Back-End development assessment

Kaleem hamid-butt

L39219321

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# Introduction

A school called st Alphonsus primary school and they want to change their manual paper-based system into a database which is digital because this is what the headteacher wants. What he wants to be is pupils, classes, teacher and parent/guardians and also wants a teaching assistance and salaries to be added when the digital database is created.

So to complete these task. There would need to be different types of technology so a plan can be created for the digital database. The very first thing that needs doing Is using draw.io to create a ER diagram because there needs to be a planned out structure of the data type that will be included for example having the primary key or a foreign key to show the data.

Once the ER diagram is made then the next thing that needs to be created is the database so using a server software called ”XAMPP”. This will help in database creation because they have sql statement where you can insert data into or just manually inserting it. After the database is created then the next thing to do is to export it into SQL file which would be a text editor and in this case would be visual code studio.

So the last action to create for the primary is to create them a website and include the database within in. which will be visual code editor which is great to use for implement PHP/HTML and allow access from XAMPP.

# documentation

# Nav



Here is a screenshot of the navigation which its functions is to allow users to navigate themselves around the website. Each Navigation Title has a sub nav which has multiple different within it as it is showed below

A screenshot of a computer

Description automatically generated

As a user shouldn’t have access to all contents before signing into, the navigation bar will not show all features/pages as it is showed below

A green rectangular sign with white text

Description automatically generated

So before a user is login/registered only 4 different pages on the website would be available to users. As Admin/Teacher/Student all should have different access to different materials and content then I made multiple different navigations bars for different people.



This what it looks like for a student.

This is what it looks like for the administrator who has all power to view and access any content that exist. 

When a users chooses to logout they can then be taken to a logged page then a page with no nav bar

A screenshot of a cell phone

Description automatically generated

This is where users can choose which login they want to use

# “Add”

On the navigation bar there is a Add categories for Student ,Teacher, Parent, Class where the admin where they can add data and information into the table. For example it is shown below a screenshot of add student and what It looks like

A screenshot of a computer

Description automatically generated

# Delete student

A screenshot of a computer

Description automatically generated

# Update student

A screenshot of a computer

Description automatically generated

# Graph table

A screenshot of a graph

Description automatically generated

# Register page

A screenshot of a login form

Description automatically generated

# Login page

A screenshot of a login page

Description automatically generated

Contact page

A screen shot of a contact page

Description automatically generated

A black background with colorful lines

Description automatically generated

Here is a screenshot of the code so users can add data

A screen shot of a computer program

Description automatically generated

This is the code of the delete page

A computer screen shot of a program code

Description automatically generated

This is the code view on update page

A computer screen shot of a program code

Description automatically generated

This is the screenshot of the view page.

This is a screenshot of The contact page

A screenshot of a computer program

Description automatically generated

A computer screen shot of a program code

Description automatically generated

Here is a screenshot of the register page

A computer screen shot of text

Description automatically generated

This is the php code of the login page

# Reflect on your website

Throughout this assignment there have been many technologies used and have been very beneficial choice for back-end system.

# Draw.io

For Example to create the er diagram the tool draw.io was used instead of other choice and this was because it is a free tools which gives you online access to create certain things like flowcharts,diagrams,charts and mind maps, in this case diagrams was used to create a ‘er.diagrams’ which was multiple tables that linked to each that later will be used in the database

# XAMPP server

Another tool that was used in creating the database was a application called XAMPP server. [[1]](#footnote-1) This is a open-source web server application which is typically used for website applications testing on a local host webserver. XAMPP contains MariaDB, PHP, and Perl; it provides a graphical interface for SQL (phpMyAdmin), making it easy to maintain data in a relational database.

# MYSQL

The reason why MYSQL is used instead of others servers like Oracle or Microsoft SQL Server is because [[2]](#footnote-2)MYSQL has a unique storage engine architecture which would make it much quicker,cheaper and much more reliable.MYSQL is also very simple and easy to use and understand, they also give developers higher level of productivity by using, views,triggers and stored producers which is beneficial because it can help users to do things quickly and efficiently and save them a lot of time.

# PHP

Within vs code the main reason it is being useful is for PHP which is a scripting language which is widely used as a server side language so developers can use it to create a dynamic website. [[3]](#footnote-3) PHP is popular and is used in over 75% of websites where server-side programming is being used.

# SQL Server

This means “structured query language which is a programming language for storing and processing information within a relational database.This is because it will then be stored in a table/form that has rows and columns that represent multiple types of data attributes throughout the different relationships of the data and values. The reason that SQL has been used instead of excel is because[[4]](#footnote-4) data is very much safer in SQL data storage than in Excel and SQL is a easier language to learn comparing to VBA.

# Primary school website research

[[5]](#footnote-5)In order to figure out how a primary school website should look, researching multiple websites is a beneficial thing to do as it is a great way to understand the structures of a website. The best website of a primary school that had a great structure was Bowker Vale Primary School.The navigation structure of this website is quite good and using images for each navigation button yet is not something that will be included within alpanous’ website. Using this website as a base structure for ideas is better than other primary because their colours are clear and consistent and all have their own identify. Their navigation system is quite clear and simple to understand. This is needed as it will be easy for students and parents to understand how to access to all available content.

# Conclusion

1. https://www.cs.virginia.edu/~up3f/cs4750/supplement/DB-setup-xampp.html#:~:text=XAMPP%20is%20an%20open%20source,install%20and%20set%20up%20XAMPP. [↑](#footnote-ref-1)
2. [https://www.w3schools.blog/mysql-advantages-disadvantages - :~:text=MySQL%20has%20a%20unique%20storage,simple%20and%20easy%20to%20use.](https://www.w3schools.blog/mysql-advantages-disadvantages#:~:text=MySQL%20has%20a%20unique%20storage,simple%20and%20easy%20to%20use.) [↑](#footnote-ref-2)
3. [https://www.codecademy.com/resources/blog/what-is-php-used-for/ - :~:text=PHP%20is%20a%20general%2Dpurpose,side%20programming%20language%20is%20known.](https://www.codecademy.com/resources/blog/what-is-php-used-for/#:~:text=PHP%20is%20a%20general%2Dpurpose,side%20programming%20language%20is%20known.) [↑](#footnote-ref-3)
4. [https://www.eswcompany.com/micrsoft-excel-vs-azure-sql/ - :~:text=Data%20is%20much%20safer%20in,language%20to%20learn%20as%20SQL.](https://www.eswcompany.com/micrsoft-excel-vs-azure-sql/#:~:text=Data%20is%20much%20safer%20in,language%20to%20learn%20as%20SQL.) [↑](#footnote-ref-4)
5. https://www.bowkervale.manchester.sch.uk/ [↑](#footnote-ref-5)