1) Make me a regular expression that matches valid mathematic expressions using numbers and +, -, \*, and /.

Good Bad

1+2 1++2

12 \* 34 / 5+3 12 34 / 5+3

+3 3+

-13 13-

1+2-3\*4/5 1+2-3 \* \* 4 / / 5

2) Suppose the accident table has 100 items, and the doctor table has 27 items.  Only three doctors have been in accidents.  How many rows will the query "select \* from accident, doctor" generate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) I'm making a web page and associated database that stores music in MP3 format. However, I fail to set the header “content-type”. What will my users experience?

4) I have a program that checks your username and password, and if found acceptable sets a cookie called “loggedIn” to 1. Other pages check this cookie, and allow access only if this cookie is present. Is this a good or bad scheme, and WHY?

5) Write me an SQL query showing all the people who went out with Amanda and where they went.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Couples   |  |  | | --- | --- | | Dater | Datee | | Jennifer | Brad | | Amanda | Jason | | Bob | Doug | | Amee' | Amanda | | Susan | Susan | | Places   |  |  | | --- | --- | | Dater | Place | | Amee' | Movie | | Bob | Gym | | Amanda | Flower Garden | | Kelly | Greatful Dead Concert | | Susan | Good Book | | Jennifer | Home (and veg) | |

6) I want my web page to react very quickly to user input. Should I write my code in PHP or in Javascript and WHY?

7) (Show me) Write the SQL that makes a table that can hold a person's disease (max 30 characters, never empty) and their doctor bill (a to-the-penny amount, never more than $999,999.99.  
  
  
8) (Show me) Using the nations database, write me a query showing the names (not the codes) of every nation that borders Russia. Hint: Check out the borders table.

9) Write me a regular expression that matches a list of words each of  
which starts with a capital letter.  
 A Few Good Men <--- yes  
 A few Good Men <--- no (one of the words starts non-caps)  
 A FEW GOOD MEN <---- yes  
 I OFFER $12.34 <----- no (not a list of words)

   +---------+--------------+------+-----+---------+-------+  
   | Field   | Type         | Null | Key | Default | Extra |  
   +---------+--------------+------+-----+---------+-------+  
   | name    | char(30)     | YES  |     | NULL    |       |  
   | testnum | int(11)      | YES  |     | NULL    |       |  
   | score   | decimal(5,0) | YES  |     | NULL    |       |  
   +---------+--------------+------+-----+---------+-------+

10)Write an SQL statement to insert the fact that 'Steve Rhodes' got a 9 on test #2 into the 'tests' table of the 'final' database, as described above.

11) Can a PHP program tell what kind of browser is requesting the page? (Circle all that apply)  
    Yes  
    Yes, but they might lie  
    No, it's typically not sent  
    No, it's never sent. That's not part of the protocol.

12) Assume that I have an associative array or dictionary named 'fred'. I made it like this.   
 $fred[“cat'] = 1;

$fred[“dog'] = 2;

...

$fred[“deer”] = 99654;

Write me a PHP loop that prints the associative array, both the names of the animals (½ a point) and the numbers (another ½ a point).

13) (Yes/No) @ signs in PHP. Do you know what they do?

14) What’s the Python equivalent?

15) Write me a program in PHP that prints all of the data it's given on the URL. In other words, if I call <http://cs.nmu.edu/~you/answer.php?A=1&name=2&age=veryOld> it will print “A=1 name=2 age=veryOld”. Hint: This is just a few lines of code.

16) Write me a program in Flask that prints all of the data it's given on the URL. In other words, if I call <http://cs.nmu.edu/~you/answer.php?A=1&name=2&age=veryOld> it will print “A=1 name=2 age=veryOld”. Hint: This is just a few lines of code.