Requirements Analysis

# Functional Requirements

* You must be able to register an account and log in.
* Website must have a place to store the users data such as login details, and a range of poles.
* You must full in all your details when creating your account, so full name, username, password, and email address.
* To create a post you must fill in all relevant details
* You must choose a survey type such as text based, number based, colour based in order to post the survey.
* There should be a navigation bar where you can easily navigate the pages
* You must fill in username to add a user
* You must put in your details correctly to log in
* Passwords must be not visible when inputted
* Passwords must be hashed on the database so they are not visible to anyone making it encrypted

# Non Functional Requirements

* Performance – our website must be fast performing this can be tested and improved.
* Scalability – our website must be able to handle many users accessing it at the same time with no problem
* Usability – our website must be very easy to use and navigate by the navigation bar and the content being clear with a consistent colour scheme.
* Security – website must protect sensitive data such as customers information
* Maintainability – website must be easy to maintain and update this can be archived by putting comments in the code so everyone understands it
* Compatibility – Our website must be able to run on every device with an internet connection.

# UML Diagrams

Overview

Diagram

Description automatically generated

This is a brief overview of how the database communicates with the mi-Linux server and the device. First of all the database gives data to the mi-Linux server so the data is stored in the php code then it moves to the web browser where the user now has access to their account and they are able to post their poll.

Database communicates with website

Diagram

Description automatically generated

This is a UML activity diagram on how a database communicates with a website to show my teammates how everything communicates first of all the database needs to authenticate if the user is able to gather the data for example, they should not be able to gather someone else’s private data, next step if the user can access the data then proceed to next step however if not allowed that reject the access to it, step after this is the website sends a specific request to the database for whatever purpose it needs, then the database searches for the data it needs to see if its available, next the data is gathered now it needs to be presented on the website in whatever format the website wants it to be displayed and finally the data is displayed on the website and the communication is finished.

How a user would log in

Diagram

Description automatically generatedThis is a UML activity diagram on how user will be able to log into our website how it works is first of all on the website the user will enter their login information, after this step the website fetches the data from the database to see if the user login and password matches the ones inputted if they are a match then proceed onto the next step however if any of the two are incorrect then go back to the login page and try again, if details are correct then they can access their data as they have successfully logged in now they should log out and end the session.

Diagram

Description automatically generatedHow a user would create an account

This is a UML diagram on how a user would create an account first of all user input is needed, after this user input is checked to see if the requirements are met for example, they need to match database requirements for example needs to use numbers, special characters, be lengthy etc. also you need to make sure that a username doesn’t already exist as this is a primary key therefore there can’t be two users with the same username. So if the username and password are accepted then the user details are stored in the database and are encrypted so now the suer will be able to log in because they created an account.

How a user would create a survey

Diagram

Description automatically generated

This is a UML diagram on how a user would create a survey first they would have to choose what survey type they would like such as colour based, text based, multiple choice etc. after this they would choose an appropriate survey question for their survey that the user would have to answer, next give possible answers if appropriate this would be for multiple choice only as other answers you could give answer by typing them out after this you need to make sure you are happy with the survey you are going to create and if so then publish them, next step is to share the survey so people can vote on it and after you can check to see how people voted on your survey.

# References

Rome, P. (no date) *What are non functional requirements - with examples*, *Perforce Software*. Available at: https://www.perforce.com/blog/alm/what-are-non-functional-requirements-examples (Accessed: February 13, 2023).

(no date) *A guide to functional requirements (with examples)*. Available at: https://www.nuclino.com/articles/functional-requirements#functional-requirements-examples (Accessed: February 24, 2023).

*UML activity diagram tutorial* (no date) *Lucidchart*. Available at: https://www.lucidchart.com/pages/uml-activity-diagram (Accessed: February 24, 2023).