Course on BASCOM AVR - (3)

Theoretic/Practical course on BASCOM AVR Programming.
Author: DAMINO Salvatore.

T1, L3 and BZ1 Management.

The purpose of these **3** simple examples, that follow, is to show that the same operation can be performed by using different techniques and instructions. All the programs execute the same work: they blink the **GMM AM08** on board **LED** with a fixed time period.

Even if the **3** programs perform the same visible function, they have some features that make them different.

Some of these differences are listed below.

- The precision in timing generation.
- Generated time period have relationship with crystal clock frequency.
- Generated time period have no relationship with crystal clock frequency.
- Etc.

When the user develop his program he will choose the best instructions according with the requirements of the application; so he will be able to enlarge or reduce these features by using the suitable instructions.

GMM AM08 Mini Module.

Example.004.   GMM AM08 on Board LED Blinking (1)

Added Definitions:
None

Added Declarations:
Dim …. As Long

Added Instructions:
NOT; DO; LOOP UNTIL

Added Operators:
+ ; >

This program blinks the on board **LED** of **GMM AM08.**

In order to perform this operation it is necessary to generate a base timing that defines the turned on and turned off periods, of the **LED**.

This requirement is satisfied by **DO … LOOP UNTIL** instructions, that generate a delay loop.

The **1** second base timing, used to blink the **LED**, is generated by counting a prefixed delay loops. The loops number, defined in these program at **116000** value, is experimentally obtained.

Example.005.   GMM AM08 on Board LED Blinking (2)

Added Definitions:
None

Added Declarations:
None

Added Instructions:
DELAY

Added Operators:
None

This program blinks the on board **LED** of **GMM AM08.**

In order to perform this operation it is necessary to generate a base timing that defines the turned on and turned off periods, of the **LED**.

This requirement is satisfied by **DELAY** instruction of **BASCOM AVR**.

The **1** second base timing is generated by counting a prefixed delay loops. The loops number, defined in these program at **993** value, is experimentally obtained.

Example.006. GMM AM08 on Board LED Blinking (3)

Added Definitions:
None

Added Declarations:
None

Added Instructions:
WAITMS

Added Operators:
None

This program blinks the on board **LED** of **GMM AM08.**

In order to perform this operation it is necessary to generate a base timing that defines the turned on and turned off periods, of the **LED**.

This requirement is satisfied by **WAITMS** instruction of **BASCOM AVR**.

In this conditions the **1** second base timing is obtained in a easier way, in fact the instruction is capable to generate a variable delay from **1** to **65535** milliseconds. So it is sufficient the instructions, with an argument 1000, that selects an equal delay of **1000 ms**.