* **OOPS** is about developing an application around its data.
* **Object oriented programming** is a way of organizing programs as collection of objects, each of which represents an instance of a class

OOPS

Abstraction

Inheritance

Encapsulation

Polymorphism

Reusability

Security

Flexibility

**Abstraction** is a powerful

methodology to manage complex systems.

**Abstraction** refers to showing only the necessary details to the intended user.

**Encapsulation** is wrapping, just hiding properties and methods. **Encapsulation** is used for hide the code and data in a single unit to protect the data from the outside the world. Class is the best example of **encapsulation**. **Encapsulation** is also known as “data hiding”.

**Inheritance** is the mechanism by which an object acquires the some/all properties of another object. Java **Swing** and **Awt** classes represent best examples.

* **Polymorphism** means to process objects differently based on their data type. In other words it means, one method with multiple implementation, for a certain class of action.
* **Polymorphism** could be static and dynamic both. Overloading is static polymorphism while, overriding is dynamic polymorphism.
  + **Overloading** in simple words means two methods having same method name but takes different input parameters. This called static because, which method to be invoked will be decided at the time of compilation
  + **Overriding** means a derived class is implementing a method of its super class

**Inheritance:**

Inheritance allows a class to use the properties and methods of another class. In other words, the derived class inherits the states and behaviors from the base class. The derived class is also called subclass and the base class is also known as super-class. The derived class can add its own additional variables and methods.

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