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(M.S.)
● Department of Information Technology ●
SE IT Java SLB Lab Experiment Writing Instructions

Experiment No: 03

Aim: To understand concept of Class for information encapsulation in Java by writing a Java program.

Theory: Concept of Classes and Objects in Java

In Java, classes and objects are basic concepts of Object Oriented Programming (OOPs) that are used to represent real-world concepts and entities. The class represents a group of objects having similar properties and behavior. For example, the animal type **Dog** is a class while a particular dog named **Tommy** is an object of the **Dog** class.

A class in Java is a set of objects which shares common characteristics/ behavior and common properties/ attributes. It is a user-defined blueprint or prototype from which objects are created. For example, Student is a class while a particular student named Ravi is an object.

Properties of Java Classes

1. Class is not a real-world entity. It is just a template or blueprint or prototype from which objects are created.

2. Class does not occupy memory.

3. Class is a group of variables of different data types and a group of methods.

4. A Class in Java can contain:
- Data member
- Method
- Constructor
- Nested Class
- Interface

Class Declaration in Java

```
access_modifier class <class_name>
{
    data member;
    method;
    constructor;
    nested class;
    interface;
}
```

Components of Java Classes

Class declaration has following elements:

1. **Modifiers**: A class can be public or has default access
2. **Class keyword:**class keyword is used to create a class.
3. **Class name:** The name should begin with an initial letter (capitalized by convention).

4. **Superclass(if any):** The name of the class's parent (superclass), if any, preceded by the keyword extends. A class can only extend (subclass) one parent.
5. **Interfaces(if any):** A comma-separated list of interfaces implemented by the class, if any, preceded by the keyword implements. A class can implement more than one interface.
6. **Body:** The class body is surrounded by braces, { }.

Constructors are used for initializing new objects. Fields are variables that provide the state of the class and its objects, and methods are used to implement the behavior of the class and its objects.

[Read more about how to create object : https://www.geeksforgeeks.org/classes-objects-java/ summarize it herein ½ page]

Problem Statement: (Copy this Problem Statement)

Write a program that would print the information (name, year of joining, salary, address) of three employees by creating a class named 'Employee'. The output should be as follows:

Name	Year of joining	Address
Robert	1994	64C-WallsStreat
Sam	2000	68D-WallsStreat
John	1999	26B-WallsStreat

[Solution to this is code :
https://github.com/profanup/JavaSBL2023/blob/main/codes/Module2/ModuleII_prgram1.java]

Classes : [Write which classes are used in above solution code fill following details about each class]

Class name :

Member name and data type :

Method name and use :

Implementation: [copy code here]

Conclusion: Thus we have studied concept of Classes and objects in java programming language.