## Definition

In this exercise you will:

* Download and install Voltdb.

Create a table as following;

CREATE TABLE SUBSCRIBER(

SUBSC\_ID NUMBER,

SUBSC\_NAME VARCHAR(100),

SUBSC\_SURNAME VARCHAR(100),

MSISDN VARCHAR(100),

TARIFF\_ID NUMBER,

START\_DATE DATE,

);

* Then insert mock records into SUBSCRIBER table
* Create a voltdb procedure for selecting SUBSCRIBER table records.
* Create a java app that selects and prints SUBSCRIBER table records with using voltdb procedure.

**Objectives** :

* To learn how to use VOLTDB basically.
* To learn how to create procedure.
* To understand advantages of VOLTDB.

**Exercise Keywords:** partition, procedure, management center.

Subscriber.java:

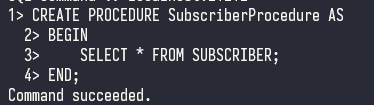
package org.example;  
  
import java.util.Date;  
  
public class Subscriber {  
 private int subscId;  
 private String subscName;  
 private String subscSurname;  
 private String msisdn;  
 private int tariffId;  
 private Date startDate;  
  
 public Subscriber(int subscId,  
 String subscName,  
 String subscSurname,  
 String msisdn,  
 int tariffId,  
 Date startDate) {  
 this.subscId = subscId;  
 this.subscName = subscName;  
 this.subscSurname = subscSurname;  
 this.msisdn = msisdn;  
 this.tariffId = tariffId;  
 this.startDate = startDate;  
 }  
  
 public int getSubscId() {  
 return subscId;  
 }  
  
 public void setSubscId(int subscId) {  
 this.subscId = subscId;  
 }  
  
 public String getSubscName() {  
 return subscName;  
 }  
  
 public void setSubscName(String subscName) {  
 this.subscName = subscName;  
 }  
  
 public String getSubscSurname() {  
 return subscSurname;  
 }  
  
 public void setSubscSurname(String subscSurname) {  
 this.subscSurname = subscSurname;  
 }  
  
 public String getMsisdn() {  
 return msisdn;  
 }  
  
 public void setMsisdn(String msisdn) {  
 this.msisdn = msisdn;  
 }  
  
 public int getTariffId() {  
 return tariffId;  
 }  
  
 public void setTariffId(int tariffId) {  
 this.tariffId = tariffId;  
 }  
  
 public Date getStartDate() {  
 return startDate;  
 }  
  
 public void setStartDate(Date startDate) {  
 this.startDate = startDate;  
 }  
  
 @Override  
 public String toString() {  
 return "Subscriber{" +  
 "subscId=" + subscId +  
 ", subscName='" + subscName + '\'' +  
 ", subscSurname='" + subscSurname + '\'' +  
 ", msisdn='" + msisdn + '\'' +  
 ", tariffId=" + tariffId +  
 ", startDate=" + startDate +  
 '}';  
 }  
}

VoltOps.java:

package org.example;  
  
import org.voltdb.VoltTable;  
import org.voltdb.client.\*;  
  
import java.io.IOException;  
import java.sql.\*;  
  
public class VoltOps {  
 private static final String INSERT\_QUERY =  
 "INSERT INTO SUBSCRIBER(SUBSC\_ID, SUBSC\_NAME, SUBSC\_SURNAME, MSISDN, TARIFF\_ID, START\_DATE) VALUES (?,?,?,?,?,?)";  
  
 String url = "jdbc:voltdb://localhost:32769";  
 private final Client client;  
  
 public VoltOps() throws IOException {  
 ClientConfig config = new ClientConfig();  
 this.client = ClientFactory.createClient(config);  
 this.client.createConnection("localhost:32769");  
 }  
  
 //just runs one time at startt.  
 public void createTable(){  
 String query = """  
 CREATE TABLE SUBSCRIBER(  
 SUBSC\_ID INTEGER,  
 SUBSC\_NAME VARCHAR(100),  
 SUBSC\_SURNAME VARCHAR(100),  
 MSISDN VARCHAR(100),  
 TARIFF\_ID INTEGER,  
 START\_DATE TIMESTAMP,  
 );  
 """;  
 try (Connection connection = DriverManager.getConnection(url);  
 Statement statement = connection.createStatement()){  
  
 statement.executeUpdate(query);  
  
 } catch (SQLException e) {  
 throw new RuntimeException(e);  
 }  
 }  
  
 public void insert (Subscriber subscriber) {  
  
 try (Connection connection = DriverManager.getConnection(url);  
 PreparedStatement preparedStatement = connection.prepareStatement(INSERT\_QUERY)){  
  
 preparedStatement.setInt(1, subscriber.getSubscId());  
 preparedStatement.setString(2, subscriber.getSubscName());  
 preparedStatement.setString(3, subscriber.getSubscSurname());  
 preparedStatement.setString(4, subscriber.getMsisdn());  
 preparedStatement.setInt(5, subscriber.getTariffId());  
 preparedStatement.setTimestamp(6, new java.sql.Timestamp(subscriber.getStartDate().getTime()));  
 preparedStatement.executeUpdate();  
  
 }catch (SQLException e){  
 e.printStackTrace();  
 }  
 }  
 public void selectSubscribers() {  
 try {  
 ClientResponse response = client.callProcedure("SubscriberProcedure");  
 VoltTable resultTable = response.getResults()[0];  
 while (resultTable.advanceRow()) {  
 System.out.println("ID: " + resultTable.getLong("SUBSC\_ID") +  
 ", Name: " + resultTable.getString("SUBSC\_NAME") +  
 ", Surname: " + resultTable.getString("SUBSC\_SURNAME") +  
 ", MSISDN: " + resultTable.getString("MSISDN") +  
 ", Tariff ID: " + resultTable.getLong("TARIFF\_ID") +  
 ", Start Date: " + resultTable.getTimestampAsSqlTimestamp("START\_DATE"));  
 }  
 } catch (IOException | ProcCallException e) {  
 e.printStackTrace();  
 }  
 }  
}

Main.java:

package org.example;  
import java.io.IOException;  
import java.sql.\*;  
import java.util.Date;  
public class Main {  
 public static void main(String[] args) throws SQLException, IOException {  
 VoltOps voltOps = new VoltOps();  
// voltOps.createTable();  
 Subscriber subscriber1 = new Subscriber(  
 1,  
 "Kaan",  
 "Yavuz",  
 "905335556677",  
 1,  
 new Date()  
 );  
 Subscriber subscriber2 = new Subscriber(  
 2,  
 "Ali",  
 "Ahmet",  
 "905553331122",  
 2,  
 new Date()  
 );  
 Subscriber subscriber3 = new Subscriber(  
 3,  
 "Ayşe",  
 "Fatma",  
 "905443332211",  
 3,  
 new Date()  
 );  
 Subscriber subscriber4 = new Subscriber(  
 4,  
 "Mehmet",  
 "Mustafa",  
 "905316661177",  
 4,  
 new Date()  
 );  
 Subscriber subscriber5 = new Subscriber(  
 5,  
 "Hakan",  
 "Ali",  
 "905324441256",  
 5,  
 new Date()  
 );  
 voltOps.insert(subscriber5);  
 voltOps.selectSubscribers();  
 }  
}

PROCEDURE:

OUTPUT:

