1. What is class in Python, and how it is used to create objects?

Answer :-

 A **class** in Python is a blueprint or template for creating objects. It defines the properties (attributes) and behaviors (methods) that the objects created from it will have.

You can think of a class as a blueprint for a house, and objects as the actual houses built using that blueprint.

A class is defined using the class keyword, followed by the class name and a colon.

2. What are methods and attributes in Python Classes?

Answer :-

 Attributes:

- Attributes (also known as **properties**) are variables that hold data related to the object.
- They define the characteristics of an object and are defined within a class.
- For example, in the Car class above, brand and model are attributes.

Methods:

- Methods are functions defined inside a class that describe the behaviors of an object.
- Methods can access and modify the attributes of an object.

3.What is encapsulation and how does it protect data within a class?

Answer :-

Encapsulation is a fundamental concept in object-oriented programming that involves wrapping the data (attributes) and the methods that operate on the data into a single unit, i.e., a class.

Encapsulation allows us to **control access** to the data by using access specifiers like **private** or **protected**.

This helps to **protect the data** from being accessed or modified directly from outside the class.

In Python, attributes can be made private by prefixing them with double underscores (__). This makes the attribute inaccessible directly from outside the class.