create database adbms\_project;

show databases;

use adbms\_project;

show tables;

create table leads(ID nchar(18) not null, CREATEDDATE datetime not null, FIRSTNAME nvarchar(40) null,

LASTNAME nvarchar(80) null, DOB datetime null, GENDER nvarchar(1) null, ADDRESS nvarchar(30) null,

ADDRESS2 nvarchar(30), CITY nvarchar(40) NULL, STATE nvarchar(25) null, ZIP nvarchar(10) null,

EMAIL nvarchar(80) null, PHONE varchar(30) null, CELLPHONE varchar(30) null,

WORKPHONE varchar(30) null, PREFPHONE varchar(30) null, STATUS nvarchar(40) null,

LASTMODIFYDATE datetime null, CC nvarchar(10) null, LSC nvarchar(2) null,

RESPONSE nvarchar(25) null, CLUB nvarchar(3) null, ACCOUNTID nchar(18) null, CONTACTID nchar(18) null,

OPPORTUNITYID nchar(18) null, TASKID nvarchar(18) null, VISITORID nvarchar(80) null,

WEBQUOTEID nvarchar(72) null, CREATEDBYID nchar(18) null, OWNERID nchar(18) null);

select\* from leads;

show tables;

desc leads;

create table market\_key(PK int not null, LEADID nchar(18) not null, CONTACTID varchar(250) not null);

#indexes are used to find rows with specific column variables quickly. We don't need to check the

#complete table at every query

create unique index IDX\_ID on leads(id);

create index IDX\_PHONE on leads(PHONE);

alter table leads drop index IDX\_PHONE;

create index IDX\_PHONE on leads(PHONE);

create index IDX\_CELLPHONE on leads(CELLPHONE);

create index IDX\_WORKPHONE on leads(WORKPHONE);

create index IDX\_PREFPHONE on leads(PREFPHONE);

create index IDX\_CC on leads(CC);

create index IDX\_LSC on leads(LSC);

create index IDX\_ACCOUNTID on leads(ACCOUNTID);

create index IDX\_CONTACTID on leads(CONTACTID);

create index IDX\_OPPORTUNITYID on leads(OPPORTUNITYID);

create index IDX\_TASKID on leads(TASKID);

create index IDX\_WEBQUOTEID on leads(WEBQUOTEID);

create index IDX\_CREATEDBYID on leads(CREATEDBYID);

create index IDX\_OWNERID on leads(OWNERID);

create index IDX\_CREATEDDATE on leads(CREATEDDATE);

create index IDX\_VISITORID on leads(VISITORID);

create index IDX\_PK on market\_key(PK);

create index IDX\_LEADID on market\_key(LEADID);

create index IDX\_CONTACTID on market\_key(CONTACTID);

show databases;

use adbms\_project;

show tables;

desc leads;

insert into leads values('1x92','2016-05-06','Bob','Smith','1956-03-23','M','1234 Happy Lane',

'Times Square','Mumbai','Maharashtra','12345','d604262@nwytg.com','555-555-5555', '+91-55555-23223',

null, '555-555-5555','VIKINGS BLADE','2018-01-08',null,null,'User Reviews','PR','A43J12','bs123',

'6bahwtyz','VB6849','d604262','9221212',null,'d604262');

insert into leads values('1x93','2015-08-12','Robert','Smith','1977-09-11','M','1234 Happy Lane',

'Times Square','Mumbai','Maharashtra','2112','d611925@nwytg.com','555-555-5555', null,

null, '555-555-5555','1984','2018-02-12',null,null,'Visited 2 times','N','WQ829J','rs654',

'2bae31z','GO1984',null,'d611925',null,'d611925');

insert into leads values('1x94','2016-05-06','B','Smith','1956-03-23',null,null,

null,null,null,null,null,null, null,

null, null,'Equinox blade','2018-03-12',null,null,'Checked cost',null,null,null,

'8qdrew','EB2342',null,null,null,null);

insert into leads values('1x95','2013-05-06','Ravi','Iyer','1942-08-12','M','4 Mayur Vihar',

null,'Delhi','Delhi','27545','d613962@nwytg.com','215-555-1111', '+91-23221-23223',

null, '215-555-1111','Walking Stick','2018-02-14',null,null,'Compare','PR','NI8293','ri823',

