**GROUP PROJECT ORGANIZER**

MUHAMMAD IZHAM BIN NORHAMADI

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

GROUP PROJECT ORGANIZER

MUHAMMAD IZHAM BIN NORHAMADI

Laporan projek ini dikemukakan sebagai memenuhi sebahagian daripada syarat penganugerahan Diploma Teknologi Maklumat dan Komunikasi

FAKULTI TEKNOLOGI MAKLUMAT DAN KOMUNIKASI UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2020/2021

ADMISSION

I admit that the project report titled

**Group Project Organizer**

is the result of my own work without plagiarizing any source except the parts that I have explained each of its sources

Student name: Muhammad Izham Bin Norhamadi Date :22/1/2021

Supervisor name: Dr. Zahriah Binti Othman Date:

Shape

Description automatically generated with low confidence

Student Signature: Supervisor Signature:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# ABSTRACT

Recently, online group discussion has been a common interacting medium to allow people to communicate due to increasing of Covid-19 cases. On the other hand, the current platforms to support the group discussion do not provide the essential features such as managing the group, categorizing and tracking the discussion topics and setting the group important dates. Therefore, the Group Project Organizer was developed to accommodate the users with a platform for discussion with tools for managing the group, discussion topics and deadlines to convenience the discussion among group members. The target user of this proposed project is students, but it is also available to any group of peoples who plan to do online group discussion. The proposed project is a web-based application that was developed based on Agile methodology and Wordpress framework to allow various customization through the use of plugins and templates. Hopefully, the provided functionality such as group accessibility, discussion topics organization and due-date notification will help in increasing the effectiveness of the group discussion process.

# ACKNOWLEDGEMENT

In the name of Allah the most Beneficient and most Merciful, All praises to Allah, Lord of the universe and peace be upon His Messenger. My deepest gratitude goes to my supervisor, Dr. Zahriah Binti Othman for her guidance and constructive comments on the project development process and it’s specifications. Her advices and comments on the project’s database model have helped improve the quality of the system.

I would also like to extend my thanks to the Wordpress community for helping me learn and familiarize the platform. Thank you for clearing the many questions I have throughout the project and for providing open sources tools that helped the development of the system ran smoothly.

Last but not least, my sincere gratitude to my parents and siblings for their support and motivations during the progress which inspired me to complete the system.

.

Table of Contents

|  |  |
| --- | --- |
| Title | Page |
| Admission | iii |
| Abstract | iv |
| Acknowledgement | v |
| List of Figures | x |
| **CHAPTER I INTRODUCTION** | 1 |
| 1.1 Project Background | 1 |
| 1.2 Problem Statement | 2 |
| 1.3 Objective | 3 |
| 1.4 Scope | 4 |
| 1.5 Project Importance | 6 |
| **CHAPTER II DEVELOPMENT PLANNING** | 7 |
| 2.1 Introduction | 7 |
| 2.2 High Level Project Requirements | 8 |
| 2.2.1 Software Requirements | 8 |
| 2.2.2 Hardware Requirements | 9 |
| 2.3 System Development Approach | 9 |
| 2.3.1 Planning | 10 |
| 2.3.2 Design | 10 |
| 2.3.3 Implementation | 11 |
| 2.3.4 Testing | 12 |
| 2.3.5 Evaluation | 12 |
| 2.3.6 Deployment | 12 |
| 2.4 Project Planning and Milestones | 13 |
| **CHAPTER III SYSTEM ANALYSIS** | 14 |
| 3.1 Introduction | 14 |
| 3.2 Current System Analysis | 14 |
| 3.2.1 Context Diagram | 14 |
| 3.2.2 Data Flow Diagram | 15 |
| 3.3 New System Analysis | 16 |
| 3.3.1 Decomposition Diagram | 16 |
| 3.3.2 Process Description | 17 |
| 3.3.3 Context Diagram | 22 |
| 3.3.4 Data Flow Diagram | 23 |
| **CHAPTER IV SYSTEM DESIGN** | 25 |
| 4.1 Introduction | 25 |
| 4.2 Design Function Module | 25 |
| 4.2.1 Log in and Session | 25 |
| 4.2.2 Topic and Polls Creation | 26 |
| 4.2.3 Group Option | 27 |
| 4.2.4 Group Moderation | 27 |
| 4.2.5 Group Search | 28 |
| 4.2.6 Dateline Reminder | 28 |
| 4.2.7 Website Administration | 29 |
| 4.3 Interface Design | 30 |
| 4.3.1 Input Interface | 30 |
| 4.3.1.1 Log-In page | 30 |
| 4.3.1.2 Group Search | 31 |
| 4.3.1.3 Group Create (Name and Description) | 32 |
| 4.3.1.4 Group Setting (Visibility) | 33 |
| 4.3.1.5 Group Forum Setting | 34 |
| 4.3.1.6 Group Upload Avatar | 35 |
| 4.3.1.7 Group Upload Cover | 36 |
| 4.3.1.8 Group Member Invite | 37 |
| 4.3.1.9 Topic Creation | 38 |
| 4.3.1.10 Poll Creation | 39 |
| 4.3.1.11 Reminder Creation | 40 |
| 4.3.2 Output Interface | 41 |
| 4.3.2.1 Home Page | 41 |
| 4.3.2.2 Group Page | 42 |
| 4.3.2.3 Topic post | 43 |
| 4.3.2.4 Poll Result | 44 |
| 4.3.2.5 Reminder list | 45 |
| 4.3.3 Database Design | 46 |
| 4.3.3.2 Data Dictionary | 47 |
| **CHAPTER V SYSTEM IMPLEMENTATION** | 56 |
| 5.1 Introduction | 56 |
| 5.2 Implementation Status | 57 |
| 5.3 Testing | 57 |
| 5.3.1 Test Design | 58 |
| 5.3.2 Test Result | 65 |
| **CHAPTER VI PROJECT CONCLUSION** | 66 |
| 6.1 Summary | 66 |
| 6.2 System Strengths and Weaknesses | 66 |
| 6.3 Suggestions for Improvements | 67 |
| 6.4 Conclusion | 67 |
| **References** | 68 |
| **Appendix** | 69 |

List of Tables

|  |  |  |
| --- | --- | --- |
| **Table** | **Title** | **Page** |
| 2.2.1 | Proposed Project Software Requirement | 8 |
| 2.2.2 | Proposed Project Hardware Requirement | 9 |
| 4.3.3.2.1 | USER | 47 |
| 4.3.3.2.2 | MEMBER | 48 |
| 4.3.3.2.3 | GROUP | 49 |
| 4.3.3.2.4 | GROUP\_MEMBER | 50 |
| 4.3.3.2.5 | TOPIC | 51 |
| 4.3.3.2.6 | POST | 52 |
| 4.3.3.2.7 | POLL | 53 |
| 4.3.3.2.8 | POLLRESULT | 54 |
| 4.3.3.2.9 | REMINDER | 55 |
| 5.3.1.1 | LOGIN SYSTEM | 58 |
| 5.3.1.2 | GROUP SYSTEM | 60 |
| 5.3.1.3 | TOPIC SYSTEM | 62 |
| 5.3.1.4 | REMINDER SYSTEM | 64 |

List of Figures

|  |  |  |
| --- | --- | --- |
| **Figure** | **Title** | **Page** |
| 2.4.1 | Gantt Chart for Project Development | 13 |
| 3.2.1 | Whatsapp Context Diagram | 14 |
| 3.2.2. | Whatsapp Data Flow Diagram | 15 |
| 3.3.1 | Decomposition Diagram of Group Project Organizer | 16 |
| 3.3.3 | Group Project Organizer Context Diagram | 22 |
| 3.3.4.1 | Level 1 Group Project Organizer Data Flow Diagram | 23 |
| 3.3.4.2 | Level 2 Group Project Organizer Data Flow Diagram | 24 |
| 4.3.1.1.1 | Log-In form | 30 |
| 4.3.1.1.2 | Register form | 30 |
| 4.3.1.2.1 | Group Search | 31 |
| 4.3.1.2.2 | My Group Sidebar | 31 |
| 4.3.1.3.1 | Group Create form (Name and Description) | 32 |
| 4.3.1.3.2 | Group Create Process Tabs | 32 |
| 4.3.1.4.1 | Group Setting (Visibility) | 33 |
| 4.3.1.4.2 | Group Invitation Setting | 33 |
| 4.3.1.5.1 | Group Forum Setting | 34 |
| 4.3.1.5.2 | Group Forum | 34 |
| 4.3.1.6.1 | Group Upload Avatar | 35 |
| 4.3.1.6.2 | Group Avatar | 35 |
| 4.3.1.7.1 | Group Upload Cover | 36 |
| 4.3.1.7.2 | Group Cover | 36 |
| 4.3.1.8.1 | Group Member Invite | 37 |
| 4.3.1.8.2 | Group Invite Message | 37 |
| 4.3.1.9 | Topic Creation | 38 |
| 4.3.1.10 | Poll Creation | 39 |
| 4.3.1.11 | Reminder Creation | 40 |
| 4.3.2.1 | Home Page | 41 |
| 4.3.2.2.1 | Group Page | 42 |
| 4.3.2.2.2 | Group Activity Tab | 42 |
| 4.3.2.3.1 | Topic post | 43 |
| 4.3.2.3.2 | Topic and Reply box | 43 |
| 4.3.2.4.1 | Poll Result | 44 |
| 4.3.2.4.2 | Poll Result | 44 |
| 4.3.2.5.1 | Reminder list | 45 |
| 4.3.2.5.2 | Reminder Dashboard | 45 |
| 4.3.3.1 | Group Project Organizer ERD | 46 |
| 5.2 | Implementation Status | 57 |

**CHAPTER I**

**INTRODUCTION**

1.1 Project Background

A group discussion is a gathering of individuals, formally or informally to discuss ideas, solve problems, or make comments. Recently, the demand for long-distance video and group discussion software spiked following the current events of the world. In terms of education, group discussions played a significant role in helping students better understand a subject and ensuring projects run smoothly. Knowing this, a student needs a platform to interact and communicate with their group members. Generally, people often use social media platform to fill this need as they are easily accessible and free to use such as Whatsapp and Facebook.

Although, these social media platforms have a few problems that made them unappealing. Social medias are known for wasting user’s time or getting them side-tracked with ads and trending posts. Group Project Organizer aims to negate most of these problems and provides a group discussions platform for students. This system will be designed to be simplistic and straightforward to save time while providing tools for administrator to manage their groups and members.

**1.2 Problem Statement**

This project aims to address three main problems with the current online group chat services which are discussed as following subsection:

**1.2.1 Unsuitable features of social media to assist a group discussion.**

Most online social platform lacks features to support online discussions in one way or another. For example, Microsoft Teams set the option to leave a Team as disabled. Such feature as simple as leaving a group is important to ensure that our past deprecated groups does not clutter the group list, impacting the user experience. Another feature that a lot of platforms lacked is to promote moderators to monitor the group chat. Platforms such as Whatsapp only allows group administrators to promote other members into administrators as well, the highest group role. This creates a problem where promoting the wrong members could lead into disastrous effect such as group deletion. Thus, multiple roles are required to moderate a group chat.

**1.2.2 Difficulty in keeping track of any discussion history.**

Due to lots of incoming messages, important discussion may get buried by other messages making it difficult to locate it in the future. Besides search option and message pinning, a system of separating discussions by topic can help organize discussions and prevents getting off topic.

**1.2.3 Important dates were set up among group members individually.**

Social platforms often lacked the option to set up reminder for the whole group. This can lead to members needing to remind others if they have forgotten about it. Plus, plenty of social media platforms are designed to keep their users engaged. Even though some moves have been made to remind users of their time like the notification system on Instagram, the problem still prevalent that social media wastes a lot of out time by keeping us engaged with our interest.

**1.3 Objective**

The main objective of this project is to create a software that provides a platform for discussing and managing groups. From this project, students will explore software platforms and learn new software development skills. The highlight of the goals to be achieved with this system are as follows:

**1.3.1 To provide online group discussion platform to support online learning**

Divides different discussions into topics for easy view and search and provide administrations tools for managing groups and members. This way, student can customize their working environment on the system to suit their needs.

**1.3.2 To trace registered group discussion based on user login**

User that recently joined a group will be recorded on the group home activity list. This list will also include topics and polls created by members.

**1.3.3 To notify important dates as reminder to the users**

Users can set a group reminder of any project due dates. This way, members of the group can review their project due date and will be notified when the date arrives.

**1.4 Scope**

Group Project Organizer was developed as a Web Application using Wordpress Framework. The system target users are students or people who must engage with the group discussion. There are several functionalities of this system which are explained as follow:

**1.4.1 Group creation**

Users are able to create their own group by choosing Create New Group option in the “Group” page. After that, user can enter the group’s name and its description. Group has 3 privacy options: Public, Private, or Hidden. Public groups are open so that any users on the site can join and the group will be listed in the groups directory. Private groups are visible in the groups directory but users need to request membership and be accepted before they can join the group. Hidden groups are hidden from the groups directory and only users that are invited can join. There is an option to choose which members are allowed to invite other users: All members, Group admins and mods only, or Group admins only. Group avatar and cover image can be customized by uploading images into the site.

**1.4.2 Topic creation and reply**

Each groups has the option to enable the Forum option which allow for discussion through topics. To create a topic, user need to set the topic title and the content, topic tags are optional. After creating a topic, users can reply to the topic with the reply box below. There’s an option to send images by clicking the “IMG” button and copy pasting the image url received from other image upload sites. A topic status can be Open, Closed, Spam, Trash, or Pending.

**1.4.3 Poll**

Besides topics, user can create a poll topic by ticking the “Add poll to this topic” option in the Forum tab of a group. Here, user can enter the poll question, descriptions and possible responses to the poll. The poll can be set to allow a certain amount of choice: Single choice, Unlimited, or Limited. There’s an option to close the poll when the topic is closed and an option to show the results of the poll.

**1.4.4 Group Managing**

Group administrators can manage and adjust various options of the group like the group details, settings, cover image, forum and members. There are 3 roles in a group, administrators, moderators, and members. Group administrator is the highest role in a group and has all the group permissions such as editing a member role, removing a member, closing a topic, and edit group settings. Group moderator has administrator permissions excluding editing a member role and deleting the group.

**1.4.5 To-Dos\ Date Reminder**

Group administrators and moderators can set the group’s important dates in the “To-Dos” tab and clicking Add. From here, they can enter the title and summary of the reminder as well as the date. After setting up the reminder, any group members can review the reminder in the To-Dos tab and will be notified through emails when the due date arrives.

**1.5 Project Importance**

People often turn to social medias for group discussion or any sort of online communications since they are free, popular, and accessible to them. But, many social media catered towards user watch time for promoting ads. Thus, there is a need to develop a platform which is designed to fulfil the group discussions required features. Hopefully,this project hopefully will facilitate the user on having practical group discussion with the provided features and capability of managing the group, discussion, important dates and polls.

