HIVE SCRIPT

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drop database if exists adynor cascade;

create database adynor;

use adynor;

create table adynor.itl_branch (branch_code varchar(6), branch_name varchar(15), city_code varchar(3)) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_BRANCH.csv' overwrite into table adynor.itl_branch;

create table adynor.itl_cdr (service_type_id varchar(4), usage_id bigint, service_usage int) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_CDR.csv' overwrite into table adynor.itl_cdr;

create table adynor.itl_city (city_code varchar(3), city_name varchar(15)) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_CITY.csv' overwrite into table adynor.itl_city;

create table adynor.itl_connection_cancellation (cancellation_request_id int, cancellation_date date, branch_code varchar(6), cancellation_reason varchar(40), request_status varchar(15), mobile_no bigint) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_CONNECTION_CANCELLATION.csv' overwrite into table adynor.itl_connection_cancellation;

create table adynor.itl_connection_sales (sale_id varchar(4), customer_no bigint, purchase_dt date, branch_code varchar(6), mobile_no bigint) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_CONNECTION_SALES.csv' overwrite into table adynor.itl_connection_sales;

create table adynor.itl_customer (customer_no bigint, is_corporate_customer int, city_code varchar(3), created_date date) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_CUSTOMER.csv' overwrite into table adynor.itl_customer;
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create table adynor.itl_rate_plan (rate_plan_id varchar(15), rate_plan_name varchar(15),
rate_plan_start_date date, rate_plan_end_date date, unit_charge int) row format delimited
fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_RATE_PLAN.csv' overwrite into table adynor.itl_rate_plan;

create table adynor.itl_rate_plan_charge (rate_plan_id varchar(15), service_type_id varchar(4),
unit_charge int) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_RATE_PLAN_CHARGE.csv' overwrite into table
adynor.itl_rate_plan_charge;

create table adynor.itl_service_type (service_type_id varchar(4), service_type_name
varchar(15), unit varchar(10)) row format delimited fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_SERVICE_TYPE.csv' overwrite into table
adynor.itl_service_type;

create table adynor.itl_sim (customer_no bigint, activation_dt date, rate_plan_id varchar(15),
conn_type varchar(10), rate_plan_end_date date, mobile_no bigint) row format delimited
fields terminated by ',' stored as textfile;

load data inpath 'Adynor/Tables/ITL_SIM.csv' overwrite into table adynor.itl_sim;

create table adynor.itl_service_usage (branch_name varchar(15), service_type_name
varchar(15), service_usage_no int) row format delimited fields terminated by ',' stored as
textfile;

load data inpath 'Adynor/Tables/ITL_SERVICE_USAGE.csv' overwrite into table
adynor.itl_service_usage;


insert overwrite local directory "Desktop/hiveexport/kpi1" row format delimited fields
terminated by ','
select a.branch_code, a.branch_name, b.purchase_dt, b.branch_code from adynor.itl_branch a,
adynor.itl_connection_sales b where a.branch_code=b.branch_code and b.purchase_dt >=
"2016-10-21";

insert overwrite local directory "Desktop/hiveexport/kpi2" row format delimited fields
terminated by ','
select d.branch_name, a.rate_plan_name, count(a.rate_plan_name) as cnt from
adynor.itl_rate_plan a, adynor.itl_sim b, adynor.itl_connection_sales c, adynor.itl_branch d
where (a.rate_plan_id = b.rate_plan_id) and (b.customer_no = c.customer_no) and
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(c.branch_code = d.branch_code) group by d.branch_name, a.rate_plan_name order by cnt
desc;

insert overwrite local directory "Desktop/hiveexport/kpi3" row format delimited fields
terminated by ','
select branch_name, count(branch_name) from adynor.itl_service_usage where
service_type_name = "Call" and service_usage_no < 30 group by branch_name;

insert overwrite local directory "Desktop/hiveexport/kpi71" row format delimited fields
terminated by ','
select a.cancellation_reason, count(a.cancellation_reason) from
adynor.itl_connection_cancellation a, adynor.itl_branch b where a.branch_code =
b.branch_code and b.branch_name = "Erie" group by a.cancellation_reason;

insert overwrite local directory "Desktop/hiveexport/kpi72" row format delimited fields
terminated by ','
select a.cancellation_reason, count(a.cancellation_reason) from
adynor.itl_connection_cancellation a, adynor.itl_branch b where a.branch_code =
b.branch_code and b.branch_name = "Lancaster" group by a.cancellation_reason;

insert overwrite local directory "Desktop/hiveexport/kpi73" row format delimited fields
terminated by ','
select a.cancellation_reason, count(a.cancellation_reason) from
adynor.itl_connection_cancellation a, adynor.itl_branch b where a.branch_code =
b.branch_code and b.branch_name = "Pittsburgh" group by a.cancellation_reason;

insert overwrite local directory "Desktop/hiveexport/kpi74" row format delimited fields
terminated by ','
select a.cancellation_reason, count(a.cancellation_reason) from
adynor.itl_connection_cancellation a, adynor.itl_branch b where a.branch_code =
b.branch_code and b.branch_name = "Bethlehem" group by a.cancellation_reason;

