

PHP/MySQL exercises:

Purpose: To test the PHP, MySQL and JavaScript skills of the applicant.

Environment: Assume a standard LAMP environment.

Time allowed: 24 hours

Exercise 1:

- Create a simple web page in PHP 5/XHTML/Javascript/jQuery with the following:
- Display a form with 5 inputs (such as name, address, city, etc.) one of which must be a multiple select.
- Validate the form within the client side, highlighting any input fields red that are empty, and if none selected in the case of the multi-select.
- An alert should also be displayed listing what is missing or in error.
- Post the form and display the user's input data on the same page (the same URL as the form).
- The resulting page, after a valid POST, should show the data as static text without input fields.
- There should be a button on the resulting page that allows the user to return to the form.
- The developer should attempt to show their skills in PHP 5 class structure and knowledge of the client DOM, while keeping the logic flow of the design simple.

Exercise 2:

- Create a normalized MySQL database to track the data collected on POST in the exercise above.
- At least two of the tables should contain predefined relational data, such as a list of cities.
- The relational data tables should have no less than 10 records each.
- The multiple select field in exercise 1 should be populated by data from one of the relational tables.
- On the bottom of results page in exercise 1 display the number of records that have NOT been selected. For example if the table used for the multiple select has a list of cities, how many cities have not been selected yet as more and more people are entered through the interface.

Exercise 3:

- Repeat Exercise 1 but on a different page.
- Create another database similar to Exercise 2.
- On the bottom of the results page (below the count display in Exercise 2), for the pages created in exercise 1 and 3 display the count of selected (opposite of Exercise 2) in both databases combined.
- Once the relational records in either database have all been referenced, display a JavaScript alert that the test is complete.

Include the following in a zipped file:

- All source code for both client and server side.
- Schema diagram for both databases
- URL demonstrating the exercises if possible
- Answers to questions below

Questions:

- Describe one major limitation of MySQL.
- Describe the challenges in trying to implement single sign-on in an enterprise environment.
- Describe reasons for implementing a data warehouse.
- Describe reasons for not implementing a data warehouse.
- What are the advantages of a data abstraction layer?
- What are the disadvantages of a data abstraction layer?
- What is the difference between 'this' and '\$(this)' in JQuery
- What are the ways to access a checkbox in JQuery using selector?
- How do you access multiple checkboxes with the same name in array notation with JQuery?
- How do you use JQuery tablesorter to sort a column by specific types such as text, numeric?