QUESTION-1:

1.1.1) Produce a table consisting of the names and addresses of the subscribers and their phone numbers.

1.1.2) select subscribers.name, subscribers.address, lines.areacode, lines.officecode, lines.stationcode FROM subscribers INNER JOIN lines on subscribers.portid=lines.portid;

1.1.3)

name	address	areacode	officecode	stationcode
Mats Sundin	45 Elgin St.	613	134	0001
Jason Allis	46 Elgin St.	613	136	0002
Eric Lindro	48 Elgin St.	613	156	0003
Bryan MacCa	23 MacLeod S	613	220	0004
Steve Nash	1129 Otterso	613	221	0005
Michael Jor	1223 Carling	613	222	0006
Roger Cleme	14 Hopewell	613	223	0007
Jack Morris	23 Prince of	613	226	0008
Roberto Alo	55 Moodie Dr	613	227	0009
Joe Carter	18 Summerset	613	229	0010
Wayne Grekz	45 Merviale.	613	310	0011
George Bell	46 Colon By	613	322	0012
Eric Staal	423 Riversid	613	333	0013
Roy Hallada	23 Ogilvie R	613	334	0014
Mario Lemie	1129 Bank Dr	613	389	0015
Patrick Roy	1223 Greenba	613	457	0016
Martin Brod	14 Baseline	613	489	0017
Homer Simps	123 Prince o	613	523	0018
Bart Simpso	155 Moodie D	613	568	0019
Joe Johnson	21 Sussex Dr	613	578	0020
Vince Carte	45 Hunt Club	613	623	0021
Ed Belfour	46 Fisher St	613	645	0022
Bobby Orr	48 Prince Ed	613	657	0023
Bobby Hull	23 Wellingto	613	712	0024
Gordie Howe	1129 Preston	613	728	0025
Larry Bird	1223 Warden	613	798	0026
Mark Messie	14 Finch Ave	416	219	0027
Wade Redden	23 Steeles A	416	331	0028
Sidney Cros	55 Sheppard	416	333	0029
Peter Forsb	1 Kennedy Dr	416	334	0030
Paul Kariya	45 Midland.	416	756	0031
Rob Blake	12 19th Ave.	705	221	0032
Chris Prong	48 16th Ave.	905	347	0033
Gary Robert	23 John St.	905	657	0034
Alex Mogily	1129 14th Av	905	819	0035
Scott Gomez	1223 Montrea	819	223	0036
Frank Thoma	14 Hull Ave.	819	227	0037
Barry Bonds	23 Hood Rd.	705	221	0038
Hank Aaron	55 Denison A	819	223	0039
Babe Ruth	1 Old Kenned	819	227	0040
Ted William	45 Birchmoun	905	347	0041
Chris Bosh	46 Queens Av	905	657	0042
Steve Sampr	448 St Clare	905	819	0043
Kobe Bryan	23 Bayview S	416	219	0044
Kevin Garne	59 Mike Myer	416	331	0045
Larry Brown	99 Blue Jays	416	333	0046
Brooke Shie	69 College A	416	334	0047
Matt Stajan	50 LakeShore	416	756	0048
Tie Domi	89 Spidina R	705	221	0049
Tevor Kidd	30 McCowan A	819	227	0050

1.2.1) Produce a table that lists all the area code, office code combinations and the number of subscribers with that area code, office code combination.

1.2.2) select area, office,(select count(*) from lines where area = areacode and office = officecode) as subscribers from ((select distinct areaCode as area from lines) left outer join (select distinct officecode as office from lines)) group by area, office;

1.2.3)

area	office	subscribers
416	134	0
416	136	0
416	156	0
416	219	2
416	220	0
416	221	0
416	222	0
416	223	0
416	226	0
416	227	0
416	229	0
416	310	0
416	322	0
416	331	2
416	333	2
416	334	2
416	347	0
416	389	0
416	457	0
416	489	0
416	523	0
416	568	0
416	578	0
416	623	0
416	645	0
416	657	0
416	712	0
416	728	0
416	756	2
416	798	0
416	819	0
613	134	1
613	136	1
613	156	1
613	219	0
613	220	1
613	221	1
613	222	1
613	223	1
613	226	1
613	227	1
613	229	1
613	310	1
613	322	1
613	331	0
613	333	1
613	334	1
613	347	0
613	389	1
613	457	1
613	489	1

1.3.1) List the names of all the subscribers who are originators of a call to someone who is also a subscriber on the same switch.

1.3.2) select sub.name from subscribers sub, calls c where sub.portid = c.originator and c.terminator in (select portid from subscribers);

1.3.3)

1.4.1) Find the names and address of all subscribers who subscribe to all of the available services. (Note the result for the current data might be empty but your query should work if the TA's add more data to the database.)