# CHAPTER II

# DEVELOPMENT PLANNING

**2.1 Introduction**

Group Project Organizer is a web-based application which was developed using Wordpress Framework. The Wordpress Framework was chosen because of its customizable features through plugins and wide array of UI templates. At the same time, the development of this proposed project involved the use of PHP as a server side scripting language and CSS to change web presentation.

Group Project Organizer was developed according to three main functionalities: managing group, managing topic and managing reminder. First, the managing group functionality consists of functions to create groups, modify group options, and manage group members. Second, managing topic functionality consists of functions to create topics, polls, and respond to posts. Third functionality, managing reminder consists of functions to create group reminder and notify users. This proposed project aims to develop a group discussion web-based application with emphasis on categorizing the discussions and group managing.

**2.2 High Level Project Requirements**

**2.2.1 Software Requirements**

The software required to run Group Project Organizer are operating system Windows 7 or newer and up-to-date browsers such as Google Chrome, Microsoft Edge, or Mozilla Firefox. The software required to develop Group Project Organizer are Google Chrome to test out debug errors and see results of the system, Xampp to develop web applications and host local database, Sublime Text to edit various programming languages, and Microsoft Visio to design database Entity Relationship Diagram (ERD). Table 2.2.1 shows the software requirement to run the project.

|  |  |
| --- | --- |
| **Proposed Project Software Requirement** | |
| **Development** | **Execution** |
| Google Chrome \ Microsoft Edge \ Mozilla Firefox | |
| Xampp | Windows 7 or newer |
| Sublime Text 3 |  |
| Microsoft Visio |  |

**Table 2.2.1 Proposed Project Software Requirement**

**2.2.2 Hardware Requirements**

The hardware required to run Group Project Organizer are any devices such as smart phone, tablet or computer with a minimum specification of 1.6GHz processor and 512MB memory. The hardware required to develop Group Project Organizer is a computer for a suitable web development environment. Table 2.2.2 show the hardware requirement to run the project.

|  |  |
| --- | --- |
| **Proposed Project Hardware Requirement** | |
| **Development** | **Execution** |
| Computer | Smart phone \ tablet \ computer |
|  | Processor 1.6GHz or faster |
|  | Memory 512MB or higher |

**Table 2.2.2 Proposed Project Hardware Requirement**

**2.3 System Development Approach**

The proposed project was developed using Agile methodology. This methodology was chosen to fulfil the rapid development of the basic functions of the system and prioritizing its working condition before moving on to other features. Agile methodology allows the basic functions of the proposed project to be built first and can be tested early. Then, any feedback received can be implemented in the next iteration. Since the requirements may be changing, it is wise to perform incremental development on the system so that more functions can be added or change later. There are 6 stages in Agile methodology which are planning, design, implementation, testing, evaluation and deployment.

**2.3.1 Planning Phase**

This is the stage where the planning on what the project should be and its direction. A feasibility study was done to investigate the possibility of developing this proposed project. Based on the study on platform that supports group discussions such as social media and learning management system, the Group Project Organizer was proposed as a project title. The problems of current group discussion platforms were identified at this phase to carry out the objectives of developing this proposed project. For instance, the current popular messaging apps such as Whatsapp and Telegram lacked the feature to separate different topics in group by channels. Even the telegram chat bots will take up space in the group chat. Based on these problems the Group Project Organizer was developed to help users in categorizing the discussions by topic and provide features to manage group and project deadlines.

**2.3.2 Design**

The design stage is where the project development begins. In this stage, it is decided on what platform the system will be developed and the user interface. The system was developed as a web browser application so that it is accessible to any devices. To make this happen, a review was done on various web application tools and Wordpress Framework was chosen as the development framework. There are many good tools available on the internet, each with its ups and downs, Wordpress was chosen because of its built-in basic feature such as log-in, sessions, and various customization through plugins. Then, thanks to various resources online, we can take courses on how to develop on this framework.

Next would be the database design. Entity Relationship Diagram (ERD) must be developed so that the entities can be extracted. All the tables related to the system need to be drafted out so that there is a clear understanding on what data is to be stored into the database and which is required to show to the user. The ERD is drafted using Visio and was constantly revised to provide a viable database for the system. The user interface was also drawn to give an idea on how it will be developed.

**2.3.3 Implementation**

Implementation stage is a stage where the database and system created based on the design produced in the design stage. The database will be created using MySQL packaged in Xampp software. phpMyAdmin helps rapidly speed up the process of SQL coding by generating code through Graphical User Interface (GUI). Once the database has been created, then the development of early version of the system can begin. The system features listed in previous stage were prioritized early in development to produce the first version of the system. This way we can receive constant feedback and make rapid improvements to the system. The user interface drawn in design stage will be used as a guideline as well. Open-source plugins by the Wordpress community helps speed up several parts of the system such as button navigation and user registration system. The main programming languages that were used for this system are PHP, Javascript, and CSS.

**2.3.4 Testing**

Once the system has been developed, testing will be performed as planned. A list of dummies data will be used to test the system which are users registration, groups, topics, polls, and reminders. If the output is not as expected, it will be recorded so that the evaluation on the system can be done.

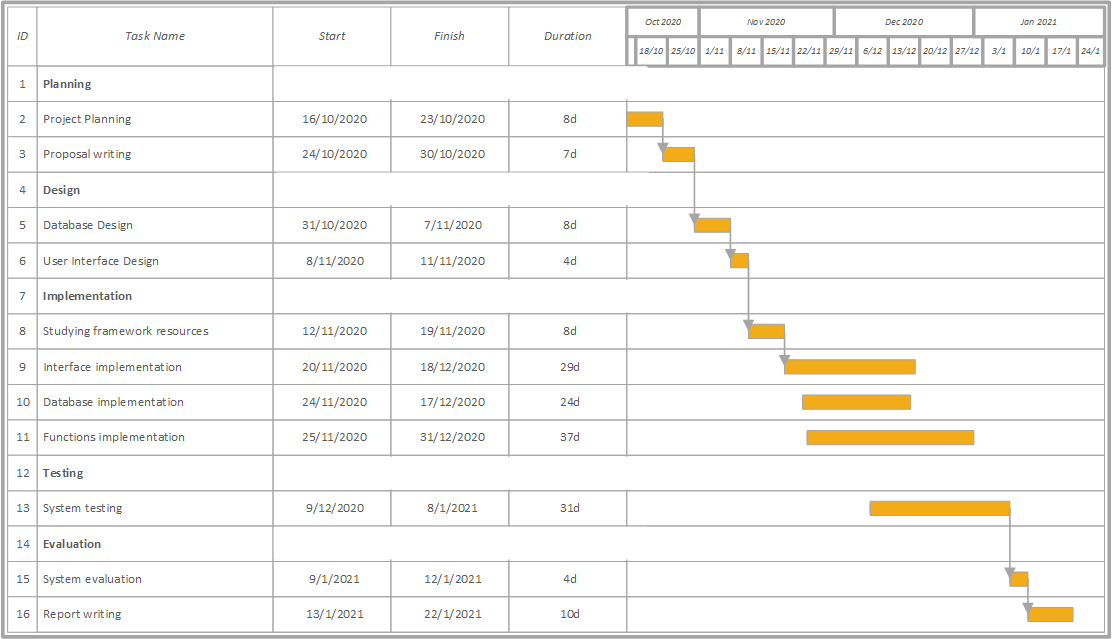
**2.3.5 Evaluation**

In this stage, an evaluation of the system will begin. The evaluation checks whether the system functions as intended. From the testing in the previous stage, we can check whether the system meets the requirements. This way, the system can be decided to either go to the next iteration or need to perform incremental improvement on the existing functions. Project demonstration videos were sent to project supervisor gradually to be evaluated. The content of the video demonstrations covers new functions and user interfaces.

