Sistemas Informáticos (Computer Systems)

Unit 07. Activities 01

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1. Exercise 01

What is the function of the battery that is in the motherboard? What happens when it runs out?

2. Exercise 02

In the documentation, we have talked about some internal connectors, but there are others who have not said anything. For example, some motherboards have a WOL connector. Can you describe it and indicate what is its function?

3. Exercise 03

Following the previous question, there are still other internal connectors, like the ports I/O: IDE, FDD, SATA, USB, FireWire. Find out about them showing their shape (photo), as silk-screened on the motherboard, which connect, which speeds support, 4etc.

4. Exercise 04

What is the difference between suspend and hibernate a computer? And between warm start and cold start? Discuss it in forum.

5. Exercise 05

When a transmission is in parallel and when it is in serial mode? Define it. Share your opinion about what is faster in forum.

6. Exercise 06

Find one motherboard for Intel processors and one for AMD processors? What chipset incorporates? What features does each of them?

7. Exercise 07

For each of the motherboard you have chosen in the activity 6. What memory distribution would you do? What kind of memory? Could you put ECC modules? How much it would cost (€)?

8. Exercise 08

For each of the motherboard you have selected in the activity 6, indicate where is the processor, north bridge, south bridge and BIOS/UEFI.

9. Exercise 09

Answer the following questions:

1. Physical definition of processor, functions.
2. How does a dual-core architecture work?

3. Difference between multicore and multiprocessor system.
4. Which are the elements of a dual-core CPU? Make a diagram.

10. Exercise 10

Analyzes the different ways of cooling that a processor can have. What is the sink? Why it has this shape?. Can the fan change its frequency to cool more? How it detects that it have to turn faster?

11. Exercise 11

Download the Everest, AIDA or similar application and analyzes your computer. Make a table in which all the elements studied so far appear, and share them in forum.

12. Exercise 12

Research and discuss your conclusions on the following topic: Monitoring the motherboard and equipment management.

13. Exercise 13

Knowing a little bit of history is a good idea to place us in a context. Make a chronology of microprocessors for PCs, starting with the 8088. What is Moore's Law?