**Block-2 Back End development**

**University Academy-92**



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# Section 1: Introduction

Documenting the website that has already been created, describing how it functions, how each feature works, implementing data entry to a database, and the different technologies that detail the feature of PHP and SQL that have been used will be discussed in this Back-End Development report.

The website is stored on the server because the browser in the end is like an interpreter that gets back certain source code. When the browser requests resources from a webserver, then the web server responds with the resources. To make these requests is going to be by filling data in and submitting forms, clicking on links, or just typing URLs into the browser.

A quick reminder of what Back-End development is The Back end contains a server, an application, and a database. The communication between the database and the browser is dealing with Back-end. If users can see the Back-End work? No.

# Section 2: Report contents

The next part of this report will detail the meaning of how to build a website from scratch to perform data entry to a database. The Linux operating system will be introduced using their command line to configure, the PHP language will also be used for this website, my SQL (Structured Query Language) will be an important part to get the data that you want, implementing a webserver that will be used to host the website, the database will also be described here and lastly, the HTML and CSS will be great to style the page even it is just optional. All these topics will be discussed and explained their roles in web development in this report.

# Section 3: The Linux operating system

Linux is an open-source operating system developed free of charge. Linux is used as an interface between computer/server hardware, and all the programs which function on it. One of the powerful points that Linux can provide is to allow the software to be able to talk to the hardware. Linux is an amazing tool for developers.

The Linux command-line interface has been used to manage databases with phpMyAdmin during the website implementation to do common webserver tasks like changing file/ directory, moving files, changing PHP configuration, creating and delete users so on.

A screenshot of a computer

Description automatically generated with medium confidence

This is a screen print to show the command prompt that has signed up with the domain name which Sax set up to load into a browser and be able to navigate the project.

# Section 4: The PHP language

The PHP stands for hypertext pre-processor and is essentially what PHP is. PHP is what we call a back-end programming language or server-side programming language. It allows to make websites more dynamic and make users able to do something on their websites, for example creating a login system where people can go and sign up. When they do log in, they can go to a forum that might have on their websites and post something. To have this a database should be created. If there is not a database, the users cannot save any information on websites. Now to connect the website to the database it is going to need a server-side language and a lot of them out there but the one which is to be focusing on this block two is the one called PHP. It also works within HTML code to be able to capture and display data. There are some features of PHP that have been used for the project like a PHP form validation in astronaut form table using astronaut\_id, name, and no\_missions with a sub\_button at the end to submit data. PHP is one of the most popular languages used for server-side technologies on the internet. In 2021, the PHP continue demonstrate how powerful it is with a market share of 45.43 percent.

# Section 5: My SQL (Structured Query Language)

A screenshot of a computer

Description automatically generatedMySQL is a relational database management system (RDBMS) designed to manage data. It can be used to store anything from a record of information it is also a leading database for web applications it is used in small business websites to very large-scale enterprise applications. Databases use SQL to manage, and they use something called tables to store data and these tables have columns and rows as having been used in the assessment like astronaut, attends, missions, and targets table. Tables and fields can relate to each other through something called keys, for example, primary key and foreign key. A primary key can be used to identify the row while a foreign key prevents anything that could destroy links between tables.

This is a screen print to show the different tables that have been created inside a database using phpMyAdmin.

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MySQL can also be easily installed on the Linux system. Once, MySQL is installed, Linux users can start operating their tasks like creating a table, dropping, edit add new columns or rows, and many more things.

# Section 6: Web server

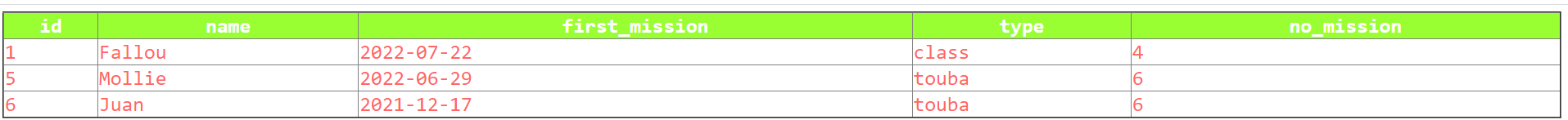
A web server is a piece of software and hardware that uses HTTP (Hypertext Transfer Protocol). A web server is managed to host the web sites, any website out there must be sitting and hosted by a web server but there are many other web servers such as Storage, Email, etc.

After creating a website there is a web server used to host the website online and make sure every time a change has been made should be committed, pushed, and git pull it to keep the website live that is one of the most important lessons that have learned in this Back-end development block. The main job of a web server is to put on view a website content through storing, processing, and delivering webpages to what users asking for.

# Section 7: Conclusion

To conclude what has been presented, the website contains multiple pages starting with the index.php page include a home page linking to other options. The technologies have used for this website are PHP language to make the website more dynamic and allow users able to have access, SQL database management to store and retrieve data in tables, the Linux command line interface also was a good choice during this website process as it a powerful tool for any developer to git push, git pull and many more tasks related the project that can be done using this command line. The Visual Studio Code is one of the most important platforms that can be used with multiple languages to build a website. After the website has been built a web server is used to host a website online to facilities users can easily have access to it over the world while they have an internet connection. Finally, HTML and CSS are also used for a bit to support and style the website.

Creating tables to display data from the database using HTML table.



Text

Description automatically generated

//Validation//

Text

Description automatically generatedThis is the window to show the final commit using the Linux command line interface.

This is another window to show the final commit from the GitHub account.A screenshot of a computer

Description automatically generated

The ER diagram has been included here in the report as it requested.

Diagram

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Section 8 : References

<https://www.w3schools.com/sql/default.asp>

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<https://www.lancaster.ac.uk/library/>

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