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SOFTWARE PROJECT ENGINEERING

(CMM004)

GROUP-L PROJECT REPORT

ON

WORKFLOW MANAGEMENT WEB APPLICATION

Prepared and presented by

**Group L**

**https://github.com/GroupL2023/GroupL\_CMM004**

Supervised by:

**Kit Ying Hui**

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# WORKFLOW MANAGEMENT WEB APPLICATION

# 1. INTRODUCTION

This is a web application that will be used to increase productivity and easily manage workflows. It will extract unnecessary activities, automate the working processes, and gather better efficacy. The application will also help reduce the time needed to transfer work between tasks, allowing constant monitoring and notification.

More importantly, it will greatly reduce documentation costs, which may involve paper in manual interventions.

The application will enable users to register and sign in, find other users, send and receive messages, and also see tasks that are assigned displayed in the dashboard.

The team leader will also be able to assign tasks to other users and members will also be able to get notifications as well as filter Individual tasks.

# **1.1 SPRINT PLANNING MEETING A1**

**DAY 1**

**10th March 2023**

**TIME: 12 noon-13:00 pm**

**ATTENDANCE: ALL MEMBERS**

The team reviewed the registration page already designed in sprint A0 and decided to modify it.

## 1.1.1. PRODUCT BACKLOG ITEMS

* As a user, I want to register. (m)
* As a user I want to be able to find users. (s)
* As a user I should be able to edit my profile. (s)
* As a user I should be able to change the password. (s)
* As a user, I should be able to receive and send messages to users. (m)
* As a user, I should assign a task to users. (m)
* As a user I should be able to filter individual tasks. (s)
* As a user I should be able to see the workflow in the dashboard. (L)
* As a user I should be able to log out. (s)

# 1.1.2. SPRINT BACKLOG ITEMS

**Start Date 10th March 2023 End Date 24th March 2023**

|  |  |  |  |
| --- | --- | --- | --- |
| **ITEMS** | **EFFORT LEVEL (S, M, L) NUMBER OF DAYS** | **TASKS - WHO** | **ACCEPTANCE CRITERIA** |
| As a user, I want to register | 2 days  (m) | Web page, wireframe, HTML pages, database,  Chukwudi Okere | Valid test data for registration should be accepted.  Invalid test data should be denied.  Input for email, username, password, and user agreement with a submit button for a member to be able to register.  If there are no valid data in the input feeds, the user should see an error message.  Steps for Sign up  1. Enter a valid URL  2. Click on sign up to navigate to Sign up page  3. Enter a name  4. Enter a valid email  5. Enter a valid Password  6. Enter valid repeat Password  7. Click on Register  Steps to test Invalid Registration  1. Enter a valid URL  2. click on sign up to navigate to Sign up page  3. Enter a name  4. Enter a valid email  5. Enter invalid Password  6. Enter valid repeat Password  7. Click on Register |
| As a user, I want to create a project page. | 2 days  (m) | Html page, linking html to database using PHP  Ebisike David, Grace Akinyoade | 1. A new taskbar should display, and a new task page created showing different tasks.  2. Project page should not be created if the taskbar cannot be displayed on Dashboard |
| As a user, I want to be able to find users | 1 day (s) | Html page, database  David Ebisike | When the User clicks on the search bar it should be able to enter the name of the user  Click on search to display the name of the user  The name should not display if not in the database. |
| As a user I should be able to edit my profile | 1 day  (s) | Html page linked by php to Database  Grace Akinyoade | 1. Only the username in the profile should be updated and saved When the user clicks on Profile.  2. The username profile should not be updated if using the existing Username |
| As a user I should be able to change the password | 1 day  (s) | Html linked by php to and Database  Ochuba Anthony  , Oluwatobi Muritala | 1. A message that shows that passwords have been updated  “Password Changed Successfully” will display  Steps to change password.  1. Click on Change Password  2. Enter the Old password  3. Enter a New password  4. Enter Confirm password  5. log in |
| As a user, I should be able to receive and send messages to users | 2 day  (m) | Html and database  Anthony Ochuba | To Send Message  1. User should be able to type in messages and post.  2. The receiver should able to receive the message.  To Receive Message  1. Message pops up in the inbox when delivered. |
| As a user, I should assign a task to users | 2 days (m) | Html and database,  Oluwatobi | A designated team member should receive a task.  Steps to Assigned Task  1. from Projects click on a new task  2. Enter the Task title  3. Enter tasks detail  4. Enter the task deadline  5. Choose a file  6. select a team-mate from drop-down  7. submit  8. Display on the Dashboard.  Negative  The task should not be assigned where  All the mandatory field are not filled. |
| As a user I should be able to filter individual tasks | 1 day (s) | Html and database  Aharauka Christian | 1.The individual task should be displayed  2. User cannot view others’ individual tasks unless when added to the task. |
| As a user, I should be able to see the workflow in the dashboard | 3 days (L) | Html and database  Grace Akinyoade, David Ebisike | 1. Workflow should display showing different tasks on the dashboard.  2. Unauthorized user cannot view the workflow dashboard |
| As a user, I should be able to log out | 1 day (s) | Frank Gomenti | Exit the home page when clicking the logout button.  Steps to Logout  Click on the Logout button, it should Navigate to the login page |

