Contents

1   Introduction

In this document,we explain several parts of the Personal Computer and every one of them should appear in the Index above.

2 Central Processor Unit

This section is meant to illustrate the main component of a PC which is the Processor usually addressed as CPU. This is the piece of hardware that phisically executes *software* instructions one at at time. Without this component there is no chance to have a running computer. It belongs to the bare minimum set of components that you need to have if you want to have something that you can call a PC.

Inside of it there is a set of *registers* available for software developers to use. Usually software developer write their code in a *high level language* such as C++, Python, Java, etc. The reason they're called high level languages is because there is a high level of abstraction from the processor language level which is usually called assembly language (like 8086 or Motorola M68000)

Every *core* of the processor executes one piece of code properly *compiled* in the low level architecture language by the compiler.

The reason why today we have usually more than one core is to allow concurrency which means more than one piece of code executed at a time. This is achieved by developers by doing concurrent programming which essentially is all about writing a software thinking at every instruction which process is executing it, so we'll find in the code checks like

$$if(pid == 0)$$

where *pid* is the ID of the **process** executing the "if" instruction which returns true only when the **process** hasn't got any *sons*. If it returns false then we're facing the father process, which usually is the process where the son has been generated from but we'll go more in depht on this later on

3 Hard Drive

This is where data is stored

3.1 types of hard drive

There are SSD drives and traditional drives

4 Memory

This is where *programs* allocate space for their *execution*

4.1 types of Memory

We have SDRAM, SO-DIMM

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