Overview of the Practicum

As of July 15, 2025, I have rendered a total of 396 hours of on-the-job training and the expected date will be on July 29, 2025 at the Department of Science and Technology – Forest Products Research and Development Institute (DOST-FPRDI), a government research facility located in Los Baños, Laguna. This organization is dedicated to advancing the sustainable use of forest-based resources and supporting local industries through research, technical services and innovation.

I was assigned at the Training Services Division- Training and Manpower Development Services Section (TSD-TMDSS), this section is responsible for planning and conducing training programs across the Philippines.

The stated trainings render in two modalities: face-to-face training courses, and training webinars. Face to face training courses is the traditional way wherein the activity is conducted at FPRDI office or on site, depending on the preference of the requesting party. While training webinars are composed of recorded lecture and technology demonstration.

While my host company is quite far to my course of Information Technology. My task is still related to my taken course. My role was to digitize records and reduce manual workloads for the team in my section.
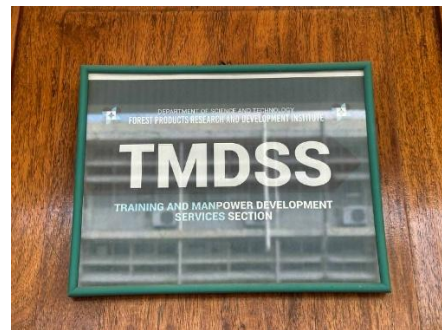

Figure 1. DOST FPRDI

Figure 2. TSD-TMDSS

<div align="center">

Presentation of Output

The first project was titled "Mapping of FPRDI Training Services".

</div>

System Overview

This system serves as an interactive platform used for visualization and managing 10 years' worth but expandable training records conducted by DOST-FPRDI. It integrates a dynamic filtering mechanism and sorting algorithm that allows users to easily locate training activities by selecting filters such as year, region, province, and city.

As the users apply filters, the system will automatically update the Philippine map view while zooming in on the filtered locations. Moreover, the result box on the left side of the map displays all matching training records. When a specific training is clicked, detailed information about that activity is presented including dates, participant counts, training type and venue details.

To secure the files, an admin page is present with CRUD functions. The system offers data management features: Importing CSV files to do batch uploads and create new training tables in the database, adding individual training records, editing or deleting trainings and viewing of import history for tracking batch data imports.

Objectives:

- To develop a comprehensive database that will allow easy access for the Institute.
- To enable better management of the resources and provide clearer view of the institute's offerings and the organization's impact.
- To serve a support decision-making, facilitate collaboration, provide evidenced of its delivered assistance and promote the broader dissemination of other technical services.

Expected Output:

- Database interface of conducted FPRDI Training Services
- Backend of FPRDI Training Maps
- Map of FPRDI Training Services

Target Beneficiaries:

- FPRDI Researchers
- Staff of TSD-TMDSS

Screenshots of the Output
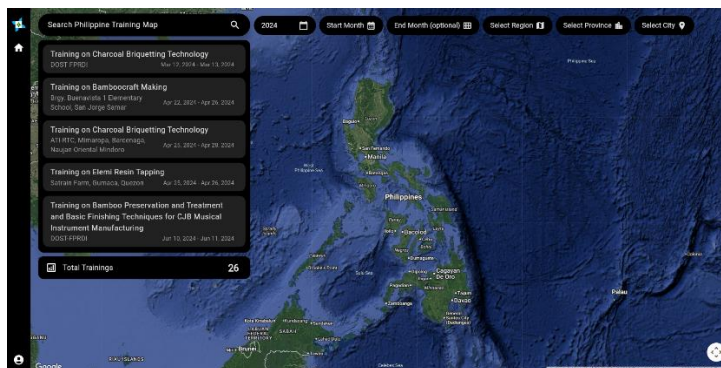

Figure 2. Landing Page
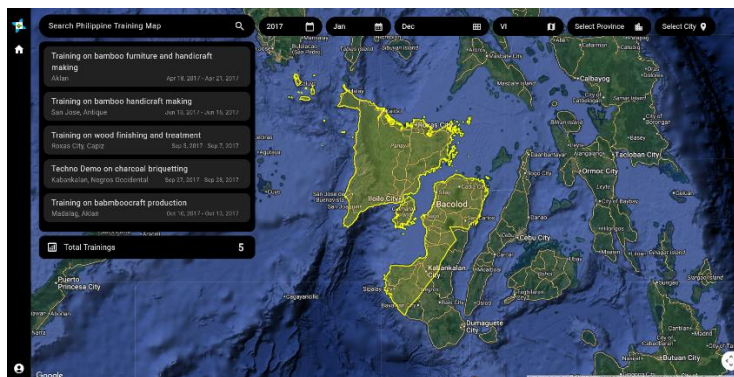

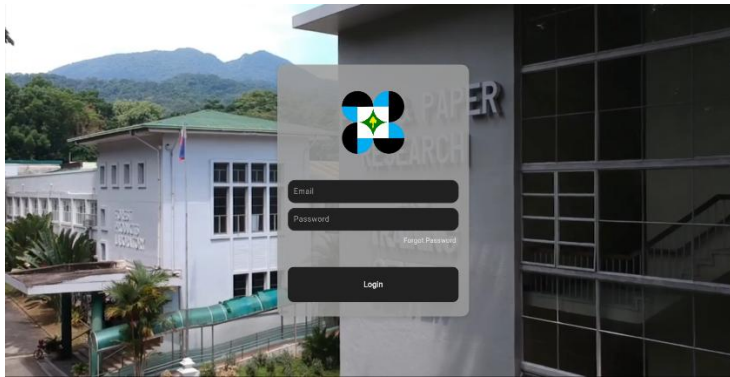*Figure 3.* Sorting and Map Page

Figure 3.1. Sorting and Map Page

Figure 4. Admin Log-in

Figure 5. File Management Page

Figure 6. Add Data

Figure 7. Import Data

Figure 8. Import History

The second Project was Titled "Batch Training Certificate Generator".

System Overview

The Training certificate generator is designed to simplify the creation of certificates for DOST-FPRDI training activities. There are two options to choose in the system. First, the training certificate creator is intended for training activities where participants data is collected through google forms namely evaluation, attendance, while the background information is optional. The system automatically sorts and matches the imported csv files to determine the eligibility of participant in the participant eligible report page. Eligible names are then passed into the certificate editor, where users can upload a certificate template, adjust placements of names and customize font styles, sizes and alignments. Note that the users do not need to adjust each name per certificate, if the user moves one name in the center, all names will be in the same place for easier customization. Once this is done, users can export individual certificates as PDFs or save all certificates in a ZIP folder. In addition, exporting of CSV files of eligible and ineligible participants are allowed by the system.

For cases where no CSV data is required, the second option should be used. The batch certificate creator enables the user to manually enter participant names and generate certificates using the same editing tools.

Overall, this system streamlines certificate creation that ensures accurate record-keeping and provides flexible export options to support effective and efficient documentation.

Objectives:

- To streamline the process of generating training certificates in batches, reducing manual encoding and minimizing errors.
- To enhance customization and professional quality tailored to each training activity.
- To Improve efficiency of record-keeping supporting faster creation of certificates.

Expected Output:

- Automatic sorting mechanism of participant data based on the required CSV file provided by the user.
- Easy editing and positioning of the participants' name and interactive UI.
- Exportable Certificates and Records

Beneficiaries:

- Staff of TSD-TMDSS
- Other Division needed to create batches of certificates

Screenshots of Output:

