TRACCIA 1

In INRIM tutti gli edifici sono dotati di rete Wi-Fi.
Come si configura una rete wireless in Windows ? Di quali informazioni abbiamo bisogno ?

TRACCIA 2:

Quali sono le precauzioni fondamentali per la sicurezza informatica?
Sia a livello di rete di Istituto, sia per il singolo computer

TRACCIA 3:

In INRiM tutti i computer sono collegati alla rete.
Un collega segnala che dal suo computer non riesce ad accedere ad una cartella condivisa su un altro computer: quali verifiche facciamo per capire la causa del problema?
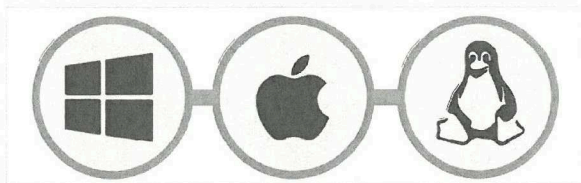
OPERATING SYSTEMS

Windows 10 is the most widely used operating system in the world, so it's natural that the vast majority of coding tools are written for Microsoft's leading operating system. However, don't discount macOS and especially Linux.

macOS users enjoy an equal number of coding tools to their Windows counterparts. In fact, you will probably find that a lot of professional coders use a Mac over a PC, simply because of the fact that the Mac operating system is built on top of Unix (the command-line OS that powers much of the world's filesystems and servers). This Unix layer lets you test programs in almost any language without using a specialised IDE.

However, Linux is, by far and away, one of the most popular and important coding operating systems available. Not only does it have a Unix-like backbone, it's also free to download, install and use and comes with most of the tools necessary to start learning how to code. Linux powers most of the servers that make up the Internet. It's used on nearly all of the top supercomputers, as well as specifically in organisations such as NASA, CERN and the military, it also forms the base of Android-powered devices, smart TVs and in-car systems. Linux, as a coding platform, is an excellent idea and it can be installed inside a virtual machine without ever affecting the installation of Windows or macOS.

THE RASPBERRY PI

If you haven't already heard of the Raspberry Pi, then we suggest you head over to **www.raspberrypi.org** and check it out. In short, the Raspberry Pi is a small, fully functional computer. It comes with its own customised, Linux-based operating system that's pre-installed with everything you need to start learning how to code in Python, C++, Scratch and more.

Costing around £35, it's incredibly cheap and allows you to utilise different hardware, in the form of robotics and electronics projects, as well as offering a complete desktop experience. Although not the most powerful computing device in the world, the Raspberry Pi has a lot going for it, especially in terms of being one of the best coding platforms available.
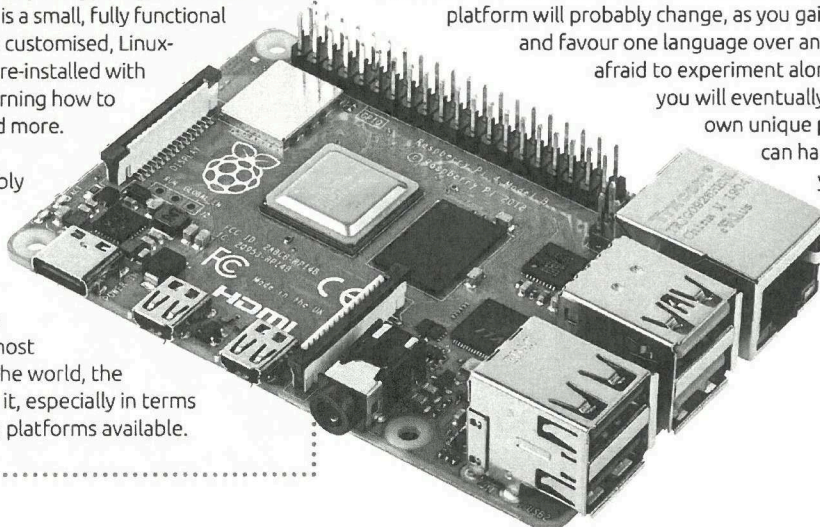
VIRTUAL MACHINES

A virtual machine is a piece of software that allows you to install a fully working operating system within the confines of the software itself. The installed OS will allocate user-defined resources from the host computer, providing memory, hard drive space etc., as well as sharing the host computer's Internet connection.

The advantage of a virtual machine is that you can work with Linux, for example, without it affecting your currently installed host OS. This means that you can have Windows 10 running and launch your virtual machine client, boot into Linux and use all the functionality of Linux, while still being able to use Windows.

This, of course, makes it a fantastic coding platform, as you can have different installations of operating systems running from the host computer while using different coding languages. You can test your code without fear of breaking your host OS and it's easy to return to a previous configuration without the need to reinstall everything again.

Virtualisation is the key to most big companies now. You will probably find, rather than having a single server with an installation of Windows Server, for example, the IT team have instead opted for a virtualised environment whereby each Windows Server instance is a virtual machine running from several powerful machines. This cuts down on the number of physical machines, allows the team to better manage resources and enables them to deploy an entire server dedicated to a particular task in a fraction of the time.

YOUR OWN CODING PLATFORM

Whichever method you choose, remember that your coding platform will probably change, as you gain experience and favour one language over another. Don't be afraid to experiment along the way, as you will eventually create your own unique platform that can handle all the code you enter into it.