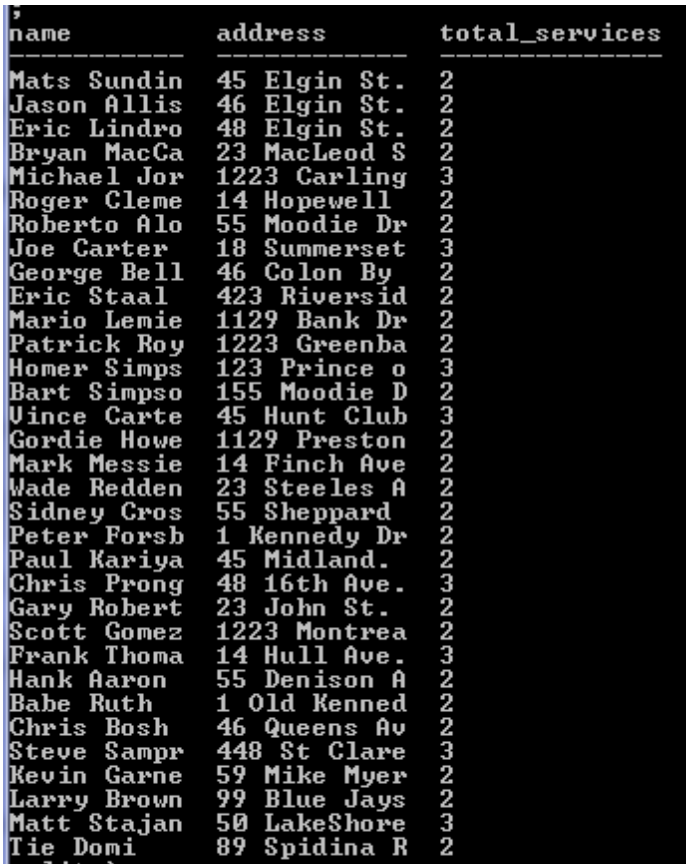
1.4.2)drop table if exists t1;
create table t1(portid integer, servicecode varchar(3), total_services varchar(3));
insert into t1 select portid, servicecode, count(*) as total_services from service_subscribers group by portid;
select subscribers.name, subscribers.address, t1.total_services from subscribers inner join t1 on subscribers.portid=t1.portid where t1.total_services=5;

1.4.3) ----------NO RESULT----------

1.5.1) Find the names of all the subscribers who subscribe to at least two services.

1.5.2) drop table if exists t1;
create table t1(portid integer, servicecode varchar(3), total_services varchar(3));
insert into t1 select portid, servicecode, count(*) as total_services from service_subscribers group by portid;
sqlite> select subscribers.name, subscribers.address, t1.total_services from subscribers inner join t1 on subscribers.portid=t1.portid where t1.total_services>1;

1.5.3)

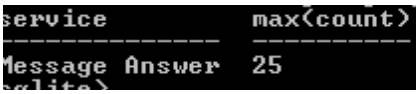


name	address	total_services
Mats Sundin	45 Elgin St.	2
Jason Allis	46 Elgin St.	2
Eric Lindro	48 Elgin St.	2
Bryan MacCa	23 MacLeod S	2
Michael Jor	1223 Carling	3
Roger Cleme	14 Hopewell	2
Roberto Alo	55 Moodie Dr	2
Joe Carter	18 Summerset	3
George Bell	46 Colon By	2
Eric Staal	423 Riversid	2
Mario Lemie	1129 Bank Dr	2
Patrick Roy	1223 Greenba	2
Homer Simps	123 Prince o	3
Bart Simpso	155 Moodie D	2
Vince Carte	45 Hunt Club	3
Gordie Howe	1129 Preston	2
Mark Messie	14 Finch Ave	2
Wade Redden	23 Steeles A	2
Sidney Cros	55 Sheppard	2
Peter Forsb	1 Kennedy Dr	2
Paul Kariya	45 Midland.	2
Chris Prong	48 16th Ave.	3
Gary Robert	23 John St.	2
Scott Gomez	1223 Montrea	2
Frank Thoma	14 Hull Ave.	3
Hank Aaron	55 Denison A	2
Babe Ruth	1 Old Kenned	2
Chris Bosh	46 Queens Av	2
Steve Sampr	448 St Clare	3
Kevin Garne	59 Mike Myer	2
Larry Brown	99 Blue Jays	2
Matt Stajan	50 LakeShore	3
Tie Domi	89 Spidina R	2

1.6.1) Produce a table that lists the most popular service (or services). That is, give the name of the service that has the most subscribers.

1.6.2) select service, max(count) from (select services.service, count(*) as count from services inner join service_subscribers on services.scode=service_subscribers.servicecode group by services.service);

1.6.3)

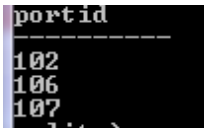


service	max(count)
Message Answer	25

1.7.1) Write an SQL query that will produce in one table a list of all the acceptable trunks that can be used to route a call to the 416 area code, office code 334. This query should list the trunks in the order of preference. (The answer should list trunks routes 416,334 then 416,000 then 000,000 for example).

