What is encapsulation and why is it important?

Encapsulation is about hiding information. In my mind I see Encapsulation as a cog in a machine. Each time you make a class, object or function it represents a cog, or system of cogs in a machine. The idea is to enclose the functionality within each of these sections, and then to be able to implement these functionalities within our program.

In the code we worked on we have different classes that contain unique functions. These functions enclose different abstractions. Abstractions to set a location, or to check a location, or compare a location. These functions are each “encapsulated” within classes.