# **Drop Rate during Roaming**

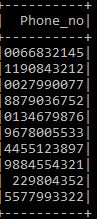
**PROBLEM STATEMENT:**

You will be given a CDR (Call Details Record) file, you need to find out top 10 customers facing frequent call drops in Roaming. This is a very important report which telecom companies use to prevent customer churn out, by calling them back and at the same time contacting their roaming partners to improve the connectivity issues in specific areas.

**CODE:**

package Examples  
  
import org.apache.spark.{SparkConf, SparkContext}  
import org.apache.spark.sql.SQLContext  
import org.apache.spark.sql.types.{IntegerType, StringType, StructField, StructType}  
  
object Churn\_analysis extends App {  
  
 val *master\_url*="local[2]"  
 val *temp\_dir*="C:\\Users\\MUKHESH\\OneDrive\\Documents\\Temp\_Dir"  
 val *app\_name*="Churn"  
 var *sc*:SparkContext=null  
 val *conf*=new SparkConf().setAppName(*app\_name*).setMaster(*master\_url*).set("spark.sql.shuffle.partitions","2").set("spark.executor.memory","2g")  
 *sc*=SparkContext.*getOrCreate*(*conf*)  
 val *spark*=new SQLContext(*sc*)  
 import *spark*.implicits.\_  
 val *schema*= new StructType(*Array*(StructField("Vistor\_loc",StringType,true),StructField("Call\_dur",IntegerType,true),StructField("Phone\_no",StringType,true),StructField("Error\_code",StringType,true)))  
 val *data*=*spark*.read.format("csv").schema(*schema*).load("D:\\Edureka\\Datasets\\CDR.csv")  
 *data*.show(100)  
 *data*.registerTempTable("churn")  
 val *top\_10*=*spark*.sql("SELECT Phone\_no,count(Error\_code) as count from churn group by Phone\_no")  
 val *results*=*top\_10*.select("Phone\_no").sort("count").limit(10)  
 *results*.show()  
}

**RESULT:**

****