import org.apache.commons.math3.stat.descriptive.DescriptiveStatistics;

public class DataScienceExample {

public static void main(String[] args) {

// Generate a sample data set

double[] data = {2.5, 3.2, 1.8, 4.5, 2.0, 3.8, 3.0, 4.2, 1.5, 2.8};

// Descriptive statistics (mean, median, standard deviation, etc.)

DescriptiveStatistics stats = new DescriptiveStatistics();

for (double value : data) {

stats.addValue(value);

}

System.out.println("Mean: " + stats.getMean());

System.out.println("Median: " + stats.getPercentile(50));

System.out.println("Standard Deviation: " + stats.getStandardDeviation());

// Perform some basic data analysis tasks

double sum = 0;

for (double value : data) {

sum += value;

}

double average = sum / data.length;

System.out.println("Sum: " + sum);

System.out.println("Average: " + average);

// You can extend this example to include more advanced data science tasks,

// such as regression analysis, clustering, classification, etc.

}

}