**2.3.6 Deployment**

In this stage, the system has met the requirements and functions working as intended. The whole process of development will be documented so that the system can be easily maintained in the future. An instruction on how to set up the system was documented in a text file shipped with the system’s folder.

**2.4 Project Planning and Milestones**



**Figure 2.4.1 Gantt Chart for Project Development**

# CHAPTER III

# SYSTEM ANALYSIS

**3.1 Introduction**

System analysis allows us to identify the objectives of a system through studying its parts and summarizing them into high-level business diagrams. In this section, we will take a look at overview functions of the Group Project Organizer system through Data Flow Diagram (DFD).

**3.2 Current System Analysis**

**3.2.1 Context Diagram**

**Graphical user interface

Description automatically generated with medium confidence**

**Figure 3.2.1 Whatsapp Context Diagram**

**3.2.2 Data Flow Diagram**

Diagram

Description automatically generated

**Figure 3.2.2 Whatsapp Data Flow Diagram**

**3.3 New System Analysis**

**3.3.1 Decomposition Diagram**

**A picture containing text, computer, computer, screenshot

Description automatically generated**

**Figure 3.3.1 Decomposition Diagram of Group Project Organizer**

**3.3.2 Process Description**

There are eight main processes involve in this proposed project. The description of those processes are discussed in the following.

*Process Name:*  
1.0 Log In

*Purpose:*  
To allow users to register and authorize registered users to access the site

*Definition:*

There are 2 sub-process involved :-

**1.1 Change Password**  
Allow users to change their password of their user account.

**1.2 Forget Password**

Allow users to authorize access to their account through email verification whenever they forgotten their password. Once successfully verified, prompt user to change their password.

*Users:*

Regular users and site administrators.

*Process Name:*  
2.0 Manage Group

*Purpose:*  
To allow group moderators to manage their groups

*Definition:*

There are 5 sub-process involved :-

**2.1 Add Group**  
Allow users to create their own group.

**2.2 Edit Group**

Allow group moderators to manage their group settings.

**2.3 Delete Group**  
Allow group moderators to delete their group.

**2.4 Deactivate Group**  
Allow group moderators to deactivate their group.

**2.5 Search Group**  
Listed groups in a searchable format.

*Users:*

Group moderators

*Process Name:*  
3.0 Manage Members

*Purpose:*  
To allow group moderators to manage their group members

*Definition:*

There are 3 sub-process involved :-

**3.1 Invite Member**  
Members of a group can invite others into the group. This is required to join a group if the setting was set as hidden.

**3.2 Accept Join Request**

Allow group moderators to accept requests of joining the group. This is required to join a group if the setting was set as private.

**3.3 Kick Member**  
Allow group moderators to kick members from the group.

*Users:*

Group moderators

*Process Name:*  
4.0 Manage Topic

*Purpose:*  
To allow members in a group to create topic discussion

*Definition:*

There are 3 sub-process involved :-

**4.1 Create Topic**  
Group members can create topic discussion in the forum tab.

**4.2 Search Topic**

Group members can search past topics with the search option.

**4.3 Delete Topic**  
Allow group moderators to delete topics.

*Users:*

Group members and group moderators.

*Process Name:*  
5.0 Manage Post

*Purpose:*  
To allow members in a group to manage posts

*Definition:*

There are 3 sub-process involved :-

**5.1 Create Post**  
Group members can create posts and reply to topics in the forum tab.

**5.2 Search Post**

Group members can search past posts with the search option.

**5.3 Delete Post**  
Group members and group moderators can delete their own posts.

*Users:*

Group members and group moderators.

*Process Name:*  
6.0 Manage Poll

*Purpose:*  
To allow members in a group to create polls.

*Definition:*

There are 3 sub-process involved :-

**6.1 Create Poll**  
Group members can create polls and accept responses from other members.

**6.2 Vote Poll**

Group members can vote other member’s poll and give replies.

**6.3 Delete Poll**  
Group members and group moderators can close their own poll from receiving anymore responses.

*Users:*

Group members and group moderators.

*Process Name:*  
7.0 Manage Due Date

*Purpose:*  
To allow group moderators to create reminder for dates in group.

*Definition:*

There are 2 sub-process involved :-

**7.1 Create Due Date**  
Group moderators can create date reminder in the To-Dos tab. When the due date arrives, every member will receive an email notification.

**7.2 Delete Due Date**

Group moderators can delete a reminder.

*Users:*

Group moderators

*Process Name:*  
8.0 View report

*Purpose:*  
To allow group moderators to view report of the group.

*Definition:*

There are 2 sub-process involved :-

**7.1 View Calendar**  
Group moderators view the due dates of the group.

**7.2 View Member Join Date**

Group moderators can review a group member join date.

*Users:*

Group moderators

**3.3.3 Context Diagram**

Diagram

Description automatically generated

**Figure 3.3.3 Group Project Organizer Context Diagram**

**3.3.4 Data Flow Diagram**

Diagram

Description automatically generated

**Figure 3.3.4.1 Level 1 Group Project Organizer Data Flow Diagram**

A picture containing text, indoor

Description automatically generated

**Figure 3.3.4.2 Level 2 Group Project Organizer Data Flow Diagra**

# CHAPTER IV

# SYSTEM DESIGN

**4.1 Introduction**

In this chapter, we will explore the result of the system analysis that covers Group Project Organizer modules and in-depth look of the system User Interface design and Database design.

**4.2 Design Function Module**

**4.2.1 Log-in and Session**

*Codename:*  
wp\_log\_in

*Purpose:*  
Verify user credentials and log-in user into site

*Input/Output:*

Input – username(user\_name), password(pass)(encrypted)  
Output – Successful log-in

*Logic code:*  
Step 1: Prompt user to enter username and password  
Step 2: Assign input into variables  
Step 3: Query variable to database user table to find a match  
Step 4: If success, return true, else go to INVALID LOGIN  
Step 5: Redirect user to homepage

When INVALID LOGIN then  
1. Prompt user choice to go to Forgotten Password form  
2. Email user verification code to change password  
3. Prompt user to enter new password and confirm password  
4. Redirect user back to Login form

**4.2.2 Topic and Polls Creation**

*Codename:*wp\_topic

*Purpose:*  
Allow users to create topic and poll

*Input/Output:*

Input – topic title(bbpress\_title), topic content(bbpress\_content)  
Output – Post topic

*Logic code:*  
Step 1: Prompt user to enter topic title and topic content  
Step 2: Assign input into variables  
Step 3: Store topic into database correspond to the current group  
Step 4: If success, return true, else go to ERROR  
Step 5: Redirect user to topic link

When ERROR then  
1. Display “An error occurred, please try again”

**4.2.3 Group Option**

*Codename:*  
wp\_group\_opt

*Purpose:*  
Allow group administrator/moderator to change group settings

*Input/Output:*

Input – Group settings(bbpress\_group\_opt)   
Output – Saved settings

*Logic code:*  
Step 1: Display form to change group settings  
Step 2: Assign input into variable  
Step 3: Store variable into group table in database  
Step 4: If success, return true, else go to ERROR  
Step 5: Display success message

When ERROR then  
1. Display “An error occurred, please try again”

**4.2.4 Group Moderation**

*Codename:*  
wp\_group\_memb

*Purpose:*  
Allow group administrator/moderator to edit group member’s role

*Input/Output:*

Input – User setting(bbpress\_group\_role)   
Output – Saved settings

*Logic code:*  
Step 1: Display form to change members role  
Step 2: Assign input into variable  
Step 3: Store variable into group table in database  
Step 4: If success, return true, else go to ERROR  
Step 5: Display success message

