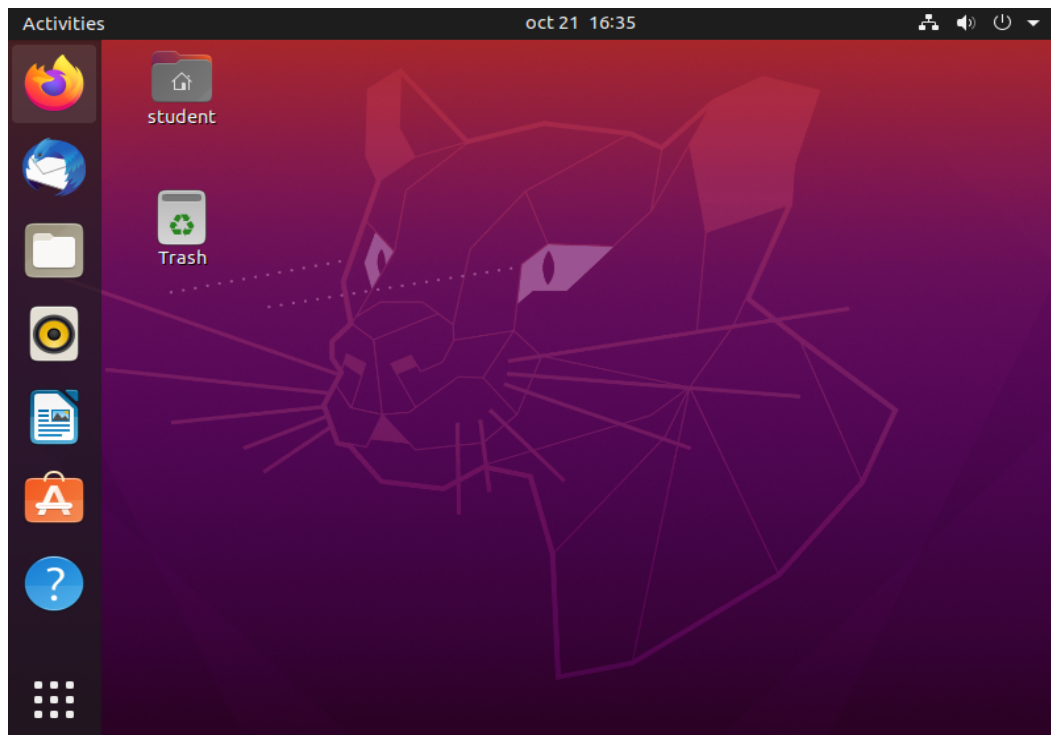
Now we will select the ubuntu partitions as in the following image.