# **1.1.3. DAILY SCRUM MEETING**

**DAY 2**

**13th March 2023**

**TIME: 4 pm- 4:15 pm**

**ATTENDANCE: ALL MEMBERS**

**WHAT THE TEAM HAS ACHIEVED SO FAR**

* Chukwudi Okere modified the signup functionality on the registration page.
* The find users functionality has been created by David Ebisike.

**TASKS THE TEAM IS EXPECTED TO ACHIEVE WITHIN A FEW DAYS**

* To create a project page.
* To create the edit profile page.
* To create the change password function.
* To create the send-and-receive message function.
* To create the assign-task function.
* To create the Filter-individual – task function.
* To create the dashboard.
* To create a log-out function.

**CHALLENGES THE TEAM IS FACING**

* Not mastering how to commit codes to the group repository in GitHub. For example, a team member mistakenly deleted the group’s GitHub repository while committing the “find users” codes and this was a huge setback for the group because it took a while for the group to rectify the challenge.
* The coding for the rest of the tasks assigned to members is still not running as expected due to bugs and members need more time to debug it.
* Almost every member complained about the timing of scrum meetings and struggled with coding.
* The problem of individual differences affected how members addressed each other.

# **1.1.4. DAILY SCRUM MEETING**

**DAY 3**

**15th March 2023**

**TIME: 4 pm- 4:15 pm**

**ATTENDANCE: ALL MEMBERS**

**WHAT THE TEAM HAS ACHIEVED SO FAR**

The logout functionality was created by Gomenti Frank and tested in the meeting.

**TASKS THE TEAM IS EXPECTED TO ACHIEVE WITHIN A FEW DAYS**

* To create a project page.
* To create the edit profile page.
* To create the change password function.
* To create the send-and-receive message function.
* To create the assign-task function.
* To create the Filter-individual – task function.
* To create the dashboard.

**CHALLENGES THE TEAM IS FACING**

* Some team members are still finding it difficult to understand what the project is all about.
* Team members are still not able to code the different functionalities assigned to them in the project.
* Engagement from other school activities affected productivity in the project.
* Team members relied on Intranet Systems Development to have a full idea of how to navigate around their coding tasks.
* No long-term thinking also affected the group which led the group to redesign the wireframe in order to suit our application.

# 1**.1.5. DAILY SCRUM MEETING**

**DAY 4**

**17th March 2023**

**TIME: 12 noon- 12:15 pm**

**ATTENDANCE: ALL MEMBERS**

**WHAT THE TEAM HAS ACHIEVED SO FAR**

The project page was completed and displayed in the meeting.

**TASKS THE TEAM IS EXPECTED TO ACHIEVE WITHIN A FEW DAYS**

* To create the edit profile page.
* To create the change password function.
* To create the send-and-receive message function.
* To create the assign-task function.
* To create the Filter-individual – task function.
* To create the dashboard.

**CHALLENGES THE TEAM IS FACING**

* Many members are still facing issues with their codes and are struggling to fix them.
* Occasional lateness to scrum meetings keeps dragging the team back in reaching conclusions.
* Different time schedules of members affect scrum meeting scheduling.
* Disagreement between team members affects the mood of the meeting.

# **1.1.6. DAILY SCRUM MEETING**

**DAY 5**

**19th March 2023**

**TIME: 12 noon- 12:15 pm**

**ATTENDANCE: ALL MEMBERS**

**WHAT THE TEAM HAS ACHIEVED SO FAR**

The edit profile functionality was created by Grace Akinyoade and was reviewed by the team.

**TASKS THE TEAM IS EXPECTED TO ACHIEVE WITHIN A FEW DAYS**

* To create the change password function.
* To create the send-and-receive message function.
* To create the assign-task function.
* To create the Filter-individual – task function.
* To create the dashboard.