When ERROR then  
1. Display “An error occurred, please try again”

**4.2.5 Group Search**

*Codename:*  
wp\_group\_search

*Purpose:*  
Allow user to view group list and search for group

*Input/Output:*

Input – Search text(bbpress\_group\_search)   
Output – Display group list

*Logic code:*  
Step 1: Display group list  
Step 2: If user type in search box, query group name variable to database group name column  
Step 3: Display search result  
Step 4: If no group name matching, then go to NONE

When NONE then  
1. Display “No matching group name found”

**4.2.6 Dateline Reminder**

*Codename:*  
wp\_group\_to\_do

*Purpose:*  
Allow group moderators to set group important dates

*Input/Output:*

Input – Reminder title(bbpress\_group\_todo\_title), Reminder description (bbpress\_group\_todo\_desc), Date(bbpress\_group\_todo\_date)   
Output – Display reminder list, notify user when date arrives

*Logic code:*  
Step 1: Display reminder list, If empty display “No reminder was set”  
Step 2: If user select create new, display new reminder form  
Step 3: User enter reminder title, description, and the date  
Step 4: Store input to database reminder table  
Step 5: If date arrives, send email to group members  
Step 6: If moderator select delete reminder, then query and delete reminder from table reminder

**4.2.7 Website Administration**

*Codename:*  
wp\_plugin\_update

*Purpose:*  
Check for plugins latest update and perform update

*Input/Output:*

Input – Update option(wp\_plugin\_update)   
Output – Display plugin list

*Logic code:*  
Step 1: Display plugin list, If there is an update, prompt user option to update  
Step 2: If user choose update, fetch update files from wordpress server and install plugin  
Step 3: If updating, disable interaction with site  
Step 4: If done updating, display “Update success”  
Step 5: Display plugin list

**4.3 Interface Design**

**4.3.1 Input Interface**

**4.3.1.1 Log-In page**

User need to input Username and Password to be authorized.

Input scope: Username, Password

Graphical user interface, application

Description automatically generated

**Figure 4.3.1.1.1 Log-In form**

Graphical user interface, application

Description automatically generated

**Figure 4.3.1.1.2 Register form**

**4.3.1.2 Group Search**

User can input group name in search box to filter group

Input scope: Group name

Graphical user interface, application

Description automatically generated

**Figure 4.3.1.2.1 Group Search**

**Graphical user interface, application, website

Description automatically generated**

**Figure 4.3.1.2.2 My Group Sidebar**

**4.3.1.3 Group Create (Name and Description)**

User need to input group name and description when creating a group

Input scope: Group name, Description

Graphical user interface, text, application, email, Teams

Description automatically generated

**Figure 4.3.1.3.1 Group Create form (Name and Description)**

A picture containing chart

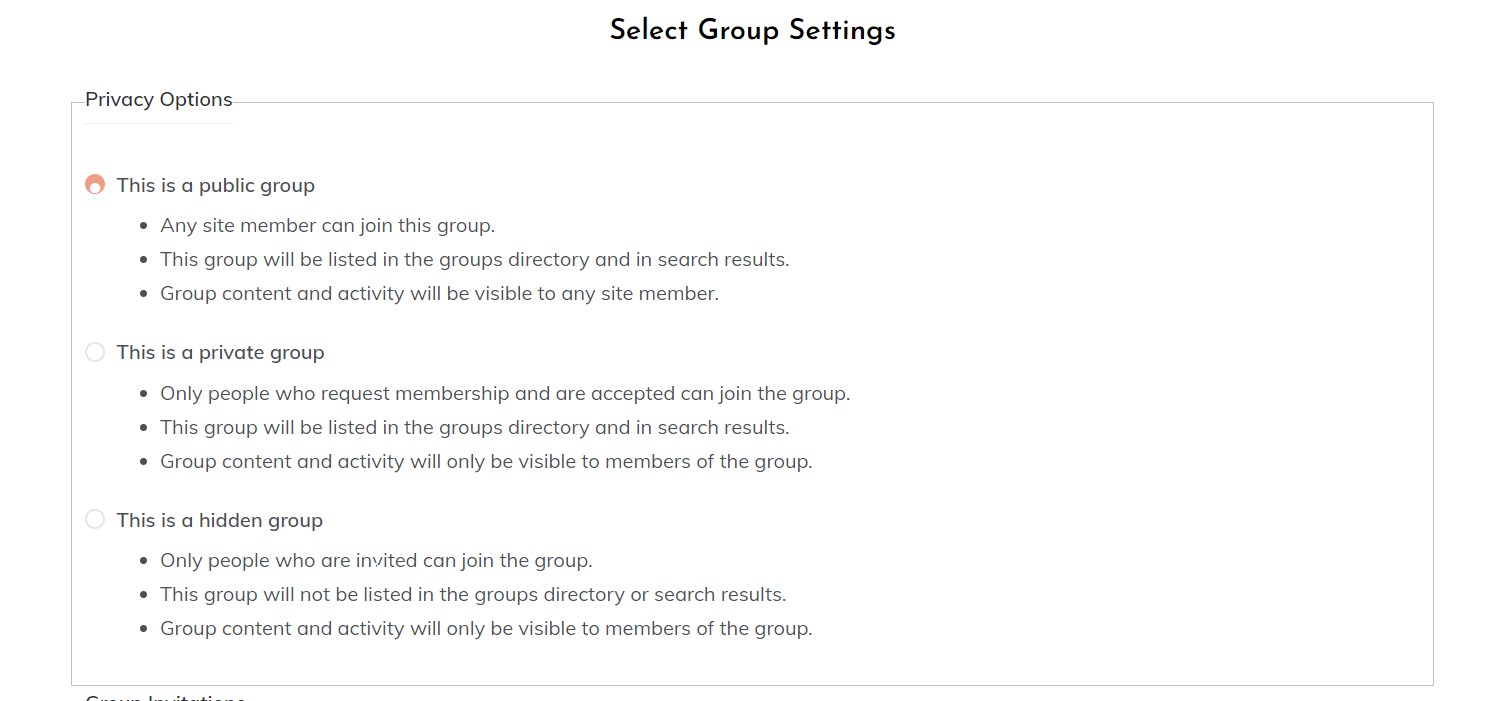
Description automatically generated

**Figure 4.3.1.3.2 Group Create Process Tabs**

**4.3.1.4 Group Setting (Visibility)**

User can set the visibility of the group

Input scope: Public, Private, Hidden



**Figure 4.3.1.4.1 Group Setting (Visibility)**

**Graphical user interface, text, application, email

Description automatically generated**

**Figure 4.3.1.4.2 Group Invitation Setting**

**4.3.1.5 Group Forum Setting**

User can choose to activate group forum to allow topic discussion

A screenshot of a computer

Description automatically generated with low confidence

**Figure 4.3.1.5.1 Group Forum Setting**

Table

Description automatically generated

**Figure 4.3.1.5.2 Group Forum**

**4.3.1.6 Group Upload Avatar**

User can upload picture to change the group avatar

Input: picture (format: png, jpeg)

Text, table

Description automatically generated

**Figure 4.3.1.6.1 Group Upload Avatar**

Background pattern

Description automatically generated with medium confidence

**Figure 4.3.1.6.2 Group Avatar**

**4.3.1.7 Group Upload Cover**

User can upload picture to change the group cover picture

Input: picture (format: png, jpeg)

Graphical user interface, text, application, table

Description automatically generated

**Figure 4.3.1.7.1 Group Upload Cover**

Graphical user interface

Description automatically generated

**Figure 4.3.1.7.2 Group Cover**

**4.3.1.8 Group Member Invite**

User can invite other members to join the group through friend list

Input: Friended user

Graphical user interface, text, application, email

Description automatically generated

**Figure 4.3.1.8.1 Group Member Invite**

Graphical user interface, text, application, email

Description automatically generated

**Figure 4.3.1.8.2 Group Member Invite Message**

**4.3.1.9 Topic Creation**

User need to input a topic title and the content to create a topic

Input scope: Topic title, topic content

Graphical user interface, application

Description automatically generated

**Figure 4.3.1.9 Topic Creation**

**4.3.1.10 Poll Creation**

User can create a poll by selecting the add poll option and inputing the poll question, description, and possible responses. User can also set how many responses will be allowed, when will the poll closed, and whether to show the result or not.

