# **VehicleDataProcessing- A Java based Netty Application**

# Use Case

1. Create a Netty pipeline to receive continuous data from multiple devices placed in a vehicle.

Input data can be one of the following types in json format.

a) Current location events (emitted multiples times / second)

{device\_id, latitude, longitude, vehicle\_speed, timestamp)

b) Speed alert events (Occasional, e.g. speed above a defined threshold 90 KM/hour)

{device\_id, vehicle\_speed, latitude, longitude, timestamp)

c) Door open alert (0 Closed, 1 Open)

{device\_id, door\_status, latitude, longitude, timestamp)

This incoming data needs to be processed and stored within the MySQL database.

This Netty pipeline should work on a specific IP address and port number which you can select of your own.

2. To simulate the data stream for #1 step explained above: create another script (in any language of your choice) which can transmit data to your Netty pipeline. e.g. it can read data from a csv file and then send it to the Netty server.

**Database Script:**

CREATE DATABASE vehicleData;

USE vehicleData;

CREATE TABLE DoorOpenEvent (

deviceId INT AUTO\_INCREMENT PRIMARY KEY,

doorStatus INT NOT NULL,

latitude DOUBLE NOT NULL,

longitude DOUBLE NOT NULL,

timestamp DATETIME NOT NULL

);

CREATE TABLE LocationEvent (

deviceId INT AUTO\_INCREMENT PRIMARY KEY,

latitude DOUBLE NOT NULL,

longitude DOUBLE NOT NULL,

vehicleSpeed DOUBLE NOT NULL,

timestamp DATETIME NOT NULL

);

CREATE TABLE SpeedAlertEvent (

deviceId INT AUTO\_INCREMENT PRIMARY KEY,

vehicleSpeed DOUBLE NOT NULL,

latitude DOUBLE NOT NULL,

longitude DOUBLE NOT NULL,

timestamp DATETIME NOT NULL

);

**Outputs:**  
  
Fetching the data saved to database after validating the csv data:  
  
  
  
  
  
  
  
  




