Internet Applications and Techniques Coursework

Date due: midnight 31st July 2019

Introduction

This coursework asks you to demonstrate your ability to design and develop a database-driven website

Scenario

The organisation “Aston animal sanctuary” has approached you to design and implement their new website. They run a sanctuary where animals are looked after before being adopted by members of the public. The website should allow a member of staff to record and manage adoptions and allow members of the public to view animals that need homes.

There should be two types of user in your system: staff and normal user.

Public users can:

1. Register a new account
2. Login to the user account with a home page showing a list of all animals available for adoption
3. Make an adoption request
4. View all their adoption requests made by this user and whether they were approved or denied

Staff users can:

1. Log into the system with a page showing a list of all pending adoption requests
2. Approve or deny an adoption request
3. Add a new animal to the system, listed as available for adoption
4. See a list of ALL animals in the system and showing who owns them if have been adopted
5. View all adoption requests made by ALL users and whether they were approved or denied

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Database

You need to design your own database to store the users, animals and adoption relevant information with proper relations and constraints. Generally:

- Any registered users should have a username, password. You could include other information you think proper.
- An animals should include a name, date of birth, description, picture, availability. You could include other information you think proper.
- One user can adopt multiple animals.
- Multiple users can apply to adopt one same animal.
- One animal can only be adopted by one user.

You should populate the tables (manually or automatically) with some data entries for testing purpose.

General implement requirements

Your implementation should use any technical knowledge covered in our module i.e. Node.js, PHP, Laravel, MySQL, MongoDB, and combined with HTML5. You are free to use any front-end technologies (e.g. CSS/Javascript, templates/frameworks). You should adhere to good coding practices and use comments properly.

You need to deploy your web site on a host server no matter internal or external. The guidance documents about deployment will be published on Blackboard.

User interface

The user interface must be easy and convenient to use. The web pages should be clean and tidy with appropriate text font, size, colour and background colour; The names of the links should be descriptive; On each page, it should have links pointing to the main page or related pages. Also the output message and error reporting should be adequate for end users in a clear format.

The system will be checked using the Google Chrome browser on a normal desktop or laptop. Please make sure that your system works in Chrome.

Security

Security is important in all web applications. Some necessary security measures are required in your coursework development. For example:

- Authentication/Authorisation
- Form validation
- Handle injections(SQL/HTML)
- Hash password
- Restrict file upload to only images
- Cross-Site Request Forgery
- ……

Stretchers

This is a list of things that will help you get the maximum number of marks. For example,

- Allow the different animal types and can list one type animals.
- Allow an animal to have multiple pictures.
- Allow the animal tables to be sorted based on some headings.
- Other extra relevant functions and work but should not be similar to the required functions.

Project Report

You MUST submit a project report in PDF format which should be no longer than 3 pages and be written in clear English. The report MUST include the following items in the order of:

- Basic information about your development:
    - Your name and students ID
    - A hyperlink to the entry page of your system on a host server.
    - One staff user's username and password.
    - One public user's username and password.
- Brief description of the key technologies and structure of your system.
- List the required functions you have implemented and the main corresponding source file(s) so examiners could find them when needed.
- List the security features you have used and point out the main corresponding source file(s) so examiners could find them when needed.
- List the stretchers you have implemented and point out the main corresponding source file(s) so examiners could find them when needed.
- List your database schema specifying your tables, the key table structures and relations/constraints you have setup. You could include an ER diagram.

- Other things which need the examiner's attention when using your system should also be described if applicable.

You should not include the screenshots of your web site in the report.

Please Note: without the project report, you work will not be marked. Missing the required information and un-clear description in the report could lead to significant deduction of your mark.

Submission

You need to submit your work on the Blackboard as well as deploy to a host server before **23:59 31st July 2019**.

- You MUST submit your coursework report in PDF format and if you do not submit your report on Blackboard, you work will not be marked.
- If you do not have the required information in the report, your mark could be deducted up to 40%.
- You MUST submit your main source code and a DB file (e.g. a SQL file). You could submit a ZIP file containing the main source code and database to Blackboard. Or you could list the GitHub link (or other easy ways) in your report in order for examiners to check your source code if needed.
- You MUST deploy your system on one host sever (either the internal or external ones). Please deploy/test your system on a host server **as earlier as possible**.
- If you fail to put your website/database on a host server, your work will not be marked.
- Late submission will incur a penalty of 10% of the available marks for each day. After 5 days, the work will not be considered.
- Your submission must be your own effort. Copying and sharing work is forbidden. If you are found to have copied or shared your submission your mark may be reduced or set to zero (or worse).
- The coursework system will be checked using the Google Chrome browser. You need to make you're your system working in Chrome.

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