HANDOUT: WINDOWS, SOFTWARE, FILES

Please read this handout. It explains
- the difference between hardware and software,
- the basics of a computer's operation system and software packages (such as MS Word) and how they relate to each other.
- files and how to organize these into folders and on drives, so you can find them back.
- the basic components of Windows.

The difference between hardware and software
The computer is sometimes called ‘the universal machine': the machine that can be used for any task. A toaster has been designed to toast bread, a calculator has been designed to count numbers, a typewriter has been designed to type documents and a computer can do it all. A computer has not been designed to perform just one specific task. It has been designed to read and execute different instructions. Because it can perform almost any task, it is sometimes called ‘the universal machine’. You can compare this with human beings. A human being has not been designed to do one specific job but can do any job as long as he/she is given the right instructions.

The instructions are called **‘software’** because they are not tangible: you cannot touch or see them. The instructions can be stored on a floppy disk or a CD-ROM, which you can see and touch, but these items are not the instructions. The instructions give the computer 'intelligence'. You can compare instructions with rules, such as: 'if the user presses the k-key on the keyboard, then the letter 'k' is displayed at the position of the cursor on the screen' or 'if the user presses the print button, then the printer prints out all the letters and writing symbols, in the same order as displayed on the monitor'.

Those parts of the computer you can see and touch are called **hardware** because these parts are tangible. Pieces of hardware are, for example: keyboard, mouse, hard disk, processor and monitor.

Software: applications and operating system
Applications can actually make files like text documents, drawings and Web sites. The computer stores such applications in its memory, like we keep information in a book. Once an application has been loaded into the computer's memory, it can be used. Imagine you have finished making a drawing on the computer and now you want to write a letter. To be able to do so, the drawing application needs to be changed to a word processor. The operating system makes sure that the drawing application is unloaded from the computer’s memory. Then the operating system picks up the writing application you need and loads it into the computer's memory.

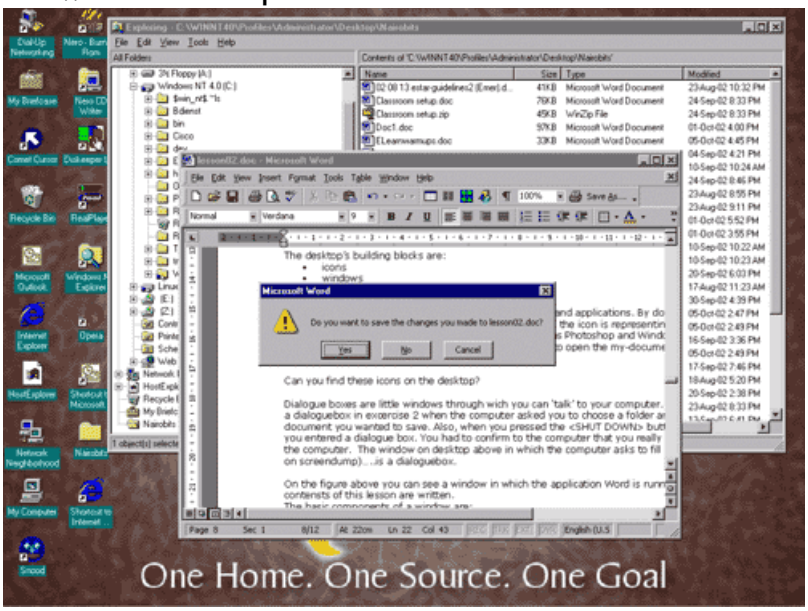
Files, drives and folders
Saving your documents is essential when you work with a computer. The computer does not automatically save the document you are working on. This means you always have to instruct the computer to save a document. Remember as a rule that saving means: giving a name to the document you are working on.

Folders are used to organize the documents you store on the computer. Think of folders as boxes with specific names that contain files of the same kind. In the box labelled 'letters', you save the letters you make; in the box labelled 'drawings', you keep your drawings.

Drives are devices that are used to store files. Most computers have at least two drives: a hard drive – which is its main storage space – and a floppy drive – to store smaller volumes of data. The hard drive is typically designated the C:\ drive and the floppy drive is typically designated the A:\ drive. Schematically, this looks as follows:

Besides the character keys, there are many other keys. The following figure shows you some:

The Windows Desktop



The building blocks of your desktop are:
Icons; windows; dialogue boxes
An **icon** is a graphic image. Icons represent files, folders and applications. By double-clicking on them, you can open files and folders or start the application the icon represents. On the computer screen above, you can find icons to start the 'Photoshop' and 'Windows media player' applications. There is an icon to open the nairobits_news file, an icon to open the my- documents folder and another one to open 'My_computer'.
Can you find these icons on your computer's desktop?

Dialogue boxes are little windows that allow you to 'talk' to your computer. You have worked with a dialogue box in exercise 2 when the computer asked you to choose a folder and a name for the document you wanted to save. When you pressed the -SHUT DOWN- button in the start menu, you also entered a dialogue box. You had to confirm to the computer that you really wanted to shut down the computer. The window on desktop above in which the computer asks 'Do you want to save the changes you made to lesson02.doc?' is a dialogue- box.

On the figure above you can see a window in which the MS Word application is running and in which the contents of this lesson are written. The basic components of a window are:

These buttons are located in the upper right-hand corner of the screen. The 'maximize' button enlarges the active window to fill the entire desktop. The 'minimize' button reduces the active window to an icon.

The 'close' button quits the application.

Scroll Bar
When the information in a window cannot be seen entirely, scroll bars are generally created. These scroll bars allow you to move through a document or a list when the entire document or list does not fit the window. To move up or down a document and left or right, click the scroll arrows or drag the square left and right.