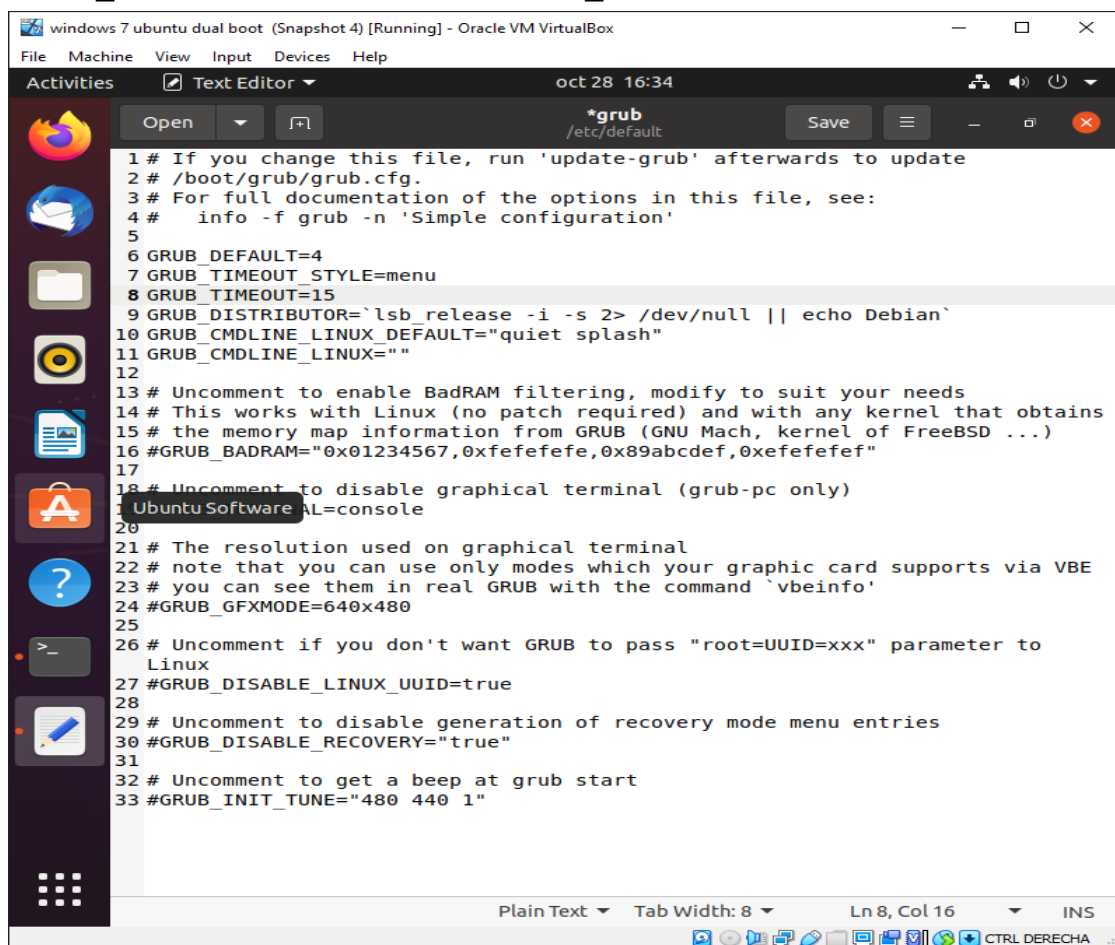
After rebooting the machine, the GRUB bootloader will show up. We will choose ubuntu.