Figure 9. Landing Page

Figure 10. Sorting Mechanism

Figure 11. Participant Eligibility Report Page

Figure 12. Certificate Editor
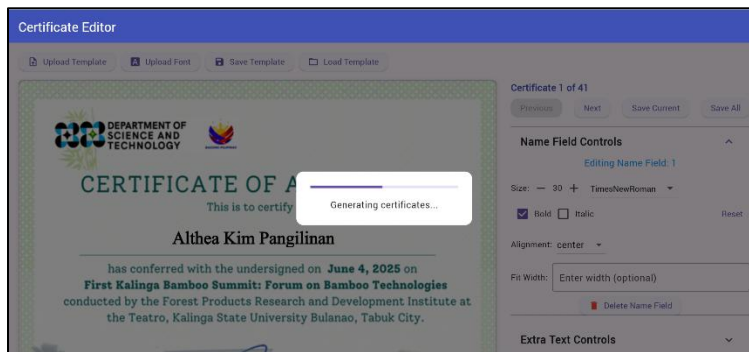
Figure 13. Saving Batch Process
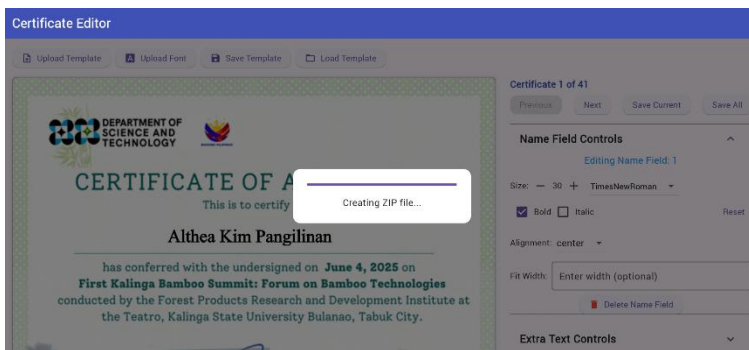
Figure 14. Creating Zip Process

Figure 15. Batch Certificate Creator (no csv)

Figure 16. Batch Certificate Creator (no csv)
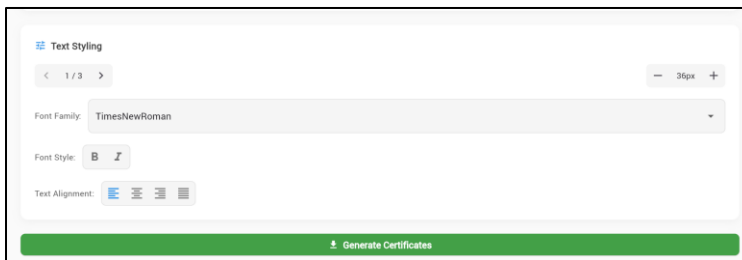
Figure 17. Batch Certificate Creator (no csv)
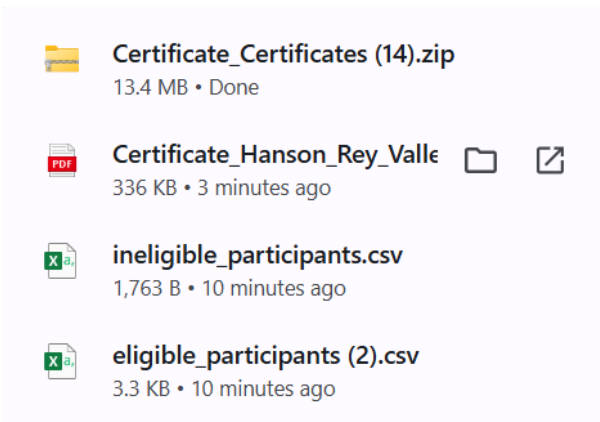
Figure 18. Exportable Certificates and Records

Conclusion

During my On-the-job training at DOST-FPRDI at the section of TSD-TMDSS, I gained both valuable technical and professional skills that enhanced my understanding of how information technology is very useful and versatile in supporting research, development, and training services. My key takeaways in this experience are developing software in a real-life professional setting. The only experience I have was just to develop a system based on Machine Problems, Laboratory Tasks and that setup is flexible where I have full control on how it will work and how will it look. However, this experience improved my ability to design, develop, test systems following a strict guideline from the host company. This taught me how to follow the requirements of my supervisor and give deliverables based on the deadline given to me. Furthermore, I also gained hands-on experience in organizing and migrating data from paper-based to digital system to improve record-keeping. This made me realized how digital solutions is crucial especially in organizations who have heavy files to make file management more efficient and effective.

