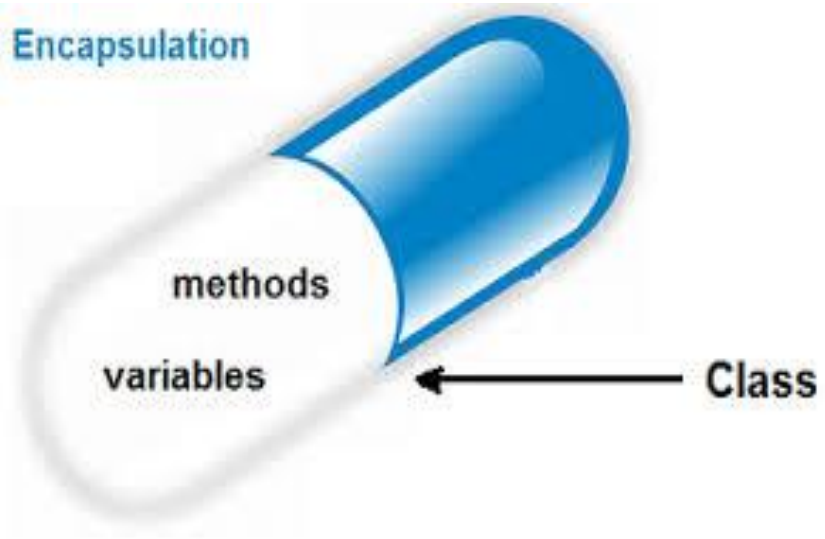
Encapsulation

It is nothing new and it is as popular as Harry Potter books among kids.



Encapsulation

- Encapsulation in Java is a mechanism of wrapping the data (variables) and code acting on the data (methods) together as single unit.
- In encapsulation the variables of a class will be hidden from other classes, and can be accessed only through the methods of their current class.
- it is also known as data hiding.

Encapsulation

To achieve encapsulation in Java

- Declare the variables of a class as private.
- Provide public setter and getter methods to modify and view the variables values.

Encapsulation is also known as “**data Hiding**”.

Advantage of Encapsulation in java

- By providing only setter or getter method, you can make the class **read-only or write-only**.
- It provides you the **control over the data**.
- It improves maintainability and flexibility and re-usability.
- The users of a class do not know how the class stores its data.
- Encapsulation allows you to change one part of code without affecting other part of code.

Encapsulation

- **Analyzing Real-life Objects**

Take a car as an example. What are expectations from Car?

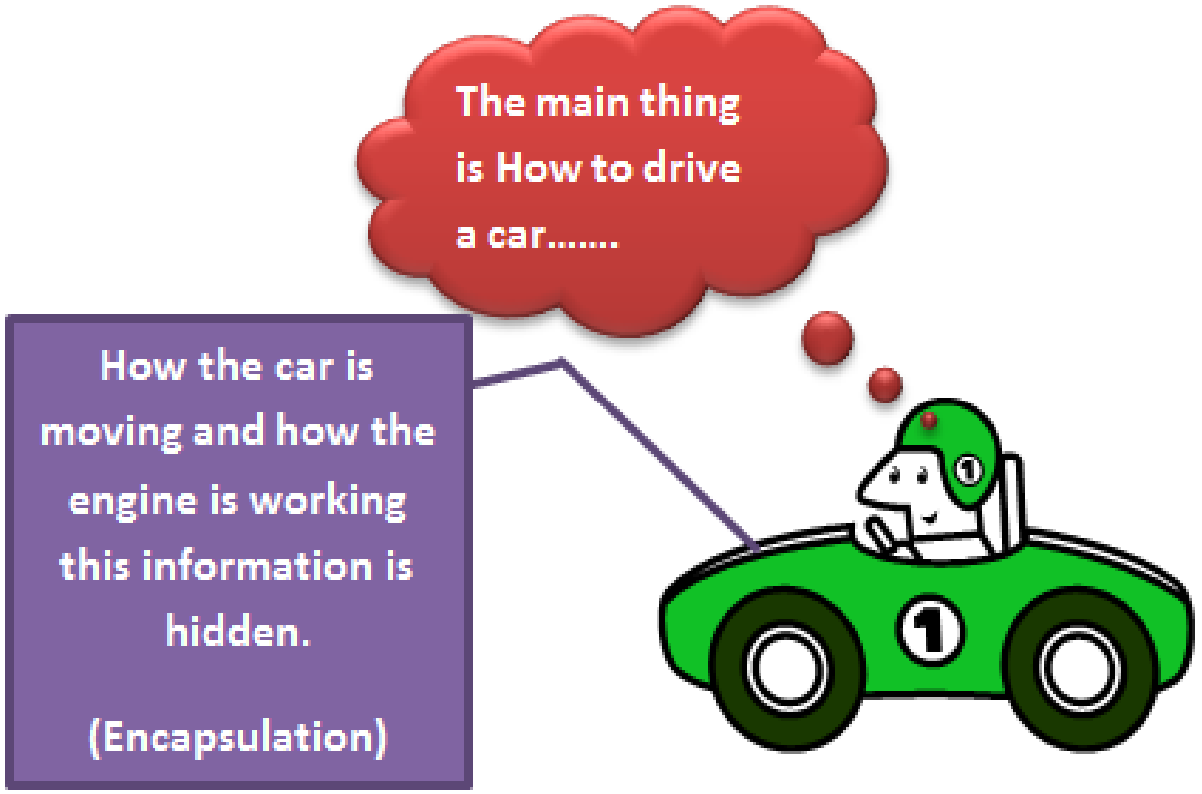
Start the car. Accelerate the car. Accelerate more n more. Break. Move to reverse slowly. Stop. That’s it.

To achieve these behavior, you are provided with some of the mechanisms.

Access Modifiers

private – Most restrictive, allows only class level access.
default - Package level access.
protected – Package level access + access to sub-classes.
public – Least restrictive, doesn’t impose any visibility constraint.

Encapsulation



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