1. What does org 0x7c00 mean and why is it necessary?

R: “ORG” defines where the program will be or expects to be loaded into memory. In others words, it means where the code will be storage in memory after being loaded.

It is necessary to put this in the code otherwise it won’t compile due to the fact that It won’t have a destined space on memory nor an address to start from.

1. What is the purpose of DW 0xAA55 and why is it necessary?

R: That is called a Boot signature, this exist with the purpose to tell the BIOS that what we coded is a valid Boot loader. Without put this at the end of the code, the BIOS will not recognize our code as a valid Boot loader.

1. Why a Boot loader should be programmed in assembly?

R: Because it needs to be compact, since they do not have access to Operating Systems routines, they have to be made to focus on doing special requirements that usually have to be done by the use of low-level language.