Making a detailed technical and user documentation while following the user manual by our division. I learned here that sometimes this is being overlooked but this is crucial to support future system maintenance and user training.

On the other hand, soft skills and professionalism are also part of my learnings in this experience. Working with the team taught me how to effectively coordinate tasks, accept feedback, and to adapt to changing requirements. I also experienced the value of time management and to be attentive.

Lastly, this on-the-job training strengthened my professionalism while applying my technical skills and my appreciation for how IT can steer innovation, efficiency and sustainability even in public service.

Appendices

Appendix A

Competency-Based CV

ALTHEA KIM
PANGILINAN

ABOUT ME

As a committed fourth-year Information Technology student at Mapúa Malayan Colleges Laguna, I have developed strengths in user interface design and database management. My passion for continuous learning fuels my enjoyment in building intuitive, data-driven applications that enhance both efficiency and user engagement.

CONTACT

- +639994402556
- altheakimpangilinan@gmail.com
- Blk 4 Lt 6 Southwynd Residences, Calamba Laguna.

EDUCATION

Mapúa Malayan Colleges Laguna
Bachelor of Science in Information Technology
President's List (SY 2021-2022 & 2023-2024)
2021-2025

New Era University
Science, Technology Engineering and Mathematics
2020-2021

University of Mindanao
Science, Technology Engineering and Mathematics
2019-2020

SKILLS

Programming Languages
Dart | C# | Assembly Language | SQL

Computer Related Skills
MS Office
HTML & CSS
CCNA: Introduction to Networks
Database Management

Soft Skills
Time Management
Communication
Adaptability

CERTIFICATES

CompTIA IT Fundamentals (ITF +) Certification
July 2024

AWS Academy Graduate - AWS Academy Cloud Foundations
November 2023

CCNAv7: Introduction to Networks
November 2022

WORK EXPERIENCE

March 2021
Immersion at CREOTEC Philippines Inc Laguna Center
117 Technology Ave, Laguna Technopark, Biñan, 4024 Laguna
Functional leader of Developing Team of Technical group
Functional leader of Developing Team is responsible in guiding the team's work from planning to execution to ensure that the deliverables are in high quality and it reached the organization's standard and project requirements.

April - July 2025
On-The-Job Training at DOST FPRDI
Domingo Lantican Ave (Formerly Narra RD.) UPCFNR Campus, UPLB, College, Laguna 4031
Software Development Team of Training Services Division
Responsible for developing a GIS-based training tracker with 10 years of data. Built a certificate generator to automate creating and exporting training certificates. Supported the Training Services Division in managing and digitizing nationwide training programs.

Appendix B

Endorsement Letter

27 March 2025

DR. RICO J. CABANGON
Department Head
DOST-FPRDI
Narra Rd., Forestry Campus, University of the Philippines Los Baños Campus, College, Laguna, 4031

Dear **Dr. Cabangon**,

The B.S. in Information Technology program of Mapúa Malayan Colleges Laguna requires their students to undergo Practicum program for a minimum of **486** hours in an academic calendar that will prepare our students to be job-ready after completing their curriculum. This program intends to enable our students to acquire and practice the knowledge and skills expected of a graduate of a B.S. IT program which, in turn, would guarantee continuous supply of IT professionals needed by your company.

We believe that your company can provide the relevant exposure necessary for our students to achieve the intended learning outcomes for the B.S. in Information Technology program. In this regard, I would like to endorse **Ms. Althea Pangilinan** to have his practicum activities in your company as requested.

We thank you for your confidence and trust with us and we look forward to a more meaningful linkage that is mutually beneficial to our students and your company.

