1. Private Variable with Getter & Setter

class Student {

private int marks;

}

public void setMarks(int marks) {

this.marks = marks;

}

public int getMarks() {

return marks;

}

public static void main(String[] args) {

Student s = new Student();

// s.marks = 90; // ■ Error: marks has private access s.setMarks(85);

System.out.println("Marks: " + s.getMarks());

}

2. Protected Variable Access in Subclass

// File: Vehicle.java (in package vehicles)

package vehicles;

public class Vehicle {

protected int speed;

}

// File: Car.java (in same package)

package vehicles;

public class Car extends Vehicle {

public void setSpeed(int s) {

speed = s;

}

public void showSpeed() {

System.out.println("Speed: " + speed);

}

// File: TestCar.java (in different package)

package test;

import vehicles.Car;

public class TestCar {

}

}

public static void main(String[] args) {

Car c = new Car();

c.setSpeed(120);

c.showSpeed();

}

3. Public Method Access Across Packages

// File: A.java (in package pack1)

package pack1;

public class A {

}

public void display() {

System.out.println("Hello from Class A!");

}

// File: B.java (in package pack2)

package pack2;

import pack1.A;

public class B {

}

public static void main(String[] args) {

A obj = new A();

obj.display();

}

4. Static Variable Counting Objects

class Employee {

static int count = 0;

}

Employee() {

count++;

}

public static void main(String[] args) {

Employee e1 = new Employee();

Employee e2 = new Employee();

Employee e3 = new Employee();

System.out.println("Total Employees: " + Employee.count);

}

5. Static Method Usage

class MathUtility {

static int add(int a, int b) {

}

}

return a + b;

int multiply(int a, int b) {

return a \* b;

}

public static void main(String[] args) {

// Calling static method without object

System.out.println("Addition: " + MathUtility.add(5, 3));

}

// Calling non-static method using object

MathUtility mu = new MathUtility();

System.out.println("Multiplication: " + mu.multiply(5, 3));