



## WORKSHOP II BITD INDIVIDUAL LOG BOOK

BITU 3923 SEM 1 2024/2025 (BITD)

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FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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WEEK: 1

DATE : 10/10/2025

MODULE: Proposal

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                     | PROBLEMS/SOLUTION                                                                                                                                                                                                         | COMMENTS/INSTRUCTION FROM SUPERVISOR                                                               |
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| <ol style="list-style-type: none"><li>1. Briefing on Workshop 2 requirements.</li><li>2. Discussion with supervisor regarding the project title: "Pharmacy and Prescription Management System (PPMS)".</li><li>3. Identifying the problem statements regarding manual pharmacy records and siloed systems.</li></ol> | <p><b>Problem:</b> Difficulty in narrowing down the scope to fit the semester timeline.</p> <p><b>Solution:</b> Decided to focus on 5 core modules: Inventory, Prescription, Patient Info, Sales, and Analytics only.</p> | Ensure the project highlights the "Database Interoperability" requirement clearly in the proposal. |

Date: 10/10/2025

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WEEK: 2

DATE : 17/10/2025

MODULE: Proposal and ERD

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PROBLEMS/SOLUTION                                                                                                                                                                                                                                     | COMMENTS/INSTRUCTION FROM SUPERVISOR                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Drafting Chapter 1 (Introduction, Problem Statement, Objectives).</li> <li>2. Conducting literature review on existing prescription management flows.</li> <li>3. Defining requirements for the Prescription Module (e.g., Digital signatures, dosage instructions).</li> <li>4. Researching MySQL syntax for Stored Procedures.</li> </ol>  | <p><b>Problem:</b> Unsure how to handle the data relationship between "Prescription" and "Medicine" (Many-to-Many).</p> <p><b>Solution:</b> Proposed an associative entity PRESCRIPTION_DETAILS to store medicine ID and dosage per prescription.</p> | <p>Provide a few opinion on our tittle and system.</p> |

Date: 17/10/2025

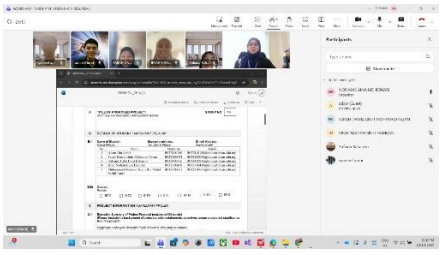
Supervisor Signature: \_\_\_\_\_

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WEEK: 3

DATE : 24/10/2025

MODULE: Planning

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                        | PROBLEMS/SOLUTION                                                                                                                                                                              | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"> <li>1. Creating the Gantt Chart for the semester.</li> <li>2. Shows our ERD</li> <li>3. <b>Deepavali Week (Online/Hybrid):</b> Discussed logic flow with via online meeting.</li> <li>4. Defining Non-functional requirements for the Prescription module (Accuracy, Data Integrity).</li> </ol>  | <p><b>Problem:</b> Coordinating the data flow ERD and define the entity, attribute and table</p> <p><b>Solution:</b> Created a shared document to map input/output fields for our modules.</p> | <p>Guide our ERD</p>                 |

Date: 24/10/2025

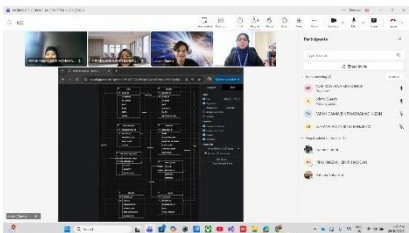
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WEEK: 4

DATE : 31/10/2025

MODULE: ERD & DFD

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                            | PROBLEMS/SOLUTION                                                                                                                                                                                                                             | COMMENTS/INSTRUCTION FROM SUPERVISOR                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>Designing the <b>Context Diagram</b> and <b>DFD Level 1</b> specifically for the Prescription process.</li> <li>Drafting the Entity Relationship Diagram (ERD).</li> <li>Defining attributes for PRESCRIPTION ( ID, PatientID, PharmacistID, Date, Status).</li> <li>Validating the logical flow with the supervisor.</li> </ol>  | <p><b>Problem:</b> Determining who authorizes a prescription edit (Doctor vs Pharmacist).</p> <p><b>Solution:</b> For the scope of this workshop, only the Pharmacist will have Create/Edit rights, linked to a Doctor's name text field.</p> | <p>Check the cardinality in the ERD. A Patient can have many Prescriptions, but a Prescription belongs to one Patient.</p> |