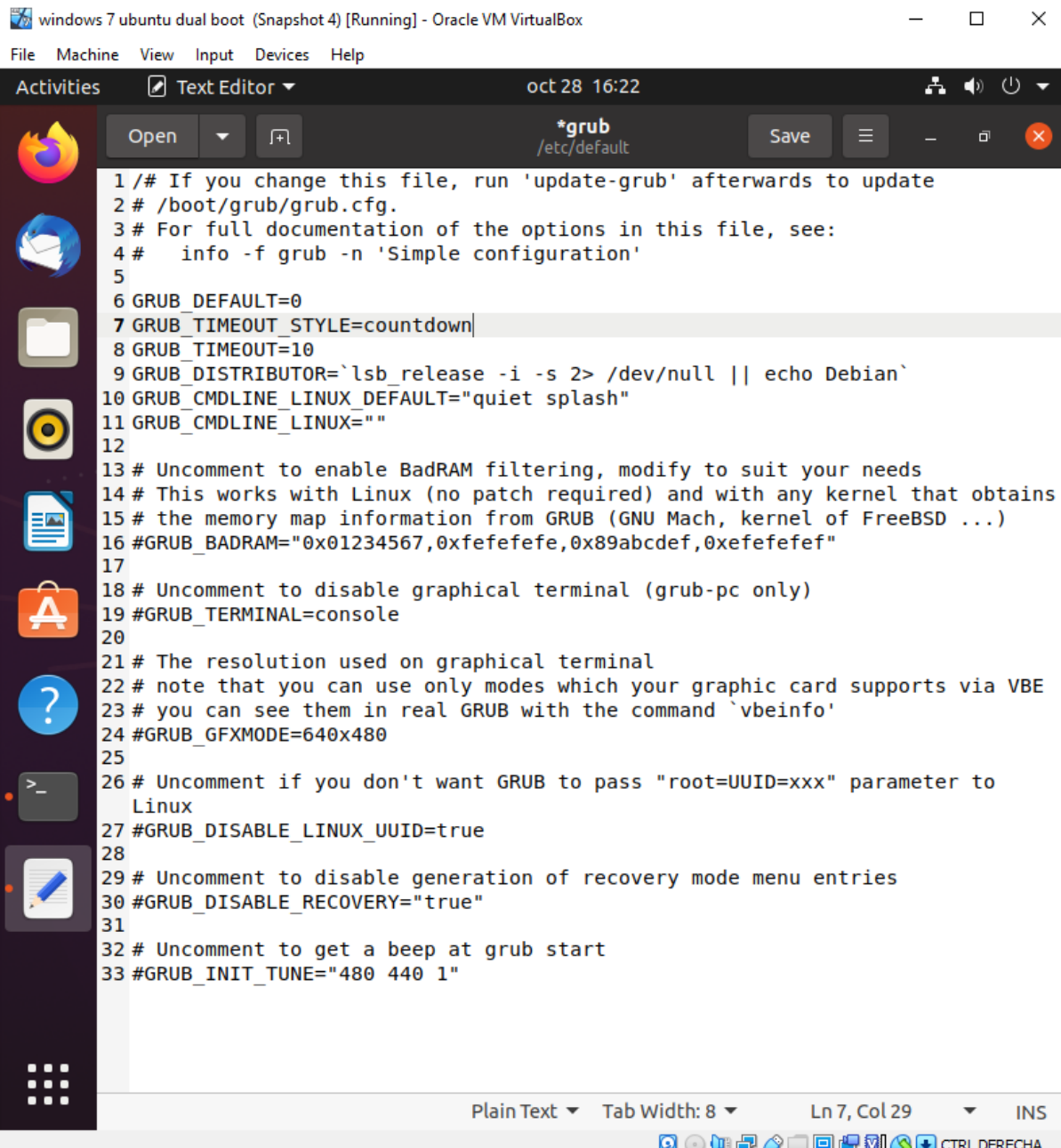
After Ubuntu has been initiated, we will open the terminal in which we will change the bootloader's config.



