**Assignment 6**

**1) Explain sessions**

To understand better what a session under php means we can make an analogy with computers. Once you start your computer it will request a login and a password, this way the computer knows it is you using it and it stores all your data safely. In a web session using php, the user hands the information to the webpage, a variable in php stores this information keeping all the users configuration in a single place, then every page of the app can use this information.

In a succinct way, if you have a session on a page of any kind of e-commerce, you can go to any page of this e-commerce and the cart will still show your same items once you click on it, that is because you have session. You do not need to be logged in the page to have that.

**2) Write a program to:**

* **Start PHP session**
* **Get PHP session**
* **Modify PHP session**
* **Destroy PHP session**  
  **A computer screen shot of a program code

  Description automatically generated**

After running it, this is the response we receive in the webpage as expected:

A close-up of a computer screen

Description automatically generated

**3) Explain cookies.**

Very similarly to the Session we have another tool to help the user and the programmer. The cookies are a client-side tool, the server embeds the file on the user`s computer, a small file that is stored by the user.

Evey time the user tries to access a page he has already accessed; their computer will send along with the request the cookie and all information. With php the programmer can create and retrieve the cookie values.

**4) Write a program to:**

* **Create a cookie**
* **Modify a cookie**
* **Delete a cookie**

Creating the Cookie  
A computer screen shot of text

Description automatically generatedA close-up of a computer screen

Description automatically generated

Modifying the cookie  
A screenshot of a computer program

Description automatically generated

A screenshot of a computer

Description automatically generated

Observation: The cookie brings the old value and you have to refresh the table to see the new value. It replaces the value in the new and old values.

Delete: To run the delete, first I had to run the Creation alone. Then I ran the delete otherwise there was an error

A close-up of a computer screen

Description automatically generated

A close-up of a line

Description automatically generated

A computer screen shot of text

Description automatically generated

**5) Explain the concept of Authentication. What is the difference between Authentication and  
Authorization?**

Authentication is the process of verifying if a user is really the user, and this is done by checking the credentials of such user. First, we have to create a login where the user can enter their username and password. After the user inputs the values, we have to check if they are correct, this can be done by another php code. Finally, the php will direct the user to the logged page if the username and password are correct. This is authentication.

Authorization is a process that determines if a user has access to a page or not. We have to check, after the user has logged, if they have the permission to see a page. If so he can ace

**6) Explain the concept of Hashing and Encryption. What is the difference in Hashing and Encryption?**

Hashing is the process of transforming data in any size into a fixed string of characters, this process is deterministic (every entry has the same output), fast computed, and has a fixed size. On the other hand, encryption is the process of converting any plain text into a new text that is unreadable to any other person. The encryption process is a 2-way process, the text can be encrypted and decrypted at any moment.

While hashing is used to guarantee data integrity and authentication, encryption is used to protect the confidentiality of data. Hashing is 1-way, while encryption is 2-way (reversible). And, hashing produces a fixed size string, while encryption can produce any size.