With warm regards,

ADOMAR L. ILAO, DIT
BSIT Program Chair
College of Computer and Information Science
Mapúa Malayan Colleges Laguna
alilao@mcl.edu.ph
(049) 832-4076
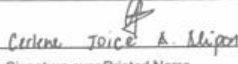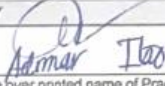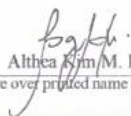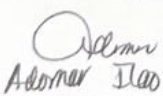
Appendix C

Practicum Confirmation and Acceptance Form

MCL
Malayan Colleges Laguna
A MAPÚA SCHOOL

PRACTICUM CONFIRMATION AND ACCEPTANCE FORM

IMPORTANT INFORMATION

- STUDENTS ACCEPTED FOR PRACTICUM IN A HOST COMPANY WILL HAVE TO ACCOMPLISH THIS FORM.
- ASK THE PRACTICUM SUPERVISOR/ COMPANY REPRESENTATIVE TO FILL IN THE DETAILS OF THE TRAINING.
- SUBMIT TO THE PRACTICUM ADVISER/COORDINATOR PRIOR TO THE START OF TRAINING.

NAME OF STUDENT	Althea Kim M. Pangilinan	STUDENT NUMBER	2021150556
COURSE CODE	IT199F	SY/TERM ENROLLED	2024-2025/ 3RD TERM

This is to certify that **Althea Kim M. Pangilinan** has been accepted for practicum at **DOST Forest Products and Research Development Institute. Narra Rd., Forestry Campus, UPLB Campus College, Laguna** and will be attached to the **Training and Manpower Development Services Section, Technical Services Division** department/s for a minimum of, but not limited to 486 hours. Training will commence on April 22,2025 and is expected to end on July 30, 2025. Attached is the list of requirements.

COMPANY REPRESENTATIVE

Cerlene Joice A. Alipon	Admin. Asst. II
Signature over Printed Name	Official Designation
HRMS - FAD	cerlene.joice.alipon@fprdi.dost.gov.ph
Department	Email and Contact Number/s

NOTED BY

Aamar Itao	3/10/2025
Signature over printed name of Practicum Coordinator	Date

COPY (1) STUDENT; (2) HOST COMPANY; (3) PRACTICUM COORDINATOR

FORM OVPAA 030B

THIS FORM IS AVAILABLE AT THE OVPAA

Appendix D

Student Training Agreement and Liability Waiver

MCL
Malayan Colleges Laguna
A MAPÚA SCHOOL

REVISION NO.: 00
REVISION DATE: May 10, 2016

STUDENT TRAINING AGREEMENT AND LIABILITY WAIVER

IMPORTANT INFORMATION
- THIS FORM IS TO BE ACCOMPLISHED AND SUBMITTED BY STUDENT TRAINEE TO THE PRACTICUM ADVISER BEFORE STARTING THE PRACTICUM.
- READ AND UNDERSTAND THE PROVISIONS OF THIS AGREEMENT AND WAIVER.
- ENSURE THAT ALL SIGNATORIES SIGN THE FORM.

I, Althea Kim Pangilinan, and a student of MAPUA MALAYAN COLLEGES LAGUNA (hereinafter referred to as "MCL", do hereby voluntarily undergo on-the-job training at DOST Forest Products Research and Development Institute, hereinafter referred to as the **"Host Company"**, located at Narra Rd., Forestry campus, UPLB Campus, College, Laguna, under the following terms and conditions:

a. That the practicum training will commence on April 22, 2025 and ends on July 30, 2025 and will have to complete a minimum of 486 hours required for the on-the-job training;

b. That I shall observe proper decorum and act professionally at all times and abide by the Company's rules and regulations and comply with those imposed for the training program, otherwise, I shall be excluded from further participation;