a. In order to open the grub settings, we will type “gedit /etc/default/grub” on the terminal. This page will show up. Here we will set GRUB_DEFAULT=4 GRUB_TIMEOUT STYLE=menu GRUB_TIMEOUT=15.



b. For the following exercises it is required to introduce the following commands in the terminal: `#set timeout_style=menu` `#if ["${timeout}" = 0]; then # set timeout=10 #fi`
For b we will set the settings like in the following image. If we do this, Windows will boot automatically after a 10 second countdown.

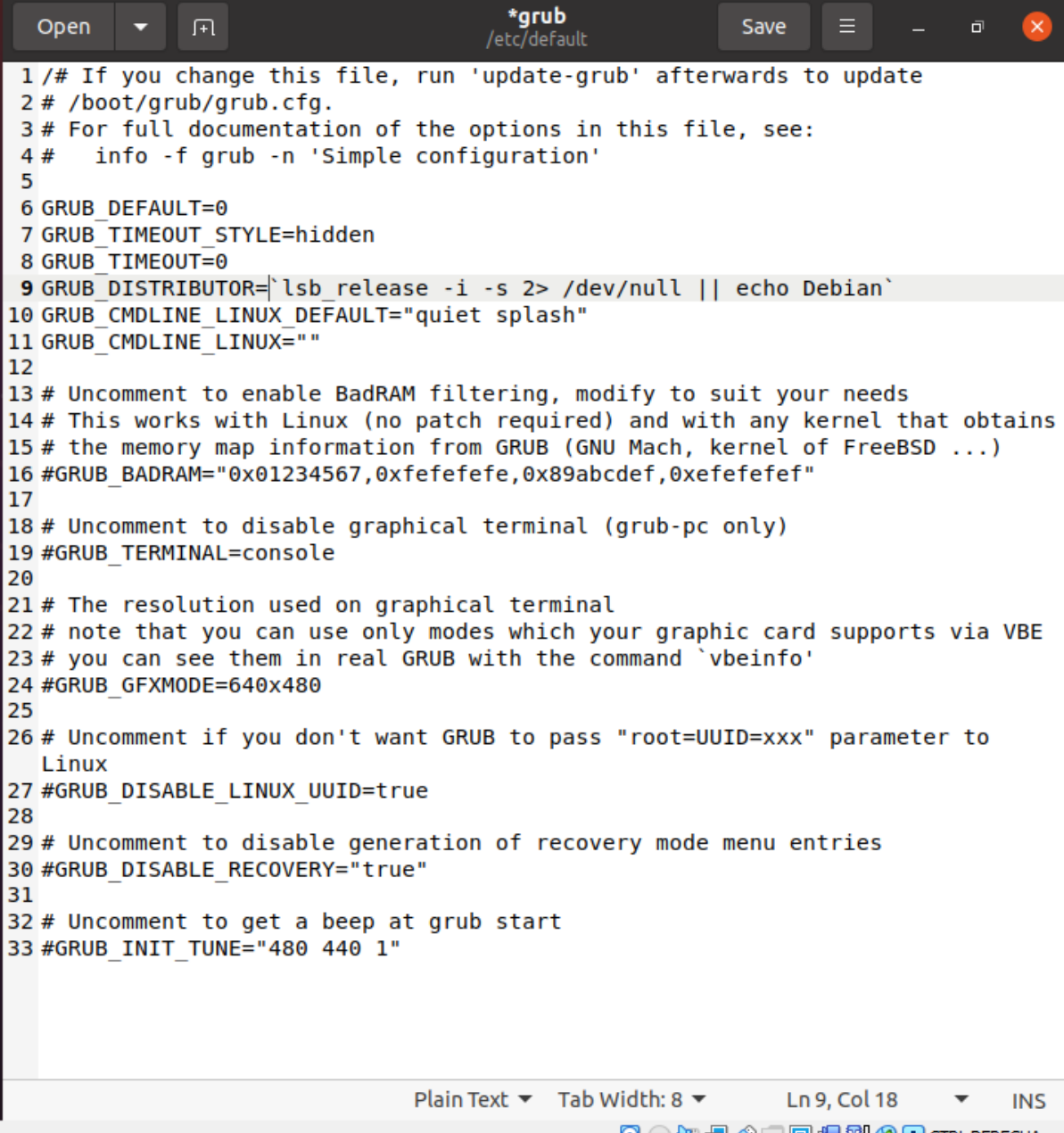


The screenshot shows a VirtualBox window titled "windows 7 ubuntu dual boot (Snapshot 4) [Running] - Oracle VM VirtualBox". Inside the window, a text editor is open, displaying the contents of the file `/etc/default/grub`. The text editor's title bar indicates the file is `*grub /etc/default`. The text in the editor is as follows:

```
1 /# If you change this file, run 'update-grub' afterwards to update
2 # /boot/grub/grub.cfg.
3 # For full documentation of the options in this file, see:
4 #   info -f grub -n 'Simple configuration'
5
6 GRUB_DEFAULT=0
7 GRUB_TIMEOUT_STYLE=countdown
8 GRUB_TIMEOUT=10
9 GRUB_DISTRIBUTOR=`lsb_release -i -s 2> /dev/null || echo Debian`
10 GRUB_CMDLINE_LINUX_DEFAULT="quiet splash"
11 GRUB_CMDLINE_LINUX=""
12
13 # Uncomment to enable BadRAM filtering, modify to suit your needs
14 # This works with Linux (no patch required) and with any kernel that obtains
15 # the memory map information from GRUB (GNU Mach, kernel of FreeBSD ...)
16 #GRUB_BADRAM="0x01234567,0xfefefefe,0x89abcdef,0xefefefef"
17
18 # Uncomment to disable graphical terminal (grub-pc only)
19 #GRUB_TERMINAL=console
20
21 # The resolution used on graphical terminal
22 # note that you can use only modes which your graphic card supports via VBE
23 # you can see them in real GRUB with the command `vbeinfo`
24 #GRUB_GFXMODE=640x480
25
26 # Uncomment if you don't want GRUB to pass "root=UUID=xxx" parameter to
   Linux
27 #GRUB_DISABLE_LINUX_UUID=true
28
29 # Uncomment to disable generation of recovery mode menu entries
30 #GRUB_DISABLE_RECOVERY="true"
31
32 # Uncomment to get a beep at grub start
33 #GRUB_INIT_TUNE="480 440 1"
```

The text editor's status bar at the bottom shows "Plain Text", "Tab Width: 8", "Ln 7, Col 29", and "INS". The VirtualBox window's taskbar at the bottom includes icons for various applications and a system tray with a "CTRL DERECHA" button.

