Object Oriented Programming.

OOP is [programming paradigm](https://en.wikipedia.org/wiki/Programming_paradigm) based on the concept of [objects](https://en.wikipedia.org/wiki/Object_(computer_science)).

1. Object

Object is instance of class. Object have two characteristics: that is State and Behavior.

* State is a well defined condition of an item.
* Behavior: Behavior is the observable effects of an operation or event,

1. Class & Instances

Class is a definiton of objects of the same kind. In other words, a class is a blueprint, template or prototype that defines and describes the static attributes and dynamic behavior common to all objects of the same kind.

Instance is a realization of particular item of a class. I other words, an instance is an instantiation of a class.

1. Inheritance

Inheritance is process where one class acquires the properties(methods and fields) of another.

1. Encaptulation

Is a mechanism of wrapping the data(variables) and code acting on the data(methods) together as a single unit.

1. Abstraction

Hiding internal details and showing functionality is known a as abstraction. Example : Car, we don’t know the internal mechines work.

1. Polymorphism

Is the ability of an object to take on many forms. There is two form of polymorphism : overriding and overloading

* Overriding(Static polymorphism) : ability child class to provide defferent implementation from parent class.
* Overloading(Dinamic polymorphism) : ability of a class to have two or more methods having same name, but their argument lists are different.

Difficult :

Oop php and java are different.