

Ubuntu

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1 A quick introduction to Free Software

- Computer programs: binary files and source code
- Free Software
- Linux

2 Ubuntu

- What is Ubuntu?
- Advantages



The source code

(Source code)

When a computer developer creates a program, he does so writing instructions in a human-readable language. The human-readable instructions of which a program consists are its “source code”.



An example of source code (C++)

```
//  
// Example code which asks the user for his name and greets him.  
//  
  
#include <iostream>  
#include <string>  
  
using namespace std;  
  
int main()  
{  
    cout << " Please enter your first name: ";  
  
    // read the name  
    string name;  
    cin >> name;  
  
    std::cout << " Hello , " << name << " !" << std::endl;  
    return 0;  
}
```



Binary files

(What happens with the source code?)

In order for the computer to understand the source code, it needs to be compiled into a binary file, which humans can't read nor modify.

When you download and install a program, you are getting said program in its binary form, which means that you can run it (maybe with certain restrictions) but you can't do any change to the program; you need its source for that.



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Free Software

Richard M. Stallman started the Free Software movement, founding the Free Software Foundation, the GNU project and the GNU General Public License.

- The freedom to run the program for any purpose.
- The freedom to study and modify the program.
- The freedom to copy the program so you can help your neighbour.
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits.



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GNU/Linux

In 1991 a student called Linus Torvals started working, as a hobby, on a kernel which was to be called *Linux*. He released it under the GNU General Public License so that others could benefit of it, and soon a whole community of computer experts gathered around it to help improve it. Together with the *GNU* components and other programs which appeared later it formed a complete operating system, known as *GNU/Linux*.

Nowadays, GNU/Linux has the backing of several major companies (IBM, RedHat, Novell, etc.) and is the most used operating system for servers.



What is Ubuntu?

Ubuntu is a free operating system based upon GNU/Linux (or, more technically, a “GNU/Linux distribution”). Its motto is:

GNU/Linux for human beings.

It is based upon another GNU/Linux distribution, Debian, and was founded in 2004 by the South-African Mark Shuttleworth, who created the company *Canonical Limited* to back it.

At the moment it has around 150 developers and many more people contributing in other aspects; most of the contributors are volunteers. Thousands contribute indirectly to it (eg., working on Debian, Linux, programs it includes, etc).

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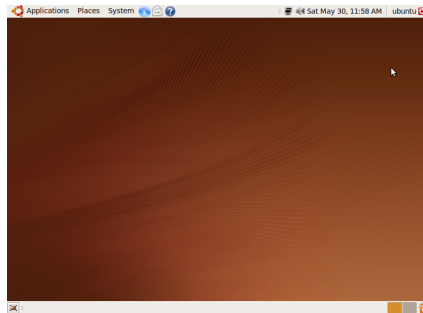
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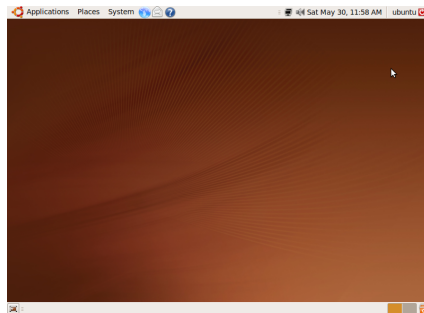
Why Ubuntu?

- It is Free Software; anyone can modify it or adapt it.
- It is available at no cost, and will always be.
- It fast and doesn't need as many resources as other operating systems.



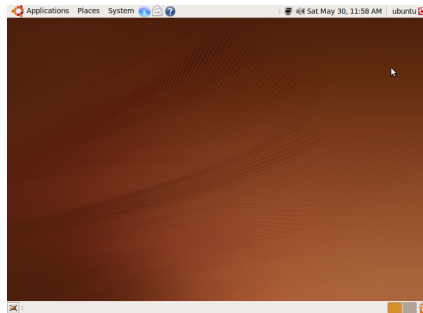
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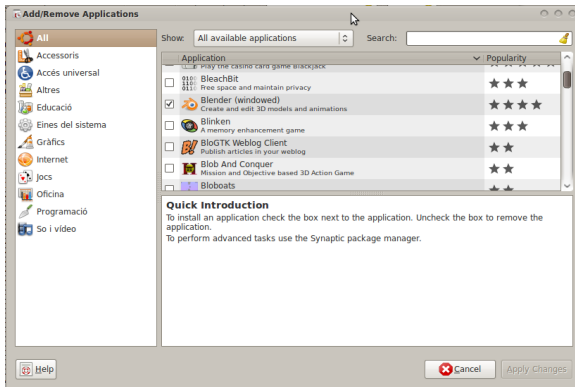


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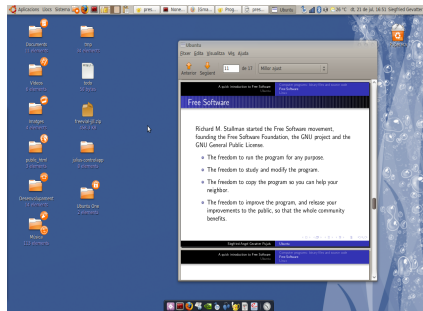
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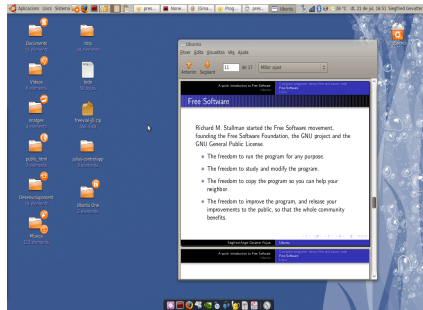
- It comes with almost everything you may need already installed; additional applications (over 20.000 of them) can be installed with a single click and will be automatically kept up to date.



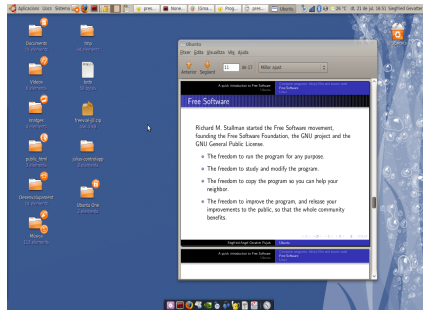
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