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WEEK: 5

DATE : 7/11/2025

MODULE: Data Dictionary

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                         | PROBLEMS/SOLUTION                                                                                                                                                                                                                          | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"><li>1. Converting ERD to Normalized Tables (3NF).</li><li>2. Creating the <b>Data Dictionary</b> for the Prescription Module.</li><li>3. Writing <b>MySQL DDL Scripts</b> (Create Table).</li><li>4. Ensuring foreign keys (Patient_ID, Medicine_ID) align with other team members' designs.</li></ol> | <p><b>Problem:</b> Syntax differences between SQL Server and MySQL for auto-incrementing IDs.</p> <p><b>Solution:</b> Used AUTO_INCREMENT for my MySQL scripts while Adam used IDENTITY. We documented this difference for the report.</p> |                                      |

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WEEK: 6

DATE : 14/11/2025

MODULE: MySQL Setup

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                         | PROBLEMS/SOLUTION                                                                                                                                                                                                                                        | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"><li>1. Installing MySQL Community Server and MySQL Workbench.</li><li>2. Executing DDL scripts to create the pharmacy_db schema.</li><li>3. Creating Views for "Active Prescriptions".</li><li>4. Inserting dummy data into Prescription tables for testing.</li></ol> | <p><b>Problem:</b> Encountered a Foreign Key constraint error when inserting dummy prescriptions before patients.</p> <p><b>Solution:</b> Inserted data into the Patient table first, then the Prescription table to maintain referential integrity.</p> |                                      |

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WEEK: 7

DATE : 21/11/2025

MODULE: Application Development

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                   | PROBLEMS/SOLUTION                                                                                                                                                                                                                          | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"><li>1. Coding the "<b>Add Prescription</b>" User Interface using HTML/CSS.</li><li>2. Setting up the Node.js MySQL driver (mysql2).</li><li>3. Developing the backend API to INSERT prescription data.</li><li>4. 4. Creating the "Prescription List" page to display data from MySQL.</li></ol> | <p><b>Problem:</b> The prescription list was not displaying the Medicine Name, only the Medicine ID.</p> <p><b>Solution:</b> Wrote a JOIN query in MySQL to fetch the Medicine Name from the Inventory table and display it in the UI.</p> |                                      |

Date: 21/11/2025

Supervisor Signature: \_\_\_\_\_



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WEEK: 8

DATE : 28/11/2025 & 29/11/2025

MODULE: Helping Class & Database Configuration, Mid-Semester Break

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | PROBLEMS/SOLUTION                                                                                                                                                                                                                                                                                                                                                                                          | COMMENTS/INSTRUCTION FROM SUPERVISOR                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li><b>1. Attended Helping Class Workshop 1</b> (Seq.1) at Executive Lab on Saturday (29 Nov).</li> <li>Focus: Basic database-level integration, installation, and configuration.</li> <li>Configured <b>MySQL</b> environment to ensure it accepts remote connections from other team members.</li> <li>Verified network connectivity with the group to prevent "lab electric trip" issues as briefed.</li> <li><b>Mid-Semester Break Week.</b></li> <li>Refining the UI for the Prescription Module.</li> </ol> | <p><b>Problem:</b> Configuring MySQL to listen on the correct IP address for the group network during the workshop.</p> <p><b>Solution:</b> Modified the bind-address in the MySQL configuration file (my.ini) to 0.0.0.0 to allow external connections from the team.</p> <p><b>Problem:</b> N/A (Break Week).</p> <p><b>Solution:</b> Used this time to fix minor CSS alignment issues on the forms.</p> | <p><b>Attendance Verified.</b><br/>Ensure that the configuration settings saved during the workshop are replicated in your home development environment.</p> |

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WEEK: 9

DATE : 05/12/2025

MODULE: Prescription Management Logic Implementation & Module Integration

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                            | PROBLEMS/SOLUTION                                                                                                                                                                                                                      | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"><li>1. Implementing logic:<br/>When a prescription is dispensed, status updates to "Completed".</li><li>2. Integrating Prescription Module with Inventory.</li><li>3. Creating a MySQL Trigger to log prescription changes.</li><li>4. Testing CRUD operations.</li></ol> | <p><b>Problem:</b> Logic error where stock wasn't deducting when a prescription was filled.</p> <p><b>Solution:</b> Coordinated with Farah to call the "Update Stock" function immediately after the "Save Prescription" function.</p> |                                      |

Date: 05/12/2025

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WEEK: 10

DATE : 12/12/2025

MODULE: System Integration & Testing

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                               | PROBLEMS/SOLUTION                                                                                                                                                                                                                                   | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"><li>1. Integrating Prescription module with Sales module.</li><li>2. Conducting <b>Functional Testing</b> on the Prescription workflow.</li><li>3. Testing database interoperability: Running the app connected to MySQL vs SQL Server.</li><li>4. Designing the architectural diagram for poster.</li></ol> | <p><b>Problem:</b> Date formats were inconsistent between Irfa's Oracle DB and my MySQL DB during integration testing.</p> <p><b>Solution:</b> Standardized all dates to ISO format (YYYY-MM-DD) in the Node.js layer before sending to any DB.</p> |                                      |

