

# Java Lab File

## Lab 4:-

**Program 9:** Write and implement java program to instance methods and static methods.

Code:-

```
public class MathOperations {
    // Instance method to calculate the square of a number
    double square(double num) {
        return num * num;
    }
    // Static method to calculate the factorial of a number
    static int factorial(int n) {
        if (n == 0)
            return 1;
        else
            return n * factorial(n - 1);
    }
    public static void main(String[] args) {
        MathOperations mathObj = new MathOperations();

        // Calling instance method
        double result1 = mathObj.square(5.5);
        System.out.println("Square of 5.5 is: " + result1); //
Output: Square of 5.5 is: 30.25

        // Calling static method
        int result2 = factorial(5);
        System.out.println("Factorial of 5 is: " + result2); //
Output: Factorial of 5 is: 120
    }
}
```

**Output**

```
[Running] cd "c:\Users\Kartik Verma\O
Square of 5.5 is: 30.25
Factorial of 5 is: 120
```