**Object** − Objects have states and behaviors.

**Class** − A class can be defined as a template/blueprint that describes the behavior/state that the object of its type support.

**Creating an object**:

There are three steps when creating an object from a class −

* **Declaration** − A variable declaration with a variable name with an object type.
* **Instantiation** − The 'new' keyword is used to create the object.
* **Initialization** − The 'new' keyword is followed by a call to a constructor. This call initializes the new object.

**Accessing Instance Variables and Methods:**

Instance variables and methods are accessed via created objects.

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| **package javaapplication3;**  **class Box**  **{**  **private int lenght;**  **private int width;**  **private int height;**  **Box()**  **{**  **lenght=width=height=10;**  **}**  **Box(int a, int b, int c)**  **{**  **lenght=a;**  **width=b;**  **height=c;**  **}**  **public void display()**  **{**  **System.out.println(lenght+" "+width+" "+height);**  **}**  **}**  **public class JavaApplication3**  **{**  **public static void main(String[] args)**  **{**  **Box b1=new Box();**  **Box b2=new Box(5,15, 20);**  **b1.display();**  **b2.display();**  **}**  **}** |

**Case Study:**

The Employee class has four instance variables - name, age, designation and salary. The class has one explicitly defined constructor, which takes a parameter.

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| --- | --- |
| package javaapplication3;  class Employee {  String name;  int age;  String designation;  double salary;  public Employee(String name) {  this.name = name;  }  public void empAge(int empAge) {  age = empAge;  }  public void empDesignation(String empDesig) {  designation = empDesig;  }  public void empSalary(double empSalary) {  salary = empSalary;  }  public void printEmployee() {  System.out.println("Name:"+ name );  System.out.println("Age:" + age );  System.out.println("Designation:" + designation );  System.out.println("Salary:" + salary);  }  } | public class JavaApplication3  {  public static void main(String[] args)  {  Employee empOne = new Employee("James Smith");  Employee empTwo = new Employee("Mary Anne");  empOne.empAge(26);  empOne.empDesignation("Senior Software Engineer");  empOne.empSalary(1000);  empOne.printEmployee();  empTwo.empAge(21);  empTwo.empDesignation("Software Engineer");  empTwo.empSalary(500);  empTwo.printEmployee();  }  } |