What is data encapsulation?

Data Encapsulation is an Object Oriented Programming concept that bind a group of related properties, functions, and other members are treated as a single unit. Class is the best example of Data Encapsulation. It sometimes referred to as data hiding that prevents the user to access the implementation details. Encapsulation therefore guarantees the integrity of the data contained in the Object.

**What is encapsulation?**

The whole idea behind the data encapsulation is to hide the implementation details from users. This is achieved through the state (the private fields) and the behaviours (the public methods) of a Class.

Data Encapsulation is implemented by using access specifiers (Access Modifiers) and it defines the scope and visibility of a class member. In C# , Encapsulation uses five types of modifier to encapsulate data.

* Public
* Private
* Protected
* Internal
* Protected internal

NB: As the packet travels through the TCP/IP protocol stack, the protocols at each layer either add or remove fields from the basic header. **When a protocol on the sending host adds data to the packet header**, the process is called data encapsulation.