'0vbrwua','WS1923','d613962','234323',null,'d613962');

insert into leads values('1x95','2013-04-01','R','Iyer','1942-08-12','M',null,

null,null,'Delhi','27545','d613962@nwytg.com','215-555-1111', '+91-23221-23223',

null, '215-555-1111','Walking Stick','2018-02-14',null,null,'Compare','PR','NI8293','ri823',

'0vbrwua','WS1923','d613962','234323',null,'d613962');

insert into leads values('1x92','2016-05-06','Bob','Smith','1956-03-23','M','1234 Happy Lane',

'Times Square','Mumbai','Maharashtra','12345','d604262@nwytg.com','555-555-5555', '+91-55555-23223',

null, '555-555-5555','VIKINGS BLADE','2018-01-08',null,null,'User Reviews','PR','A43J12','bs123',

'6bahwtyz','VB6849','d604262','9221212',null,'d604262');

select \* from leads;

desc leads;

insert into leads values('1x96','2013-04-02','R','Iyer','1942-08-12','M',null,

null,null,'Delhi','27547','e1718211@nwytg.com','215-555-1111', null,

'215-555-1111',null,'Sminiker Walking Cane','2018-01-17',null,null,'Add to wishlist','N','PA723',null,

'723dhe','L7231','e1718211',null,null,'e1718211');

insert into leads values('1x97','2013-04-02','G','Raj','1978-06-23',null,'G V road',

'Panampilly Nagar','Kochi','Kerala','34223','tjo30502@ckoie.com','163-232-2321', null,

'163231423',null,'Fluttersleeve Top','2018-02-20',null,null,'Viewed more tops','PR','JY723','jq231',

'312hjy','K7843',null,'FT605',null,'tjo30502');

insert into leads values('1x98','2013-04-02','R','Raj',null,null,null,

null,null,null,null,'f731945@nwytg.com',null, null,

null,null,'Fluttersleeve Top','2018-02-22',null,null,'Ordered tops','PR','JW153','kj531',

'542grv','LF231',null,'FT605',null,'rf2310');

insert into leads values('1x99','2011-01-31','Jai','Sharma','1965-12-23','M','23', 'Lajpat Nagar',

null,'Delhi','Haryana','763543''f1109611@nwytg.com','849-232-1232', +91- 849-232-1232,

null,null,'Fitness watch','2018-03-02',null,null,'Checked deals','N','FW321','js653',

'901hds','FW245',null,null,null,'js653');

insert into leads values('1x100','2011-01-31','Kamal','Sharma',null,null,'2343','Kamal Nagar',

null,'Delhi','Haryana','763545''f1115805@nwytg.com','849-232-1232', null,

null,null,'Fitness band','2018-03-04',null,null,'Put in wishlist','N','KS154','ks091',

'923rtw','FB574',null,null,null,'ks091');

insert into leads values('1x101','2011-01-31','J','Sharma',null,null,null,

null,'Delhi','Haryana',null,'f1115805@nwytg.com',null, null,

null,null,'Dumbbell set','2018-03-08',null,null,'Put in wishlist','N','js190','bv353',

'014zxs','UW642',null,null,null,'js190');

select count(\*) from leads;

#Check if the same person has multiple touchpoints across the table across multiple sources

#We will start by preprocessing the data

#Preprocessing

#We convert all the phone numbers to a standard form XXXXXXXXXX

select substring\_index('555-555-5555','-',3);

select instr('555-555-5555','-');

select instr('555-555-5555','-') as instr into @myVar;

delimiter $$

#create procedure storevar(out changePhone varchar(50))

#egin

# select instr('555-555-5555','-') as instr into changePhone;

#end$$

call storevar(@a);

#We carry out the preprocessing of phone numbers here. We remove the std codes and the '-' characters

