Department: BCA
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Subject: java (5th SEM.)
Topic: Inheritance

Inheritance in Java

➢ Inheritance is an important pillar of OOP (Object Oriented Programming).
➢ It is the mechanism in java by which one class is allow to inherit the features (fields and methods) of another class.

➢ Inheritance represents the **IS-A relationship** which is also known as a *parent-child* relationship.

Terms used in Inheritance

➢ **Class:** A class is a group of objects which have common properties. It is a template or blueprint from which objects are created.

➢ **Sub Class/Child Class/Derived Class:** Subclass is a class which inherits the other class. It is also called a derived class, extended class, or child class.

➢ **Super Class/Parent Class/Base Class:** Superclass is the class from where a subclass inherits the features. It is also called a base class or a parent class.

➢ **Reusability:** Inheritance supports the concept of "reusability", i.e. when we want to create a new class and there is already a class that includes some of the code that we want, we can derive our new class from the existing class. By doing this, we are reusing the fields and methods of the existing class.

Syntax

class subclass **extends** superclass

{

//body of subclass (fields and methods)

}

Note: The keyword used for inheritance is **extends**.

Example

IS-A Relationship (Manager is an Employee)


```java
class Employee
{
  double salary=25000;
}
class Manager extends Employee
{
 int bonus=10000;
}
class TestInheritance
{
  public static void main(String args[])
   {
   Manager obj=new Manager();
   System.out.println("Manager salary is:"+obj.salary);
   System.out.println("Bonus of Manager is:"+obj.bonus);
   }
}
```

```
C:\Users\ashishjha\Desktop\java>java TestInheritance
Manager salary is:25000.0
Bonus of Manager is:10000

C:\Users\ashishjha\Desktop\java>
```