**CHALLENGES THE TEAM IS FACING**

* The disagreement among team members lingers, especially when deciding on implementation, and the choice of words created an unpleasant mood.
* Sometimes we find it difficult to finalize an idea because every member thinks that their opinion is better and should be considered.
* Some team members have not worked in a team before and sometimes try to impose their decisions on others.
* The problem of overlapping responsibilities like role confusion slows the progress of the team.

# **1.1.7. SPRINT REVIEW MEETING**

**DAY 6**

**22nd March 2023**

**TIME: 2 pm-3 pm**

**ATTENDANCE: ALL MEMBERS**

The product working increment was reviewed and demonstrated.

There was clarification from the scrum master on the tasks to be considered functionalities and those that are the bedrock upon which they run.

The application was demonstrated to the scrum master to enable him to critically review the functionalities achieved and pass a verdict on the few that were considered ***done*** using the acceptance criteria.

**Commitments made at the sprint planning meeting:**

These items **modified the Registration page**, **Find users, Create-project page, Edit profile, and logout** functionalitieswere all considered done.

Below are the current **product backlog items** yet to be achieved.

* As a team leader, I should be able to assign tasks to users. (m)
* As a user, I should be able to receive and send messages to team members. (m)
* As a user I should be able to filter individual tasks. (s)
* As a user I should be able to change my password. (s)

**1.1.7.2. PROGRESSION OF TASK**

|  |  |  |  |
| --- | --- | --- | --- |
| **Committed Backlog Items** | **Task Not Started** | **Task In Progress** | **Task Completed** |
| Register |  |  | Modified Registration page |
| Find users |  |  | Find users |
| Create project page |  |  | Create project page |
| Edit profile |  |  | Edit profile |
| Change password |  | Change password |  |
| Send and receive a message |  | Send and receive a message |  |
| Assign tasks to users |  | Assign tasks to users |  |
| Filter individual task |  | Filter individual task |  |
| Workflow in the dashboard |  | Workflow in the dashboard |  |
| Logout |  |  | Logout |

# **1.1.8.** **SPRINT RETROSPECTIVE**

**The Things that We Are Not Doing Right Previously**

* Almost all Team members were requesting an extension of time to complete their assigned tasks, which seems to be reoccurring. Some members came to the next scrum meeting without recording any progress from where they stopped during the previous scrum meeting.
* Misunderstanding of personal views of members. Some members tend to misinterpret the views expressed by others and this sometimes leads to an eyebrow that ends up delaying the flow of activities.
* Lack of knowledge of committing codes to the group’s GitHub repository delayed members in committing their codes.

**Measures adopted by the team to improve during the next sprint.**

* Team members were encouraged to make adjustments to be able to beat deadlines and to also seek more clarifications from team members in areas they do not understand. Members who require extra tutorials to understand coding were advised to work with others who are already making progress.
* Team members were asked to communicate openly and try to understand the views expressed by other team members that may greatly improve the ongoing project.

**The Things We Did Right Since This Sprint Planning**

* The team encouraged themselves to show more commitment to individual tasks to beat deadlines.
* Consistently checked on ourselves to know the progress of both general and individual tasks.
* Seeking clarification from team members.
* Improvement recorded in the team coding skills. The team devoted more time to learning and improving their coding skills which greatly yielded outcomes.
* We utilized our time productively.

# **2.1.1 SPRINT PLANNING MEETING A2**

**DAY 1**

**7th April 2023**

**TIME: 12:30-13:00 pm**

**ATTENDANCE: ALL MEMBERS**

PRODUCT BACKLOG ITEMS

* As a team leader, I should be able to assign tasks to users. (m)
* As a user, I should be able to receive and send messages to team members. (m)
* As a user I should be able to filter individual tasks. (s)
* As a user I should be able to change my password. (s)

# **2.1.2. SPRINT BACKLOG ITEMS**

**Start Date 7/4/2023 End Date 18/4/2023**

|  |  |  |  |
| --- | --- | --- | --- |
| **ITEMS** | **EFFORT LEVEL (S, M, L) NUMBER OF DAYS** | **TASKS - WHO** | **ACCEPTANCE CRITERIA** |
| As a user, I should be able to assign tasks to users. | 3 days (m) | Html and database,  Oluwatobi Muritala | A designated team member should receive a task.  Steps to Assigned Task  1. from Projects click on a new task  2. Enter the Task title  3. Enter tasks detail  4. Enter the task deadline  5. Choose a file  6. select a team-mate from drop-down  7. submit  8. Display on the dashboard.  Negative  The task should not be assigned where  All the mandatory fields are not filled. |
| As a user, I should be able to receive and send messages to team members | 3 days  (m) | Html and database  Anthony Ochuba | To Send Message  1. User should be able to type in a message and post.  2. The receiver should able to receive the message.  To Receive Message  1. Message pops up in the inbox when delivered. |
| As a user, I should be able to filter individual tasks | 3 days (s) | Html and database  Chukwudi okere and Akinyoade Grace | 1. The individual task should be displayed  2. User cannot view others’ individual tasks only when added to the task. |
| As a user, I should be able to change my password | 2 day  (s) | Html linked by php to and Database.  Aharauka Christian | 1. A message that shows that passwords have been updated  “Password Changed Successfully” will display |

