Encapsulation is a fundamental concept in Object-Oriented Programming that involves keeping the underlining attributes and methods contained privately in a single unit class. It restricts direct access to everything except for methods employing abstraction which are used to interface with other pieces of software.

This is done for several reasons. Sensitive data can be hidden from external access, reducing the risk of accidental modification or corruption, thus providing data protection. By grouping related data and methods together, encapsulation makes code easier to understand, debug, and maintain. It also allows changes to internal logic to be made without affecting other parts of the program that rely on the public interface. This gives you modularity and flexibility.

Add example here.