1.7.2) select distinct portid from trunk_routes where (area=416 OR area='000') AND (office= 334 or office='000') order by area desc, office desc;

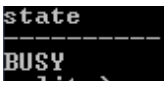
1.7.3)



1.8.1) Write an SQL query that would find if the line with phone number (613) 712-0024 is currently available to take a call (that it is IDLE).

1.8.2) select state from lines where (areacode='613' and officecode='712' and stationcode='0024');

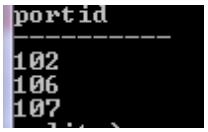
1.8.3)



1.9.1) Do the same as question 1.7 but this time only include trunks that have at least one 'IDLE' channel. That is, Write an SQL query that will produce in one table a list of all the acceptable trunks that can be used to route a call to the 416 area code, office code 334 have at least one idle channel. This query should list the trunks in the order of preference. (The answer should list trunks routes 416,334 then 416,000 then 000,000 for example)

1.9.2) select distinct (trunk_routes.portid) from trunk_routes inner join channels on (trunk_routes.portid=channels.portid) and (state='IDLE') where (area='416' or area='000') and (office='334' or office='000') and (state='IDLE') order by area desc, office desc;

1.9.3)



1.10.1) Produce a table that lists the name of all the service-subscribers that subscribe to at least all the same services as Jason Allison subscribes to but possibly others as well. Jason Allison rents the line with portID=2.

1.10.2) select name from subscribers where portid in (select distinct portid as portid from service_subscribers me where not exists (select servicecode from service_subscribers where portid='2' except select servicecode from service_subscribers where portid=me.portid));

1.10.3)

QUESTION-3:

3.2.1) Names of everyone registered in a routine and what routine they are registered in:

sqlite> select People.Name, People_Routines.RoutineID from People inner join People_Routines on People.PersonID=People_Routines.PersonID;

Name	RoutineID
Muhammad Mustafa	R01
Abdul Bin Asif	R02
Ray Tarra	R03
Ehsan Mallock	R04
Salman Aslam	R05
Hassan Paracha	R03

3.2.2) Names of people not on a routine:

sqlite> select People.Name from People natural left outer join People_Routines where RoutineID is null;

Name
Mr Perfect

3.2.3) Name of exercises in R01:

sqlite> select Exercises.Exercise_Name from Exercises natural left outer join Routine_Exercises where RoutineID is 'R01';

Exercise_Name
Skull Crushers
Cable Extensions

Close Grip Bench Press

Single-Handed Bent Extensions

Concentrated Cable Extensions

Flat Bench Press

Incline Bench Press

Decline Bench Press

Lower Cable Extensions

Upper Cable Extensions

Fly Machine

3.2.4) Name of people in R03:

sqlite> select People.Name from People natural left outer join People_Routines where RoutineID is 'R03';

Name

Ray Tarra

Hassan Paracha

3.2.5) all exercises with 2 reps completed:

sqlite> select Exercises.Exercise_Name from Exercises natural left outer join Person_Routine_Exercises where Reps_Completed is 2;

Exercise_Name

Deadlifts

Good-Mornings

Concentrated Cable Extensions

Side Raises

Leg Presses

Leg Curls

Planks

Push-ups

Biking

3.2.6) Names of people with reps time taken between 06 and 75:

sqlite> select People.Name from People natural left outer join People_Routines where Time_Taken_in_mins between 60 and 75;

Name

Muhammad Mustafa

Abdul Bin Asif

Ray Tarra

Ehsan Mallock

3.2.7) Dates and Routines Hassan Paracha worked on:

sqlite> select People_Routines.RoutineID, People_Routines.Routine_Date from People_Routines natural left outer join People where Name is 'Hassan Paracha';

RoutineID	Routine_Date
R03	12-12-2012

3.2.8) All exercises done and reps completed by Hassan Paracha

sqlite> select Exercises.Exercise_Name, Person_Routine_Exercises.Reps_Completed from Person_Routine_Exercises natural left outer join People_Routines natural left join Exercises natural left join People where Name is 'Hassan Paracha';

Exercise_Name	Reps_Completed
Squat	3
Leg Raises	3
Leg Presses	3
Leg Curls	2

3.2.9) All People doing Exercise LG01:

sqlite> select People.Name from Person_Routine_Exercises natural left outer join People_Routines natural left join Exercises natural left join People where ExerciseID is 'LG01';

Name
Ray Tarra
Hassan Paracha

3.2.10) Name of the person with fastest time taken to complete Routine03 (R03):

sqlite> select People.Name, min(Time_Taken_in_mins) as Fastest_Time from People_Routines natural left join People where RoutineID is 'R03';

Name	Fastest_Time
Ray Tarra	7