Input scope: Poll question, poll description, poll possible responses, poll settings

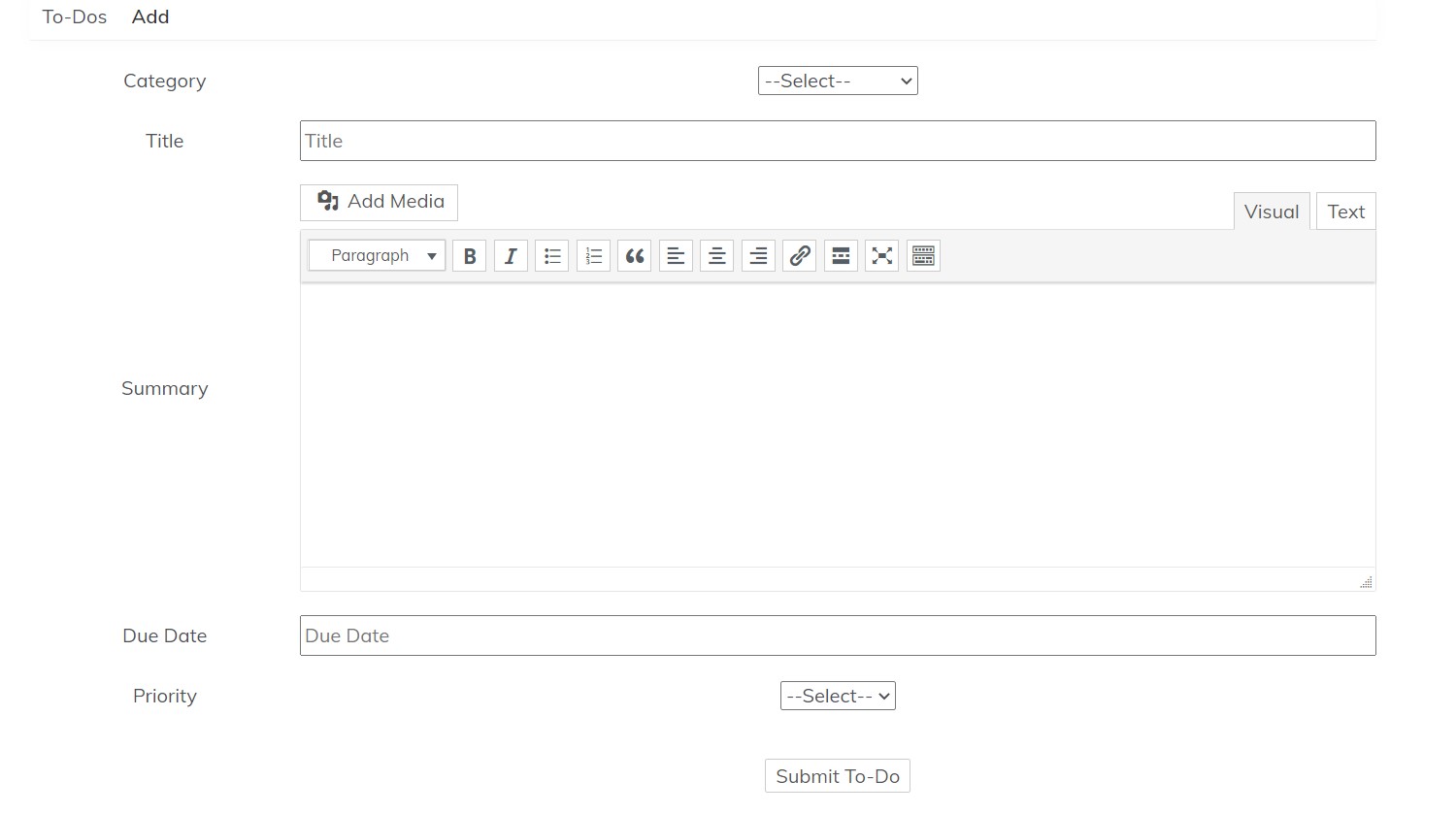
Graphical user interface, text, application, email

Description automatically generated

**Figure 4.3.1.10 Poll Creation**

**4.3.1.11 Reminder Creation**

User can create a new reminder by inputting reminder title and the summary of the reminder. Then, user need to enter the due date.  
Input scope: Reminder title, reminder summary, reminder due date



**Figure 4.3.1.11 Reminder Creation**

**4.3.2 Output Interface**

**4.3.2.1 Home Page**

After successful log-in, user will be directed to the home page. From here, they can navigate to the group tabs.

Graphical user interface, website

Description automatically generated

**Figure 4.3.2.1 Home Page**

**4.3.2.2 Group Page**

After creating a group, the user will be directed to the group page.

**Graphical user interface, text, application

Description automatically generated**

**Figure 4.3.2.2.1 Group Page**

Graphical user interface, application

Description automatically generated

**Figure 4.3.2.2.2 Group Activity Tab**

**4.3.2.3 Topic post**

After creating a topic, the user will be directed to the topic page. Here, user can reply to the topic,

Graphical user interface, application, Teams

Description automatically generated

**Figure 4.3.2.3.1 Topic post**

Graphical user interface, application, Teams

Description automatically generated

**Figure 4.3.2.3.2 Topic and Reply box**

**4.3.2.4 Poll Result**

After creating a poll, other group members can vote on the poll and if allowed, see the result.

Rectangle

Description automatically generated with medium confidence

**Figure 4.3.2.4.1 Poll Result**

**A picture containing rectangle

Description automatically generated**

**Figure 4.3.2.4.2 Poll Result**

**4.3.2.5 Reminder list**

After creating a reminder, the user can view the reminder in the To-Dos tab. From here, they can delete or edit the reminder.

