

1 microcontroller. Block diagram

- in regard to the microcontroller PIC16F84A, in regard to the block diagram, try to identify the building blocks which their role seem to be known to you
- which blocks seem to be unknown to you?

a document related to the said microcontroller

might be found at the following web link

<http://ww1.microchip.com/downloads/en/DeviceDoc/35007b.pdf>

2 microcontroller. Instructions set

- in regard to the microcontroller PIC16F84A, what is the maximum addressable range of the instruction 'goto'?

### 3 binary system and decimal system

- the word base and the word radix what they might represent?

4 representing positive and integer values. Binary system and decimal system

- how a value represented in binary system might be represented in decimal system?
- how a value represented in decimal system might be represented in binary system?

- 5 binary system. Representing negative and integer values
- how a negative value might be represented using a binary system?

## 6 sign magnitude approach

- how zero might be represented when using the sign magnitude approach?
- when using the sign magnitude approach, adding a value to the negative version of the said value would it produce zero?

## 7 two complement approach

- when using the two complement approach, adding a value to the negative version of the said value would it produce zero?
- when using the two complement approach, the number of patterns used to represent positive values would it be equal to the number of patterns used to represent negative values?