import scala.io.Source

object WeatherProcessor {

def main(args: Array[String]): Unit = {

val filename = "weatherHistory.csv"

val lines = Source.fromFile(filename).getLines()

// Map

val data = lines.map(line => {

val fields = line.split(",")

val temperature = fields(3).toDouble

val dewPoint = fields(4).toDouble

val windSpeed = fields(6).toDouble

(temperature, dewPoint, windSpeed)

})

// Reduce

val (tempSum, dewPointSum, windSpeedSum, count) = data.foldLeft((0.0, 0.0, 0.0, 0)) {

case ((tempAcc, dewPointAcc, windSpeedAcc, countAcc), (temperature, dewPoint, windSpeed)) =>

(tempAcc + temperature, dewPointAcc + dewPoint, windSpeedAcc + windSpeed, countAcc + 1)

}

val avgTemp = tempSum / count

val avgDewPoint = dewPointSum / count

val avgWindSpeed = windSpeedSum / count

println(s"Average temperature: $avgTemp")

println(s"Average dew point: $avgDewPoint")

println(s"Average wind speed: $avgWindSpeed")

}

}