Name: Vaibhav Patel (Email: vaipate@siue.edu)

Course: CS-434

Instructor: Dr. Mark McKenney

Project 1

The Insurance Company Database will have data about different insurance plans, car information, house information, customer information, agent information, accidents, and address. I would try to find real data to insert to my database.

The database will be used to answers following questions:

1. How many customers are in a specific plan under a specific agent?

* [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) smallcontract.planno, smallagent.aid,smallagent.name,[count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(\*) from smallcontract, smallagent, smallcustomer where smallagent.aid = smallcontract.aid [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) smallcustomer.cid = smallcontract.cid group by smallagent.aid,smallcontract.planno order by smallcontract.planno, smallagent.aid
* [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) contract.planno, agent.aid, agent.name,[count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(\*) from contract, agent, customer where agent.aid = contract.aid [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) customer.cid = contract.cid group by agent.aid, contract.planno order by contract.planno, agent.aid

1. How many accidents were recorded in a specific City and State in 2016?

* In small database date is from 2017-06-01 to 2017-06-30

[select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) smalladdress.city, smalladdress.state, [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(smallaccident.reportno) from smallaccident, smalladdress where smallaccident.smallaccidentstreet = smalladdress.street [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) smallaccident.smallaccidentzip =smalladdress.zipcode [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) smallaccident.date BETWEEN '2017-06-01' [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) '2017-06-30' group by smalladdress.city, smalladdress.state order by [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(smallaccident.reportno) desc

* [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) address.city, address.state, [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(accident.reportno) from accident, address where accident.accidentstreet = address.street [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) accident.accidentzip = address.zipcode [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) accident.date BETWEEN '2016-01-01' [and](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) '2016-12-31' group by address.city, address.state order by [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(accident.reportno) desc

1. List all cars that are under a specific plan that were involved in the accident more than once?

* [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) smallcarinfo.vin, [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(smallcarinvolved.vin) from smallcarinfo, smallcarinvolved where smallcarinfo.vin = smallcarinvolved.vin group by smallcarinfo.vin having [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(smallcarinvolved.vin) > 1
* [select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) carinfo.vin, [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(carinvolved.vin) from carinfo, carinvolved where carinfo.vin = carinvolved.vin group by carinfo.vin having [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(carinvolved.vin) > 1 order by [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)(carinvolved.vin) desc

1. Find all customers that have a car Insurance but not a home insurance (vice-versa) that are more than 35 years old?

Although, there are many other questions we can ask to this database. The database will have two types of Insurance Plans: House and Car. House Policy insures many houses. A house can be insured by only one policy. Similar relationships with Car Policy and cars. A car can have many Accidents. An accident can have many cars involved in it. Similar relationships with customers and accidents. Many customers can have same address, For Example: family members. Many accidents can happen at a specific location. Contracts can be made by one agent to many Customers and many Plans.

Constraints:

IsGuilty must have Boolean value True or False. Year in Car and House tables must be in certain range. I will add more constraints later as I found out more.