Graphical user interface, application

Description automatically generated

**Figure 4.3.2.5.1 Reminder List**

Graphical user interface, application

Description automatically generated

**Figure 4.3.2.5.1 Reminder Dashboard**

**4.3.3 Database Design**

Graphical user interface, application

Description automatically generated

**Figure 4.3.3.1 Group Project Organizer ERD**

In Group Project Organizer system:-

* Every member will have one and only one user identification
* Every member can join one or many groups and every group must have one or many members
* Every group can have one or many reminders
* Every member can create one or many topics
* Every member can create one or many posts
* Every topic can must have one or many topic but every post belongs to one and only one topic
* Every member can create one or many polls
* Every poll can be voted by one or many members

**4.3.3.2 Data Dictionary**

Detailed information on user table (table name: USER)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | User ID | Character | 20 | Yes | A unique user identification | Yes |  |
| 2 | Username | Character | 30 |  | Name of the user | Yes | must be unique |
| 3 | User password | Character | 80 |  | Password of the user account | Yes | must be encrypted |
| 4 | User email | Character | 100 |  | Email of user | Yes | must be unique |
| 5 | User level | Number | 1 |  | Identify whether the user is a regular member or website administrator | Yes | zero or one only |

**Figure 4.3.3.2.1 USER table**

Detailed information on member table (table name: MEMBER)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | Member ID | Character | 20 | Yes | A unique member identification | Yes |  |
| 2 | User ID | Character | 20 | FK | Foreign key taken from user table | Yes |  |
| 3 | Member Name | Character | 50 |  | Chosen name to be displayed to other users | No | Can be imported from user table if left empty |
| 4 | Member Profile | Character | 200 |  | The profile of the user | No |  |

**Figure 4.3.3.2.2 MEMBER table**

Detailed information on group table (table name: GROUP)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | Group ID | Character | 20 | Yes | A unique group identification | Yes |  |
| 2 | Group Name | Character | 30 |  | Name of a group | Yes |  |
| 3 | Group Description | Character | 200 |  | Description of a group | Yes |  |
| 4 | Group Option | Character | 100 |  | The settings of a group | Yes |  |

**Figure 4.3.3.2.3 GROUP table**

Detailed information on group member table (table name: GROUP\_MEMBER)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | Group Member ID | Character | 20 | Yes | A unique group member identification | Yes |  |
| 2 | Group ID | Character | 20 | FK | Foreign key taken from group table | Yes |  |
| 3 | Member ID | Character | 20 | FK | Foreign key taken from member table | Yes |  |
| 4 | Member level | Number | 1 |  | Member role in a group | Yes | 0 – Regular member  1 – Moderator  2 – Administrator |

**Figure 4.3.3.2.4 GROUP\_MEMBER table**

Detailed information on topic table (table name:TOPIC)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | Topic ID | Character | 20 | Yes | A unique topic identification | Yes |  |
| 2 | Member ID | Character | 20 | FK | Foreign key taken from member table | Yes | Indicate who started the topic |
| 3 | Topic title | Character | 80 |  | Title of a topic | Yes |  |

**Figure 4.3.3.2.5 TOPIC table**

Detailed information on post table (table name:POST)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | Post ID | Character | 20 | Yes | A unique topic identification | Yes |  |
| 2 | Topic ID | Character | 20 | FK | Foreign key taken from topic table | Yes |  |
| 3 | Member ID | Character | 20 | FK | Foreign key taken from member table | Yes |  |
| 4 | Post Content | Character | 500 |  | Content of a post | Yes |  |
| 5 | Post Position | Number | 10 |  | Indicating where the post is located in a topic | Yes |  |

**Figure 4.3.3.2.6 POST table**

Detailed information on poll table (table name:POLL)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | Poll ID | Character | 20 | Yes | A unique poll identification | Yes |  |
| 2 | Member ID | Character | 20 | FK | Foreign key taken from member table | Yes |  |
| 3 | Poll Title | Character | 50 |  | Title of a poll | Yes |  |
| 4 | Poll Description | Character | 100 |  | Description of a poll | Yes |  |
| 5 | Poll Choice | Character | 500 |  | List of possible choices | Yes | formatted by commas |

**Figure 4.3.3.2.7 POLL table**

Detailed information on poll result table (table name:POLLRESULT)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | PollResult ID | Character | 20 | Yes | A unique poll result identification | Yes |  |
| 2 | Member ID | Character | 20 | FK | Foreign key taken from member table | Yes |  |
| 3 | Poll ID | Character | 20 | FK | Foreign key taken from poll table | Yes |  |
| 4 | PollResult Counter | Character | 100 |  | Poll answer counter | Yes | formatted by commas |

**Figure 4.3.3.2.8 POLLRESULT table**

Detailed information on reminder table (table name:Reminder)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | Name | DataType | Length | Primary Key | Description | Mandatory (Yes/No) | Remarks |
| 1 | Reminder ID | Character | 20 | Yes | A unique poll reminder identification | Yes |  |
| 2 | Group ID | Character | 20 | FK | Foreign key taken from group table | Yes |  |
| 3 | Reminder Title | Character | 50 |  | Title of a reminder | Yes |  |
| 4 | Reminder Summary | Character | 300 |  | Summarization of a reminder | Yes |  |
| 5 | Reminder date | Date |  |  | Due date of a reminder | Yes |  |

**Figure 4.3.3.2.9 REMINDER table**

# CHAPTER V

# SYSTEM IMPLEMENTATION

**5.1 Introduction**

The system implementation stage can be started after the design stage has been done. In this stage, the system will be developed and coded into a software following the designs created. Once the system has been completed, it will be tested with various test data to make sure the system met the requirements.

The next page shows the process of implementing the system, categorized by its component, when did the development started and how long it takes to implement it. Since the system is worked on Wordpress Framework, the plugins will provide the desired functions and capabilities toward the system.

The development was focused on implementing login functions first so that it was easier to test the different user permissions and roles. Then, the functions that were developed next are groups, topics, replies, polls, and finally, reminder.

**5.2 Implementation Status**



**5.3 Testing**

Once the system has been successfully developed, the project can now move to system testing. This is an important stage to ensure the system is working as intended besides help find errors that may not be visible from user. There are few types of testing which includes the unit testing, functional testing and integration testing.

**5.3.1 Test Design**

Sistem: Login System  
Module: Login  
Created by: Muhammad Izham Bin Norhamadi Test Date: 21/10/2020

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Action** | **Test Steps** | **Test Data** | **Expected Result** | **Result (Pass/Failed**) |
| 1 | Verify user login with correct user credentials | 1. Go to login page  2.Enter username and password  3. Click submit | username:Ali  password:test123 | Successfully login to the system as user | Pass |
| 2 | Verify user login with incorrect user credentials | 1. Go to login page  2.Enter username and password  3. Click submit | username:Ali  password:ali1234 | Login failed, show invalid login error message | Pass |
| 3 | Verify login with empty username and password fields | 1. Go to login page  2. Click submit | username:  password: | Login failed, show invalid error message | Pass |
| 4 | Click “Lost your password?” link | 1. Go to login page  2. Click “Lost your password?” |  | Redirect page to Lost Password page | Pass |
| 5 | Request new password via email address | 1. Go to password recovery page  2. Enter email  3. Click submit | username: Ali  email:ali@gmail.com | Receive an email to change password | Failed |
| 6 | Register as a new user | 1. Go to register page  2. Enter username and password  3. Click submit | username: Abu  password:Abu123 | Successfully registered as new user | Pass |
| 7 | Leave register fields blank and click ‘register’ | 1. Go to register page  2. Click submit | username:  password: | Registration failed, show invalid error message | Pass |

**Table 5.3.1.1 Login System**

Sistem: Group System  
Module: Manage Group  
Created by: Muhammad Izham Bin Norhamadi Test Date: 1/11/2020

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Action** | **Test Steps** | **Test Data** | **Expected Result** | **Result (Pass/Failed**) |
| 1 | Create a group, filling both group name and description fields | 1. Go to group create page  2. Enter group name and description  3. Click save | Group name: Calculus  Group description:  Our Calculus group | Successfully registered a group | Pass |
| 2 | Create a group, leaving group name and description fields blank | 1. Go to group create page  2. Click save | Group name:  Group description: | Register failed, show error message | Pass |
| 3 | In group photo menu, upload and crop an image | 1. Go to group avatar setting  2. Upload and crop an image  3. Click save | Any photo | Successfully group photo | Pass |
| 4 | In members tab, change member role | 1. Go to group member setting  2. Click edit on member and choose administrator role  3. Click save |  | Successfully changed member role | Pass |
| 5 | In members tab, remove a member | 1. Go to group member setting  2. Click remove on member |  | Successfully removed a member | Pass |
| 6 | In group list, join a public group | 1. Go to group list  2. Click join group | Any public group | Successfully joined the group | Pass |
| 7 | In group list, request to join private group | 1. Go to group list  2. Click request to join | Any private group | Successfully requested | Pass |
| 8 | In invite tab, invite a friend to group | 1. Go to group invite tab  2. Click invite | Any friend | Successfully invited | Pass |

