**OOPs concept using Java**

**Encapsulation :** Binding or wrapping data (variables) and code (methods/functions) in a single unit is known as Encapsulation.

Example : class is good example for Encapsulation.

**JavaBean class:**

JavaBean class is a normal class with few rules we need follow

1. All variable must be private.
2. For each variable we need to provide setter and getter method.
3. Setter method is use to set the value and getter method is use to get the value.

**JavaBean class follow pure encapsulation rules.**

Inheritance :

Inheritance is use to inherits properties and behaviour of old class to new class.

class OldClass { super class or base class oar parent class

property

behaviour

}

class NewClass extends OldClass{

property sub class or derived class or child class

behaviour

}

Types of inheritance

1. Single inheritance : one super class and one sub class

class A { }

class B extends A {}

1. Multilevel inheritance : oner super class and n number of sub classes connected one by one

class A { }

class B extends A { }

class C extends B {}

class D extends C {}

1. Hierarchical inheritance : one super class and n number of sub classes connected to super class directly

Class A { }

Class B extends A{}

Class C extends A{}

Class D extends A {}

1. Multiple inheritance : more than one super class and one sub class

Class A {}

Class B {}

Class C extends A,B{} error this type of inheritance we can use using interface.

Oops relationship

1. Is a relationship
2. Has a relationship

Manager is a Employee

Employee has a Address

Class Employee {

Id,name,salary readEmp, disEmp

Address add = new Address();

}

Class Manager extends Employee {

numberofEmp, readMgr, disMgr

}

Class Developer extends Employee{

projectName,readDev, disDev

}

Class ProjectManager extends Manager{

clientName, readPMgr, disPmgr()

}

class Address {

City, state readAdd, disAdd

}