**SQL**

1) Using the nations database, how many nations have a population of less than 1,000,000 people? SHOW ME THE QUERY ON THE COMPUTER.

2) Using the nations database, what are the three richest (gdp/pop) nations with a population over 10,000,000 people? SHOW ME THE QUERY ON THE COMPUTER.

3) Using the nations database, what is the nation with the largest population that borders Russia. Hint: There is a “borders” table that says who touches whom. Half a point for national codes (like ‘ch’) and a whole point for national names (like “China”). Use only one query. SHOW ME THE QUERY ON THE COMPUTER.

4) Make a table that can be used to hold the data below. Don’t insert the data. Just show me the table schema.

Rules:

* All cars have either 4,6,8, or 12 cylinders.
* All car model names are unique. If Honda has an Accord, then Ford does not.
* The ‘produced’ column has realistic dates. No one made a car in 20BC.
* The cost is in American dollars, and is realistic. No negative costs, no car costs $1,000,000,000

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **Cylinders** | **First Produced** | **Cost** |
| Mustang | 8 | July 4, 1976 | $4,299.99 |
| Accord | 4 | August 17, 2019 | $38,124.12 |
| A4 | 6 | April 4, 2019 | $37,125.00 |
| (And many many more) |  |  |  |

**PHP**

5) Can a PHP program tell what kind of browser (Chrome, Firefox, etc.) is requesting the page?
    Yes
    Yes, but they might lie
    No, it's typically not sent
    No, it's never sent. That's not part of the protocol.

6) (Yes/No) Suppose I set a session variable as shown below. Can the browser learn the secret phrase?

 $\_SESSION[‘secret\_phrase’] = “kermit the frog”;

7) I have an array as shown below. Write me code that prints the names used as indexes. Just a line or three of code .. I don’t need a whole program.

age[‘scott’] = 43;

age[‘emily’] = 13

… (lots more here) ...

age[‘beverly’] = 72;

8) Say something interesting about this code:

 $conn = new mysqli($servername, $username, $password, $dbname);

 // code that checks to make sure the connection worked

 sql = “insert into cars values (“ . $\_REQUEST[‘owner’] . “);”

 $conn→query($sql);

 // Code that makes sure the sql worked

9) What is the right amount of friends to have?

 No friends

 1-3 friends

 lots of friends

 everyone should like you

**CODE**

(Pick one. Just one)

**(3 points)** Make me a page that asks for a password and a username. If the name is “pinky” and the password is “brain” set a session cookie called “loggedIn” to 1. Make me a second page that says “Yes” or “Not logged in” depending on if the cookie “loggedIn” is set to 1.

**(3 points)** Make me a program that connects to the database and prints every nation that is richer per capita than average. In other words, every nation who's gdp/pop is greater that the world's gdp/pop.