c. That in the course of my training program, I may have access to information which may be of confidential in nature and proprietary to the Company, for which I may be required to execute a confidentiality and non-disclosure agreement as a prerequisite to my participation in the training program;

d. That the time I will spend on the training program in the completion of my on-the-job training requirements will not and should not be interpreted or construed as working hours and should be regarded as non-compensable. Provided that, the Company may, as a unilateral act of liberality or generosity on their part, provide me with meal, travel, transportation allowances, accommodations, etc.;

e. That I fully understand that notwithstanding the allowances enumerated in the preceding section which I may receive, there exists no labor-management and/or employer/employee relationship between me and the Company where I will undergo my training;

f. That I shall exercise due care and diligence in the tasks assigned to me and personally be made answerable for any and all liabilities for damage to property or injury to third person, which may be occasioned by my intentional or negligent acts during the course of my on-the-job training;

g. That I shall likewise hold the Host Company and MCL free and harmless from any and all liability and responsibility for any sickness or injury to myself and third parties and damage to property which I may sustain and/or may occur at any time during the training program, including time spent in traveling to and from any and all premises and locations where I may be required to go to as part of my training program;

h. That the Company reserves the right to discontinue my training on reasonable grounds upon written notice to MCL and myself. Additionally, in the event my training program is discontinued for reasons attributable only to myself, I may be made to reimburse the Host Company for any/all the allowances, stipends, etc., which I may have received from them during and prior to the termination of my training program;

i. That in addition to my liability under section *g* and for the pre-termination of my training program provided for under section *h* hereof, I may be subjected further to disciplinary action in accordance with the school's student manual and/or be a ground for disqualification from graduation;

Signed on this 23 day of May.

Althea Kim M. Pangilinan
Signature over printed name of **Student Trainee**

WITH OUR CONSENT: _____
Signature over printed name of **Parent/Guardian**
(for minors only)

NOTED BY:

Adornar Ilao 5/13/205
Printed Name and Signature of **Practicum Adviser/ Coordinator**

EMILY JANE L. LAURENTE
Printed Name and Signature of **Host Company Representative**

COPY: (1) STUDENT (2) HOST COMPANY (3) PRACTICUM ADVISER (4) PRACTICUM COORDINATOR

FORM OVPAA 030C
THIS FORM IS AVAILABLE AT THE OVPAA

Appendix E

Training Plan

MCL
Malayan Colleges Laguna
A MAPÚA SCHOOL

REVISION NO.:
REVISION DATE: May 10, 2016

TRAINING PLAN

NAME	Althea Kim M. Pangilinan	COURSE CODE	IT199F
PROGRAM & STUDENT NO.	BSIT- 2021150556	COURSE TITLE	I.T. PRACTICUM

STUDENT OUTCOMES

CO1. Analyze organizational needs and design appropriate digital solutions
CO2. Apply technical knowledge in software development and database systems to real-world projects
CO3. Demonstrate growth through hands-on industry experience and continuous learning

AREAS / PHASES OF TRAINING AND TIME ALLOTMENT

A. Company Orientation	—	8 hrs
B. Software Development	—	438 hrs
C. Technical Documentation	—	40 hrs

EVALUATION GUIDELINES & COURSE OUTCOMES

DEMONSTRATION OF SOFT SKILLS (40%)	DEMONSTRATION OF TECHNICAL SKILLS (60%)
KEY AREAS	**KEY AREAS**

COMMUNICATION SKILLS (20%)

Relate to co-trainees/supervisors terminologies and rules Recite procedures and instructions needed for the tasks Identify and describe safety signs and symbols

Ask critical questions related to the tasks

Produce well-written regular and incident reports

Prepares and presents reports using Information and Communication Technology (ICT)

PROFESSIONAL DEPORTMENT (20%)

Observes proper grooming and attire

Reports to work regularly on time and as necessary, even beyond prescribed working hours

Acts according to the job description given by the company

Willing to accept new tasks apart from the usual routine and responsibilities

Delivery quality output on time

Demonstrates respect for different individuals

INITIATIVE (+5%)

