Assembler Directives

Assembler directives are the directions to the assembler which indicate how an operand or section of the program is to be processed. These are also called pseudo operations which are not executable by the microprocessor. The following section explains the basic assembler directives for 8086.

ASSEMBLER DIRECTIVES:

The various directives are explained below.

1. ASSUME : The ASSUME directive is used to inform the assembler the name of the logical segment it should use for a specified segment.

Ex: ASSUME DS: DATA tells the assembler that for any program instruction which refers to the data segment ,it should use the logical segment called DATA.

2.DB -Define byte. It is used to declare a byte variable or set aside one or more storage locations of type byte in memory.

For example, CURRENT_VALUE DB 36H tells the assembler to reserve 1 byte of memory for a variable named CURRENT_ VALUE and to put the value 36 H in that memory location when the program is loaded into RAM .

3. DW -Define word. It tells the assembler to define a variable of type word or to reserve storage locations of type word in memory.

4. **DD(define double word**) :This directive is used to declare a variable of type double word or restore memory locations which can be accessed as type double word.

5.DQ (define quadword) : This directive is used to tell the assembler to declare a variable 4 words in length or to reserve 4 words of storage in memory .

6.DT (define ten bytes): It is used to inform the assembler to define a variable which is **10** bytes in length or to reserve 10 bytes of storage in memory.

7. EQU –Equate It is used to give a name to some value or symbol**.** Every time the assembler finds the given name in the program, it will replace the name with the value or symbol we have equated with that name

8.ORG -**Originate** : The ORG statement changes the starting offset address of the data.

It allows to set the location counter to a desired value at any point in the program.For example the statement ORG 3000H tells the assembler to set the location counter to 3000H.

9 .PROC- Procedure: It is used to identify the start of a procedure. Or subroutine.

10. END- End program .This directive indicates the assembler that this is the end of the program module.The assembler ignores any statements after an END directive.

11. **ENDP**- End procedure: It indicates the end of the procedure (subroutine) to the assembler.

12.ENDS-End Segment: This directive is used with the name of the segment to indicate the end of that logical segment.

Ex: CODE SEGMENT : Start of logical segment containing code

CODE ENDS : End of the segment named CODE.