# **2.1.3. DAILY SCRUM MEETING**

**DAY 2**

**11th March 2023**

**TIME: 12 noon- 12:15 pm**

**ATTENDANCE: ALL MEMBERS**

**WHAT THE TEAM HAS ACHIEVED SO FAR**

* The assign-task functionality was completed by Oluwatobi Muritala.
* The send-and-receive message functionality was completed by Anthony Ochuba.

**TASKS THE TEAM IS EXPECTED TO ACHIEVE WITHIN A FEW DAYS**

* As a user I should be able to filter individual tasks. (s)
* As a user I should be able to change my password. (s)

**CHALLENGES THE TEAM IS FACING**

* Half code was submitted for filter-individual-task and the group could not use it because it did not meet the accepted criteria.
* Some members are still not able to tone down their voices when addressing other members.
* Navigating between coursework became a problem for the team as submission deadline approached.

# **2.1.4. DAILY SCRUM MEETING**

**DAY 3**

**15th April 2023**

**TIME: 12 noon- 12:15 pm**

**ATTENDANCE: ALL MEMBERS**

**WHAT THE TEAM HAS ACHIEVED SO FAR**

* The change-password functionality was completed by Aharauka Christian.

**CHALLENGES THE TEAM IS FACING**

* Considering the limited time frame, the team could not complete the filter-individual-task functionality.
* Scheduling a meeting became difficult because examinations and deadlines were approaching, and members found it difficult to navigate.

# **2.1.5. SPRINT REVIEW MEETING**

**DAY 4**

**17th April 2023**

**TIME: 9 am-10 am**

**ATTENDANCE: ALL MEMBERS**

A product working increment was reviewed and demonstrated.

**Commitments made at the sprint planning meeting:**

The items **Change password** and **Send-and-receive message, Assign-task to users, and** were considered done.

By the end of the project, one of the items in the **product backlog items** was not achieved and this item is listed below.

* As a user, I should be able to filter individual tasks. (s)

# **2.1.6. PROGRESSION OF TASK**

|  |  |  |  |
| --- | --- | --- | --- |
| **Committed Backlog Items** | **Task Not Started** | **Task In Progress** | **Task Completed** |
| Change password |  |  | Change password |
| Send and receive a message |  |  | Send and receive a message |
| Assign tasks to users |  |  | Assign tasks to users |
| Filter individual task |  | Filter individual task |  |

# **2.1.7. SPRINT RETROSPECTIVE**

**Things We Are Not Doing Right Previously**

* The team was initially categorizing the send-and-receive message functionality as one before the scrum master guided us to separate it to be able to define and display the acceptance criteria.
* The timeframe for each sprint was omitted in the product backlog items and the team was guided by the scrum master to include it to enable us to pick sprints we can achieve within the time.

**The Things We Did Right Since This Sprint Planning**

* The team removed all achieved functionalities from the product backlog items.
* The team’s time management was reasonably good.
* Members were able to complete the tasks assigned to them.
* The team’s project management understanding greatly improved.
* The bond among team members became admirable.
* Committing codes to the group’s GitHub Repository became easy.
* We put down the report of activities and achievements as they happen.

# **3.1. DESCRIPTION OF DESIGN AND IMPLEMENTATION**

The application is a software program that is designed to provide functionality similar to traditional desktop applications but with the added advantage of being accessible from any device.

The implementation of the application involves several key components, including:

For the front end: We used HTML, PHP, CSS, Bootstrap, and JavaScript code that is responsible for rendering the user interface and handling user input.

For the Back end: We used PHP, MySQL component of the web application that handles requests from the front end and interacts with the database or other external services.

For the Database: We used MySQL to create the database.

For Web server: We used Apache webserver MariaDB to run the application.

Deployment: we ran the application using a browser on localhost.

# **ERD**

# **Fig.1. Entity Relationship Diagram**

Graphical user interface, table

Description automatically generated

# **Fig.2. WIREFRAME**

