

Applicant-Test – Backend

Notes

For code on the server side use PHP, at least version 5.3.

The only external library you may use is jQuery.

All source files have to be encoded in UTF-8.

1.

You will find the file "hits.xls" attached.

- a) Put the data from the file into a MySQL-table and describe how you accomplished that.
- b) Develop a query which results in the columns title, the amount of hits per job, the point in time where the first and the point in time where the last access occurred.
- c) How should one change the structure of the data to normalize the database and what would the query in b) look like then?

2.

Describe briefly in your own words which risks come up when you have to work with database-queries that contain user-input and what you do to counteract those risks.

3.

a) "According to a researcher at Cambridge University, it doesn't matter in what order the letters in a word are, the only important thing is that the first and last letter be at the right place. The rest can be a total mess and you can still read it without problem. This is because the human mind does not read every letter by itself but the word as a whole."

"Aoccdnrig to a rearsehcer at Cmabrigde Uinervtisy, it deosn't mtttaer in waht oredr the ltteers in a wrod are, the olny iprmoetnt tihng is taht the frist and lsat ltteer be at the rghit pclae. The rset can be a toatl mses and you can sitll raed it wouthit porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe."

Write a class that changes strings like in the example given.

Write a form that uses said class with the help of an ajax-request to scramble the text.

The visual design of the form is of no relevance, the solution should be minimalistic but well-structured and elegant.

- b) Bonus: write the algorithm in such a way that the scrambling is reversible and provide that functionality in the same form.

4.

Write a PHP-File that outputs a png of a chessboard while using the GD-library. It should be possible to give width, height and fieldWidth (the length of a side of a field on the board) as GET-variables.

You don't need to work object-oriented here.