#from the numbers and convert them to XXXXXXXXX form to help in finding leads

set @q = replace('555-555-5555','-','');

select @q;

desc leads;

show tables;

desc market\_key;

desc leads;

select ID from leads where PHONE = '-2222';

update leads set PHONE = '222-213-2222' where ID = '1x100';

select ID from leads where CHAR\_LENGTH(PHONE) < 11;

update leads set PHONE = '843-615-8271' where ID = '1x99';

select PHONE from leads;

#We convert each and every phone number in the leads table to the specified format XXXXXXXXXX

delimiter $$

create procedure convNo(out NUM varchar(50))

begin

declare count int ;

declare num varchar(30);

set count = 0;

lab1: LOOP

leave lab1;

end loop lab1;

end$$

select PHONE from leads;

set @t2 = 2;

select @t2;

# Testing the standardisation of phone numbers to XXXXXXXXX

set @clean = replace('555-555-334','-','');

select @clean;

set @phone = (select PHONE from leads LIMIT 6,1);

select @phone;

set @conv = replace(@phone,'-','');

select @conv;

#doing it for all phone numbers in a loop

#DROP PROCEDURE IF EXISTS ConvPhone;

DROP PROCEDURE IF EXISTS CONV\_PHONE\_NOS;

DELIMITER //

CREATE PROCEDURE CONV\_PHONE\_NOS()

BEGIN

DECLARE n INT DEFAULT 0;

DECLARE i INT default 0;

declare oldPhone varchar(50);

declare newPhone varchar(50);

declare lead\_id char(18);

SELECT count(\*) FROM leads into n;

set i = 0;

while i < n do

set oldPhone = (select PHONE from leads limit i,1);

set newPhone = replace(oldPhone,'-','');

select newPhone;

set lead\_id = (select concat(leads.ZIP,leads.LASTNAME) from leads limit i,1);

insert into market\_key(market\_key.PK,market\_key.LEADID,market\_key.CONTACTID) values(i,lead\_id,newPhone);

set i = i + 1;

end while;

END //

delimiter ;

call CONV\_PHONE\_NOS();

select\* from market\_key;

insert into market\_key(PK,LEADID,CONTACTID) VALUES(1,'msd','2155551111');

select \* from market\_key;

desc market\_key;

truncate market\_key;

select leads.ID,ZIP, leads.LASTNAME from leads where ZIP is not null;

#Change the zip to a valid entry

select leads.ID from leads where leads.ZIP = 'Haryana';

update leads

set leads.ZIP = '85623'

where leads.ID = '1x100';

update leads

set leads.ZIP = '85623'

where leads.ID = '1x99';

select leads.ID from leads where leads.ZIP = 'Haryana';

select count(\*) from leads where leads.ZIP is not null;

select concat(leads.ZIP,leads.LASTNAME) from leads where leads.ZIP is null;

desc market\_key;

delimiter //

create procedure check\_no()

begin

declare n int default 0;

declare i int default 0;

declare oldPhone varchar(50);

declare newPhone varchar(50);

declare lead\_id char(18);

select count(\*) FROM leads into n;

set i = 0;

while i < n do

set oldPhone = (select PHONE from leads limit i,1);

set newPhone = replace(oldPhone,'-','');

select newPhone;

set i = i + 1;

end while;

end;

//

delimiter ;

call check\_no();

delimiter ;

call CONV\_PHONE\_NOS();

select\* from market\_key;

drop procedure if exists rowperrow;

delimiter //

delimiter ;

show procedure status;

DROP PROCEDURE IF EXISTS CONV\_PHONE\_NOS;

DELIMITER //

CREATE PROCEDURE CONV\_PHONE\_NOS()

BEGIN

declare n int default 0;

declare i int default 0;

declare oldPhone varchar(50);

declare newPhone varchar(50);

declare lead\_id char(18);

select count(\*) FROM leads into n;

set i = 0;

while i < n do

set oldPhone = (select leads.PHONE from leads where leads.PHONE is not null limit i,1);

set newPhone = replace(oldPhone,'-','');

select newPhone;

set lead\_id = (select concat(leads.ZIP,leads.LASTNAME) from leads limit i,1);

insert into market\_key(market\_key.PK,market\_key.LEADID,market\_key.CONTACTID) values (i,lead\_id,newPhone);

set i = i + 1;

end while;