**Table 5.3.1.2 Group System**

Sistem: Topic System  
Module: Manage Topic  
Created by: Muhammad Izham Bin Norhamadi Test Date: 13/12/2020

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Action** | **Test Steps** | **Test Data** | **Expected Result** | **Result (Pass/Failed**) |
| 1 | Create a topic, filling both topic title and content fields | 1. Go to topic tab  2. Enter topic title and content  3. Click submit | Topic title: Presentation idea  Topic content: What should we include? | Successfully created a topic | Pass |
| 2 | Create a topic, leaving topic title and content fields blank | 1. Go to topic tab  2. Enter topic title and content  3. Click submit | Topic title:  Topic content: | Topic creation failed, show error message | Pass |
| 3 | Post a reply to a topic | 1. Go to any topic  2. Enter a reply  3. Click submit | Reply content:  We should include chapter 1 | Successfully posted a reply | Pass |
| 4 | Add a poll to a topic, filling both poll title and possible choices | 1. Go to topic tab  2. Click enable poll checkbox  3. Enter poll title and choices  4. Click submit | Poll title: What day?  Poll choices:  Monday, Tuesday, Wednesday | Successfully created a poll | Pass |
| 5 | Add a poll to a topic, leaving poll title empty | 1. Go to topic tab  2. Click enable poll checkbox  3. Click submit | Poll title:  Poll choices: | Failed to create poll, show error message | Pass |
| 6 | Vote on a poll | 1. Go to any topic with poll  2. Click on a choice | Any poll | Successfully voted, vote counted | Pass |
| 7 | Close a topic | 1. Go to any topic with poll  2. Click “close” on the topic | Any poll | Successfully closed the topic | Pass |
| 8 | Delete a post as group moderator | 1. Go to any topic  2. Click “delete” on the topic content | Any topic | Successfully deleted a post | Pass |

**Table 5.3.1.3 Topic System**

Sistem: Reminder System  
Module: Manage Due Date  
Created by: Muhammad Izham Bin Norhamadi Test Date: 28/12/2020

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Action** | **Test Steps** | **Test Data** | **Expected Result** | **Result (Pass/Failed**) |
| 1 | Create a reminder, filling title, summary and due date fields | 1. Go to group To-Do tab  2. Enter reminder title, summary and date  3. Click save | Reminder title: Project submission  Reminder summary: Deadline for project submission  Reminder date: 22/1/2021 | Successfully created a reminder | Pass |
| 2 | Create a reminder, leaving due date field empty | 1. Go to group To-Do tab  2. Click save | Reminder title:  Reminder summary:  Reminder date: | Prompt user to fill in due date empty field | Pass |
| 3 | Click ‘complete’ button on a reminder | 1. Go to group To-Do tab  2. Click the checkmark button | Any reminder | Reminder will be marked as completed | Pass |
| 4 | Delete a reminder | 1. Go to group To-Do tab  2. Click the cross button | Any reminder | Successfully deleted a reminder | Pass |
| 5 | Wait until a due date arrives |  | Any reminder | Email user reminder | Failed |

**Table 5.3.1.4 Reminder System**

**5.3.2 Test Result**

Most of the software features returned positive results during the test stage excluding two test cases, more specifically test cases involving emailing user. This problem arises because Wordpress email function did not set up properly to work while hosting on a local machine, instead needed an external email server to function.

# CHAPTER VI

# PROJECT CONCLUSION

**6.1 Summary**

Overall, Group Project Organizer project ran smoothly throughout its development. Many of the system’s core features was successfully implemented and the system received additional features as the result of discovering the framework’s potential.

**6.2 System Strengths and Weaknesses**

Group Project Organizer is usable by any users that have made an account and can immediately start using the system. It helps that the system was developed as a web application, meaning that any devices with a web browser application can access the system. The system is customizable which makes it easier to implement any future improvements.

Most of the system features are functioning as of the first version. However, the emailing function might not be working as intended for users that needed to recover their password. The system graphical user interface (GUI) might also be archaic, requiring user to do trial and error to see what each of the system function will accomplish.

**6.3 Suggestions for Improvements**

The system can be improved by making a GUI overhaul to improve the overall user experience. Besides that, the emailing function can be fully implemented by paying for an email server or hosting the site to a domain. The performance of the site can be improved by optimising the plugins and codes of the system.

**6.4 Conclusion**

While the system delivered most of its requirements, it will benefit a lot from improvements and implementing more features requested by users. In future versions, the system would be accessible to everyone by having its own domain link and providing some sort of user manual for all the capabilities of the system.

**REFERENCES**

Editorial Staff, March 19th 2020, How to Learn WordPress for Free in a Week (or Less) , <https://www.wpbeginner.com/beginners-guide/how-to-learn-wordpress-for-free-in-a-week-or-less/>

Jeff Roussel, April 23th 2014, Creating a Successful Suggestion System, <https://blog.kainexus.com/improvement-disciplines/suggestion-box/creating-a-successful-suggestion-system>

WPBeginner, Jun 4th 2018, How to Create a Custom Login Page for WordPress, <https://www.youtube.com/watch?v=7zgDqzuL_fA>

Jason Moore, May 14th 2018, How to build a Forum with Wordpress, <https://www.anarieldesign.com/how-to-build-a-forum-with-wordpress/>

BuddyPress, About Groups, <https://buddypress.org/about/groups/>

WP For The Win, bbPress Voting, 2020, <https://wordpress.org/plugins/bbp-voting/>

Ellice, August 1st 2018, How to Create Your First WordPress Plugin (With a Minimal Amount of Coding) , <https://www.dreamhost.com/blog/how-to-create-your-first-wordpress-plugin/>

WordPress.org, Editing wp-config.php, <https://wordpress.org/support/article/editing-wp-config-php/>

WordPress.org, Database Description, <https://codex.wordpress.org/Database_Description>

BuddyPress, Installing Group and Sitewide Forums, <https://codex.buddypress.org/getting-started/installing-group-and-sitewide-forums/>

**APPENDIX**

How to install Group Project Organizer

1- Go to https://www.apachefriends.org/download.html and download Xampp PHP 7.4.14

Graphical user interface

Description automatically generated with low confidence

2- Install the program and start Xampp Control Panel

3- Start Apache and MySQL

Graphical user interface, application, table

Description automatically generated

4- Type localhost in browser link and press enter to go to Xampp Dashboard

Graphical user interface, text, application

Description automatically generated with medium confidence

5- Click PHPMyAdmin to go to the database interface

Graphical user interface, application, Word

Description automatically generated

6- Choose import

Graphical user interface, text, application

Description automatically generated

7- Choose gpo.sql from folder and press go

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, application

Description automatically generated with medium confidence

8- Extract wordpress folder to C:\xampp\htdocs

Graphical user interface, application, table

Description automatically generated

9- Type localhost/wordpress in browser link and press enter to go to the main page

Graphical user interface, text, application

Description automatically generated

10 - From here you can create a new user on the Register tab or login as website admin

Admin credentials:

username: admin

password: admin123

Test users:

username: ali

password: test123

username: abu

password: test123