Date: 12/12/2025

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WEEK: 11

DATE : 19/12/2025

MODULE: Final Report Drafting & Documentation

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | PROBLEMS/SOLUTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | COMMENTS/INSTRUCTION FROM SUPERVISOR                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. <b>Meeting with Supervisor</b> to review the current system build.</li> <li>2. Improving Global Navigation: Adding direct buttons/links to Dashboard, Medicine, and Reports on <i>every</i> page.</li> <li>3. Refining User Permissions in the Prescription Module.</li> <li>4. Cleaning up scope: Removing the "Role and Permission Management" feature.</li> <li>5. Documenting the MySQL-specific configuration.</li> <li>6. Capturing screenshots of the Prescription UI and Code.</li> </ol> | <p><b>Problem 1:</b> Navigation was disconnected; users couldn't jump from "Report" to "Medicine" directly.</p> <p><b>Solution:</b> Added a fixed Sidebar/Navigation Bar to all pages for seamless switching.</p> <p><b>Problem 2:</b> "Admin" users could click "Add New Prescription", which is incorrect logic.</p> <p><b>Problem:</b> Organizing the code snippets for the report took longer than expected.</p> <p><b>Solution:</b> Selected only the core functions (Create/Read) for the report to keep it concise.</p> | <ol style="list-style-type: none"> <li>1. Ensure every page has a button to direct to other pages (Dashboard, Medicine, etc.).</li> <li>2. <b>Disable</b> the "Add New Prescription" button for Admins immediately.</li> <li>3. Remove Role Management from the final report scope; do not attempt to add new tables now.</li> </ol> |

7. Compiling the individual logbook.



Date: 19/12/2025

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WEEK: 12

DATE : 26/12/2025

MODULE: Final Report Refinement

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                            | PROBLEMS/SOLUTION                                                                                                                                                                                              | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"> <li><b>Christmas Week (Thursday Holiday):</b> Finalizing Chapter 6 (Integration &amp; Testing).</li> <li>Writing the Conclusion and Limitations (Chapter 7).</li> <li>Proofreading the full report.</li> <li>Preparing the Demo environment for the showcase.</li> </ol> | <p><b>Problem:</b> Finding limitations for the project.</p> <p><b>Solution:</b> Noted that the current Prescription module does not support e-signatures yet, which is a valid limitation for future work.</p> |                                      |

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WEEK: 13

DATE : 02/01/2026

MODULE: Final Preparations (Poster & Slides)

| TASK DESCRIPTION                                                                                                                                                                                                                                                                          | PROBLEMS/SOLUTION                                                                                                                                               | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"><li>1. <b>New Year Week (Thursday Holiday):</b> Finalizing the A1 Poster.</li><li>2. Preparing presentation slides for the assessment.</li><li>3. Printing the draft report.</li><li>4. Rehearsing the system demonstration flow using MySQL.</li></ol> | <p><b>Problem:</b> Poster layout was too text-heavy.</p> <p><b>Solution:</b> Replaced the text description of the prescription flow with a flowchart image.</p> |                                      |

Date: 02/01/2026

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WEEK: 14

DATE : 09/01/2026

MODULE: Showcase & Peer Assessment

| TASK DESCRIPTION                                                                                                                                                                                           | PROBLEMS/SOLUTION                                                                                                                                                       | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"><li>1. Preparing presentation slides for the assessment.</li><li>2. Printing the draft report.</li><li>3. Rehearsing the system demonstration flow using MySQL</li></ol> | <p><b>Problem:</b> Nervousness about live coding questions.</p> <p><b>Solution:</b> Reviewed the SQL queries and Node.js routes thoroughly before the presentation.</p> |                                      |

Date: 09/01/2026

Supervisor Signature: \_\_\_\_\_



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WEEK: 15

DATE : 15/01/2026

MODULE: Showcase & Peer Assessment

| TASK DESCRIPTION                                                                                                                                                                                                                                                                                                                                                        | PROBLEMS/SOLUTION                                                                                                                                                       | COMMENTS/INSTRUCTION FROM SUPERVISOR |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <ol style="list-style-type: none"> <li><b>Workshop 2 Showcase:</b> Presenting the PPMS.</li> <li>Demonstrating the Prescription Management Module live.</li> <li>Explaining the MySQL implementation to examiners.</li> <li>Completing Peer Assessment for team members.</li> </ol>  | <p><b>Problem:</b> Nervousness about live coding questions.</p> <p><b>Solution:</b> Reviewed the SQL queries and Node.js routes thoroughly before the presentation.</p> |                                      |

Date: 15/01/2026

Supervisor Signature: \_\_\_\_\_