END //

delimiter ;

call CONV\_PHONE\_NOS();

set @olds = (select leads.PHONE from leads where leads.PHONE is not null limit 0,1) ;

select @olds;

select @oldPhone;

set @check = (select leads.PHONE from leads where leads.PHONE limit 9,1);

select @check;

select leads.ID, leads.PHONE,leads.CELLPHONE,leads.PREFPHONE,leads.WORKPHONE from leads;

#Replace all the empty phone number values with 00000000

select leads.ID, leads.PHONE from leads where leads.PHONE is null;

update leads set leads.PHONE = '0000000000' where leads.PHONE is null;

select leads.ID,leads.ZIP,leads.LASTNAME,leads.PHONE from leads;

#Replace all the null zip values with 00000

update leads set leads.ZIP = '00000' where leads.ID is null;

call CONV\_PHONE\_NOS();

select COUNT(\*) from market\_key;

truncate table market\_key;

select\* from market\_key;

call CONV\_PHONE\_NOS();

#Check all the multiple lead points across different channels in the table

select leads.PHONE as 'PersonID',market\_key.LEADID

from leads,market\_key

union

select concat(leads.LASTNAME,leads.PHONE),LEADID

from leads,market\_key

union

select leads.WEBQUOTEID, market\_key.LEADID

from leads,market\_key;

create table a(PersonID varchar(20) not null,LEADID varchar(30));

rename table a to impLeads ;

select\* from impleads;

#include this: optimized part

#impLeads will store the various leads obtained throughout the table

select leads.\*

from impLeads

inner join leads

on impLeads.PersonID = leads.PHONE

or impLeads.PersonID = leads.WEBQUOTEID

or impLeads.PersonID = leads.ADDRESS2

or impleads.PersonID = leads.EMAIL

or impleads.PersonID = leads.STATUS

or impleads.PersonID = leads.OPPORTUNITYID

or impleads.PersonID = leads.OWNERID

or impleads.PersonID = leads.VISITORID;

insert into impLeads(PersonID,LEADID) select leads.PHONE, market\_key.LEADID

from leads,market\_key;

truncate table newLeads;

create table newLeads2(PersonID varchar(20) not null,LEADID varchar(30));

insert into newLeads2(PersonID,LEADID) select market\_key.CONTACTID, market\_key.LEADID

from leads,market\_key;

select \* from newLeads2;

select \* from impLeads;

insert into impLeads(PersonID,LEADID) select leads.WEBQUOTEID, market\_key.LEADID

from leads,market\_key;

insert into impLeads(PersonID,LEADID) select leads.STATUS,market\_key.LEADID

from leads,market\_key;

alter table impLeads

modify PersonID varchar(50);

select count(\*) from impLeads;

drop table impLeads;

show tables;

create table a(PersonID varchar(20) ,LEADID varchar(30));

rename table a to impLeads ;

alter table impLeads

modify PersonID varchar(50);

insert into impLeads(PersonID,LEADID) select leads.PHONE, market\_key.LEADID

from leads,market\_key;

select count(\*) from impLeads;

select \* from impLeads;

insert into impLeads(PersonID,LEADID) select leads.WEBQUOTEID, market\_key.LEADID

from leads,market\_key;

insert into impLeads(PersonID,LEADID) select leads.ADDRESS2, market\_key.LEADID

from leads,market\_key;

select count(\*) from impLeads;

select \* from impLeads;

insert into impLeads(PersonID,LEADID) select leads.EMAIL, market\_key.LEADID

from leads,market\_key;

select count(\*) from impLeads;

select \* from impLeads;

insert into impLeads(PersonID,LEADID) select leads.STATUS, market\_key.LEADID

from leads,market\_key;

select count(\*) from impLeads;

select \* from impLeads;

insert into impLeads(PersonID,LEADID) select leads.OPPORTUNITYID, market\_key.LEADID

