ECM 1417: Web Development

The URL of the deployed application is at:

http://ml-lab-4d78f073-aa49-4f0e-bce2-
31e5254052c7.ukwest.cloudapp.azure.com:50590/index.php

All the static content is there for each page in the form of HTML.

The HTML pages all have several CSSs to apply styles to the HTML pages. Several pages share CSSs since they all have styles in common such as the header at the top of the page. All the fonts, colours have used the style guide. The watermark is set back using the z-index, positioned to the middle and made to be semi-transparent.

PHP is correctly used throughout the website, used to set cookies, and create sessions. PHP is used for registration by checking the password was strong enough, retrieving the data inputted, storing the data in the MySQL database, and hashing the password. To login, PHP was used to retrieve data inputted and then check that it was valid. To check for infections, PHP was used to extract data from the MySQL tables about locations of infections that are in the time limit and then checked the distance between the users visited spots and other infected users' places that they visited. If they were within the distance set by the cookie then the user was notified. To create the table showing the places the user had visited, I used PHP to gather the data about the user from the database and then it printed the rows of the tables with information about each visited put into each cell. The PHP used to add a new visit was to retrieve inputted data, validate it, to get the coordinates from the URL and then add the data to the table if it was valid. To report an infection PHP was only used to retrieve inputted data, validate it and then add it to the table if correct. To change settings PHP was used to retrieve inputted data and then use it to change the cookie's values.

The session and cookies are secure because is created only once the user has logged in and closed by unsettling all the session variables and then destroying it. It is closed whenever the log out button is pressed but also after 300 seconds so that if it is closed a session does not remain. There are two cookies for each setting, window, and distance. They are created to the default values of 2 weeks for the window and 250 distance. They last for a month and can only be changed by the user on the settings page.

JavaScript is used to remove a location from the overview with Ajax. When the cross is pressed on a row, it will send a synchronous Ajax request to run a PHP file that removes the row from the user's locations table. JavaScript was not used to select a location from the map since it was easier to use HTML since it the attribute ismap will produce the coordinates. It is also used for the validation that the first name, username and password are not empty on registration.

Ajax was only used synchronously to remove a row from the location table.

The web site is secure because hashing is used. This means the password in plain text does not need to be stored in the database. A salt and pepper are being used to prevent the password being found using lookup tables. SQL injections are being prevented by escaping any text inputs made by the user and cross site scripting are prevented by using htmlspecialchars and by making sure the cookies are only sent over http.

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