c. We will use the following settings. If we do this, Ubuntu will boot without displaying the menu.



```
1 /# If you change this file, run 'update-grub' afterwards to update
2 # /boot/grub/grub.cfg.
3 # For full documentation of the options in this file, see:
4 #   info -f grub -n 'Simple configuration'
5
6 GRUB_DEFAULT=0
7 GRUB_TIMEOUT_STYLE=hidden
8 GRUB_TIMEOUT=0
9 GRUB_DISTRIBUTOR=`lsb_release -i -s 2> /dev/null || echo Debian`
10 GRUB_CMDLINE_LINUX_DEFAULT="quiet splash"
11 GRUB_CMDLINE_LINUX=""
12
13 # Uncomment to enable BadRAM filtering, modify to suit your needs
14 # This works with Linux (no patch required) and with any kernel that obtains
15 # the memory map information from GRUB (GNU Mach, kernel of FreeBSD ...)
16 #GRUB_BADRAM="0x01234567,0xfefefefe,0x89abcdef,0xefefefef"
17
18 # Uncomment to disable graphical terminal (grub-pc only)
19 #GRUB_TERMINAL=console
20
21 # The resolution used on graphical terminal
22 # note that you can use only modes which your graphic card supports via VBE
23 # you can see them in real GRUB with the command `vbeinfo'
24 #GRUB_GFXMODE=640x480
25
26 # Uncomment if you don't want GRUB to pass "root=UUID=xxx" parameter to
   Linux
27 #GRUB_DISABLE_LINUX_UUID=true
28
29 # Uncomment to disable generation of recovery mode menu entries
30 #GRUB_DISABLE_RECOVERY="true"
31
32 # Uncomment to get a beep at grub start
33 #GRUB_INIT_TUNE="480 440 1"
```


Plain Text ▾ Tab Width: 8 ▾ Ln 9, Col 18 ▾ INS

CTRL DERECHA

d. If we change the settings like this, the virtual machine will boot windows without showing the menu. Make sure to run "update-grub" afterwards.

```
1/# If you change this file, run 'update-grub' afterwards to update
2# /boot/grub/grub.cfg.
3# For full documentation of the options in this file, see:
4#   info -f grub -n 'Simple configuration'
5
6GRUB_DEFAULT=4
7GRUB_TIMEOUT_STYLE=hidden
8GRUB_TIMEOUT=0
9GRUB_DISTRIBUTOR=`lsb_release -i -s 2> /dev/null || echo Debian`
10GRUB_CMDLINE_LINUX_DEFAULT="quiet splash"
11GRUB_CMDLINE_LINUX=""
12
13# Uncomment to enable BadRAM filtering, modify to suit your needs
14# This works with Linux (no patch required) and with any kernel that obtains
15# the memory map information from GRUB (GNU Mach, kernel of FreeBSD ...)
16#GRUB_BADRAM="0x01234567,0xfefefefe,0x89abcdef,0xefefefef"
17
18# Uncomment to disable graphical terminal (grub-pc only)
19#GRUB_TERMINAL=console
20
21# The resolution used on graphical terminal
22# note that you can use only modes which your graphic card supports via VBE
23# you can see them in real GRUB with the command `vbeinfo`
24#GRUB_GFXMODE=640x480
25
26# Uncomment if you don't want GRUB to pass "root=UUID=xxx" parameter to
   Linux
27#GRUB_DISABLE_LINUX_UUID=true
28
29# Uncomment to disable generation of recovery mode menu entries
30#GRUB_DISABLE_RECOVERY="true"
31
32# Uncomment to get a beep at grub start
33#GRUB_INIT_TUNE="480 440 1"
```

Plain Text ▾ Tab Width: 8 ▾ Ln 8, Col 15 ▾ INS

 CTRL DERECHA

3.If you lose the bootloader in exercise 2, use the tool "Boot-Repair", which will let you solve the issue. If necessary, use the following the instructions in the URL:
<https://help.ubuntu.com/community/Boot-Repair>

In order to repair GRUB, we will need to use the Boot-Repair tool.
We open the terminal and type:

```
sudo add-apt-repository ppa:yannubuntu/boot-repair
sudo apt-get update
sudo apt-get install -y boot-repair && boot-repair
```

But with this option we are hiding the menu. If we type "ESC" when we start the machine, Ubuntu's startup menu will be displayed and we will be able to modify GRUB's configuration.