from leads,market\_key;

select count(\*) from impLeads;

select \* from impLeads;

insert into impLeads(PersonID,LEADID) select leads.OWNERID, market\_key.LEADID

from leads,market\_key;

select count(\*) from impLeads;

select \* from impLeads;

insert into impLeads(PersonID,LEADID) select leads.VISITORID, market\_key.LEADID

from leads,market\_key;

select count(\*) from impLeads;

select \* from impLeads;

select \* from leads;

show tables;

desc market\_key;

desc impleads;

create table keyTable(PersonID varchar(50), LEADID varchar(50));

select impleads.PersonID

from leads

left join market\_key a

on impLeads.personID = leads.PHONE

left join market\_key b

on impleads.PersonID = leads.WEBQUOTEID

left join market\_key c

on impleads.Person = leads.ADDRESS2

left join market\_key d

on impleads.PersonID = leads.EMAIL

left join market\_key e

on impleads.PersonID = leads.STATUS

left join market\_key f

on impleads.PersonID = leads.OPPORTUNITYID

left join market\_key g

on impleads.PersonID = leads.OWNERID

left join market\_key h

on impleads.PersonID = leads.VISITORID;

select\* from impLeads;

#Toggling the safe\_updates option to off

set sql\_safe\_updates = 0;

#Removing null rows from table

delete from impLeads where PersonID is null;

select count(\*) from impleads;

show tables;

#Optimization of the query to find all the important leads

select b.LEADID, A.\*

from market\_key b inner join leads A

on A.EMAIL = b.CONTACTID

or A.PHONE = b.CONTACTID

or A.PREFPHONE = b.CONTACTID

or A.WORKPHONE = b.CONTACTID

or A.CELLPHONE = b.CONTACTID;

desc market\_key;

desc impleads;

#Include this 1st query unoptimized to f

select b.\*

from impleads a left join leads b

on a.PersonID = b.PHONE

left join leads c

on a.PersonID = b.WEBQUOTEID

left join leads d

on a.PersonID = b.ADDRESS2

left join leads e

on a.PersonID = b.EMAIL

left join leads f

on a.PersonID = b.STATUS

left join leads g

on a.PersonID = b.OPPORTUNITYID

left join leads h

on a.PersonID = b.OWNERID

left join leads i

on a.PersonID = b.VISITORID;

desc newLeads2;

select b.\*

from newLeads2 a left join leads b

on a.PersonID = b.PHONE

left join leads c

on a.PersonID = b.WEBQUOTEID

left join leads d

on a.PersonID = b.ADDRESS2

left join leads e

on a.PersonID = b.EMAIL

left join leads f

on a.PersonID = b.STATUS

left join leads g

on a.PersonID = b.OPPORTUNITYID

left join leads h

on a.PersonID = b.OWNERID

left join leads i

on a.PersonID = b.VISITORID;

select leads.\*

from newLeads2

inner join leads

on newLeads2.PersonID = leads.PHONE

or newLeads2.PersonID = leads.WEBQUOTEID

or newLeads2.PersonID = leads.ADDRESS2

or newLeads2.PersonID = leads.EMAIL

or newLeads2.PersonID = leads.STATUS

or newLeads2.PersonID = leads.OPPORTUNITYID

or newLeads2.PersonID = leads.OWNERID

or newLeads2.PersonID = leads.VISITORID;

select \* from market\_key;

select \* from newLeads2;

#Unoptimsed distinct query

select distinct market\_key.\*

from newLeads2

inner join market\_key

on newLeads2.PersonID = market\_key.CONTACTID

order by LEADID;

#Optimised distinct query

select distinct b.\*

from newLeads2 a left join market\_key b

on a.PersonID = b.CONTACTID

order by LEADID;

#Unoptimsed query

select market\_key.\*

from newLeads2

inner join market\_key

on newLeads2.PersonID = market\_key.CONTACTID

order by LEADID;

#Optimised query

select b.\*

from newLeads2 a left join market\_key b

on a.PersonID = b.CONTACTID

order by LEADID;

select\* from newleads2;

select \* from market\_key;