

Assignment NO-3

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Title:-

Design and develop inheritance for a given case study, identify objects and relationships and implement inheritance whenever applicable. Employee class has Emp_name, Emp_id, Address, Mail_id and mobile_no as members. Inherit and classes: Programmer, Team lead, Assistant Project Manager and Project Manager from employee class. Add Basic pay (BP) as the member of all the inherited classes with 97% of BP as DA, 10% of BP as HRA, 12% of BP as PF, 0.1% of BP for staff club fund. Generate pay slips for the employees with their gross and net salary.

Theory.

Inheritance :

Inheritance in Java is a mechanism in which one object acquires all the properties and behaviors of a parents object. It is an important part of OOPs.

The idea behind inheritance in Java is that you can create new classes that are built upon existing classes. When you inherit from an existing class you can reuse methods and fields of the parent class.

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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

Subclass is a class which inherits the other class. It is also called a derived class.

Super class

Super class is the class from where a subclass inherits the features. It is also called a base class or a parent class.

The syntax of Java Inheritance

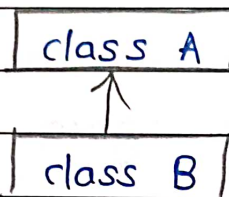
```
class Subclass-name extends Superclass-name  
{  
    // methods of fields  
}
```

The extends keywords indicates that you are making a new class that derived from an existing class. The meaning of "extends" is to increase the functionality.

Types

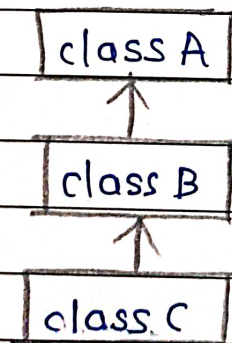
1] Single Inheritance

When a class inherits another class, it is known as a single Inheritance.



2] Multilevel Inheritance

When there is a chain of inheritance, it is known as multilevel inheritance.

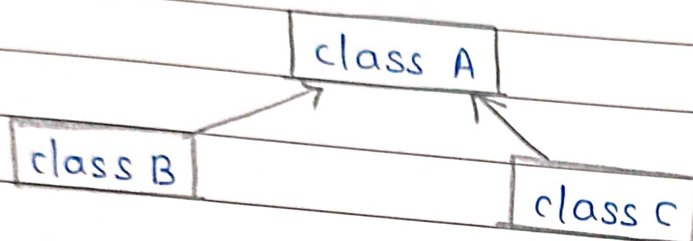


3] Hierarchical Inheritance

When two or more classes inherit a single class, it is known as hierarchical inheritance.

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Conclusion:

we have successfully implemented the inheritance program.