insert overwrite local directory "Desktop/hiveexport/kpi10" row format delimited fields
terminated by ','
select a.branch_name, count(b.cancellation_date) from adynor.itl_branch a,
adynor.itl_connection_cancellation b, adynor.itl_sim c where a.branch_code = b.branch_code
and b.mobile_no = c.mobile_no and (datediff(b.cancellation_date,c.activation_dt) < 30) group
by a.branch_name;
```

VISUALIZATION SCRIPT IN RSTUDIO

1. library("ggplot2", lib.loc="~/R/win-library/3.3")
   kpi1 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi1.csv", header=FALSE)
   View(kpi1)
   b<-data.frame(table(kpi1))
   ds = data.frame(b)

   ggplot(data = ds, aes(x = b$a, y = b$Freq)) + geom_area(color = "dark blue", size = 9) + ggtitle("NEW CONNECTIONS") + ylab("DATE COUNT") + xlab("BRANCHES") + theme(plot.title = element_text(size = 20, face = "bold", vjust = 1, lineheight = 0.6), panel.background = element_rect(fill = 'white'), panel.grid.minor = element_line(colour = "black"), panel.grid.major = element_line(colour = "black")) + ylim(c(0, 30)) + geom_text(aes(label = b$Freq), colour = "white")

2. kpi2 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi2.csv", header=FALSE)
   View(kpi2)

   ggplot(data = kpi2, aes(x = kpi2$V1, y = kpi2$V3)) + geom_area(color = "green", size = 11) + ggtitle("Voice call usage below 30") + ylab("Frequency") + xlab("BRANCHES") + theme(plot.title = element_text(size = 20, face = "bold", vjust = 1, lineheight = 0.6), panel.background = element_rect(fill = 'white'), panel.grid.minor = element_line(colour = "black"), panel.grid.major = element_line(colour = "black")) + ylim(c(0, 1600)) + geom_text(aes(label = kpi2$V3), colour = "white")

3. kpi3 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi3.csv", header=FALSE)
   View(kpi3)

   ggplot(data = kpi3, aes(x = kpi3$V1, y = kpi3$V2)) + geom_area(color = "Magenta", size = 9) + ggtitle("Voice call usage below 30") + ylab("Frequency") + xlab("BRANCHES") + theme(plot.title = element_text(size = 20, face = "bold", vjust = 1, lineheight = 0.6), panel.background = element_rect(fill = 'white'), panel.grid.minor = element_line(colour = "black"), panel.grid.major = element_line(colour = "black")) + ylim(c(0, 10)) + geom_text(aes(label = kpi3$V2), colour = "white")

4. kpi71 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi71.csv", header=FALSE)
   View(kpi71)
   ggplot(data = kpi71, aes(x = kpi71$V1, y = kpi71$V2)) + geom_area(color = "pink", size = 12) + ggtitle("Cancellation details for Erie") + ylab("Frequency") + xlab("Cancellation Reasons") +
   theme(plot.title = element_text(size = 20, face = "bold",
   vjust = 1, lineheight = 0.6),
   panel.background = element_rect(fill = 'white'),
   panel.grid.minor = element_line(colour = "black"),
   panel.grid.major = element_line(colour = "black")) + ylim(c(0, 5)) + geom_text(aes(label = kpi71$V2), colour = "white")

5. kpi72 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi72.csv", header=FALSE)
   View(kpi72)
   ggplot(data = kpi72, aes(x = kpi72$V1, y = kpi72$V2)) + geom_area(color = "cyan", size = 12) + ggtitle("Cancellation details for Lancaster") + ylab("Frequency") +
   xlab("Cancellation Reasons") +
   theme(plot.title = element_text(size = 20, face = "bold",
   vjust = 1, lineheight = 0.6),
   panel.background = element_rect(fill = 'white'),
   panel.grid.minor = element_line(colour = "black"),
   panel.grid.major = element_line(colour = "black")) + ylim(c(0, 5)) + geom_text(aes(label = kpi72$V2), colour = "white")

6. kpi73 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi73.csv", header=FALSE)
   View(kpi73)
   ggplot(data = kpi73, aes(x = kpi73$V1, y = kpi73$V2)) + geom_area(color = "purple", size = 12) + ggtitle("Cancellation details for Pittsburgh") + ylab("Frequency") +
   xlab("Cancellation Reasons") +
   theme(plot.title = element_text(size = 20, face = "bold",
   vjust = 1, lineheight = 0.6),
   panel.background = element_rect(fill = 'white'),
   panel.grid.minor = element_line(colour = "black"),
   panel.grid.major = element_line(colour = "black"))+ ylim(c(0, 5)) + geom_text(aes(label = kpi73$V2), colour = "white")

7. kpi74 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi74.csv", header=FALSE)
   View(kpi74)
   ggplot(data = kpi74, aes(x = kpi74$V1, y = kpi74$V2)) + geom_area(color = "yellow", size = 12) + ggtitle("Cancellation details for Bethlehem") + ylab("Frequency") +
   xlab("Cancellation Reasons") +
   theme(plot.title = element_text(size = 20, face = "bold",
   vjust = 1, lineheight = 0.6),
   panel.background = element_rect(fill = 'white'),
   panel.grid.minor = element_line(colour = "black"),
   panel.grid.major = element_line(colour = "black")) + ylim(c(0, 5)) + geom_text(aes(label = kpi74$V2), colour = "white")

8. kpi10 <- read.csv("C:/Users/ErumSanwari/Desktop/Adynor Project/KPIs/kpi10.csv", header=FALSE)
   View(kpi10)

   ggplot(data = kpi10, aes(x = kpi10$V1, y = kpi10$V2)) + geom_area(color = "orange", size = 9) + ggtitle("Connections cancelled within 1 month of activation") + ylab("Frequency") + xlab("BRANCHES") +
   theme(plot.title = element_text(size = 20, face = "bold",
   vjust = 1, lineheight = 0.6),
   panel.background = element_rect(fill = 'white'),
   panel.grid.minor = element_line(colour = "black"),
   panel.grid.major = element_line(colour = "black")) + ylim(c(0, 6)) + geom_text(aes(label = kpi10$V2), colour = "white")