OOP paradigm 📗📘📙

And it's main pecularities

Basics of OOP

- Everything is made up of classes and objects
- Class is a template for creating objects
- Classes have fields and methods

OOP has some main concepts

Main concepts of OOP

- Incapsulation
- Polymorphism
- Inheritance

Incapsulation 

Concept of enclosing parts of data inside of classes (sometimes called blackbox principle)
Classes have private, public members

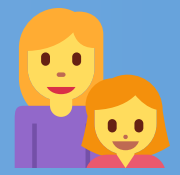
Example:
Class car may have fields *model, engine* and methods *drive(), stop()*. All that is combined in one class.

Polymorphism 🤘🤘🤘

Concept of class having multiple forms.
Classes may serve different purposes.

Example:

A method may accept two integers and return an integer, or may take two floats and return a float. Depending on the parameters we provide calling method, we get a different outputs.

Inheritance 

Classes can be derived from one another, preserving superclasses' fields and methods.

Example:

Class electric car derives from class car.
It derives such properties as *color, size, max. velocity*.
Electic car is subclass for class car.
Car is superclass for class electic car.

Advantages of OOP ✅

- Modularity for easier troubleshooting
- Reuse of code through inheritance
- Flexibility through polymorphism
- Effective problem solving

Disadvantages of OOP ⚠️

- Complexity on large scale
- Low compatibility
- Larger code length

Popular OOP languages

- Python
  for ease of learning and lots of libraries
- Ruby
  for fast compilation and execution
- C#
  for variety of applications and UI
- Java
  for fast execution and being cross-platform

Thanks for attention!