Volunteers to perform tasks beyond routine tasks

SOFTWARE DEVELOPMENT SKILLS

- Able to deliver bug-free modules on time (20%)
  - Delivered stable modules with no major bugs reported. (10%)
  - Met all project deadlines consistently. (10%)
- Able to integrate and implement the new modules (10%)
  - Successfully integrated Supabase. (5%)
  - Implemented key features with smooth functionality. (5%)
- Able to implement good UI/UX principles in the modules (10%)
  - Applied consistent design and responsive layout. (5%)
  - Ensured user-friendly navigation and interaction. (5%)

TECHNICAL DOCUMENTATION SKILLS (20%)

- Created and maintained clear project timelines. (5%)
- Able to write Testing Activities documents (5%)
- Documented test cases and tracked bug resolutions. (5%)
- Prepared easy-to-follow guides for end users. (5%)

INITIATIVE (+5%)

Volunteers to perform tasks beyond routine tasks

CONFORME	CONSENT (FOR MINORS ONLY)	NOTED BY	ENDORSED BY	APPROVED BY
Althea Kim M. Pangilinan		Ms. Marjee A. Dizon	Mr. Ademar L. Ilao	Mr. Ademar L. Ilao
SIGNATURE OVER PRINTED NAME OF STUDENT / DATE	SIGNATURE OVER PRINTED NAME OF PARENT/OR GUARDIAN / DATE	SIGNATURE OVER PRINTED NAME OF PRACTICUM SUPERVISOR / DATE	SIGNATURE OVER PRINTED NAME OF PRACTICUM ADVISER / DATE	SIGNATURE OVER PRINTED NAME OF PROGRAM CHAIR / DATE

COPY: (1) STUDENT, (2) HOST COMPANY, (3) PRACTICUM COORDINATOR

FORM OVPAA-030D
THIS FORM IS AVAILABLE AT THE OVPAA

Appendix F

Practicum Learning Module Path Proposal

PRACTICUM INTENT FORM

REVISION NO.: 02
REVISION DATE: Nov. 8, 2019

IMPORTANT INFORMATION

- THIS FORM IS FILLED-UP BY THE STUDENT TO SIGNIFY INTENTION TO ENROLL IN THE PRACTICUM COURSE
- TO BE SUBMITTED TO THE PROGRAM CHAIR ONE TERM BEFORE THE PRACTICUM
- STUDENTS WHO PREFER TO TRAIN WITH A COMPANY THAT IS NOT IN THE APPROVED LIST MUST COMPLY TO APPLICABLE POLICIES AND DUE PROCEDURES.

PERSONAL INFORMATION

NAME OF STUDENT	Althea Pangilinan	STUDENT NUMBER	2021150556
PROGRAM AND YEAR	BSIT 4th Year	CONTACT NO. AND E-MAIL ADDRESS	09994402556/ 2021akmpangilinan@live.mcl.edu.ph

PRACTICUM INFORMATION

PRACTICUM COURSE CODE	IT99F
COURSES TO BE TAKEN WITH PRACTICUM	IS191 , IT200 - 20
TOTAL UNITS (PER CURRICULUM)	157
TOTAL NO. OF UNITS TAKEN	142

PREFERRED / TARGET HOST COMPANIES

- DOST Forest Product Research and Development Institute
- STmicroelectronics
- Municipality of Biñan

☐ I have a preferred Host Company.

☐ I am requesting for a Host Company and my preferred location is _____.

I hereby undertake to provide all relevant information as required by Malayan Colleges Laguna (MCL) and/or the Host Training Establishment (HTE). Hence, by signing this document I hereby give my consent for MCL and/or the HTE to generate, extract, use, store, and dispose any and all personal data that may be necessary. Furthermore, I am authorizing MCL and/or the HTE to obtain copies of my medical and psychological assessment reports as part of the practicum requirements.

Althea Pangilinan | 02-28-25
SIGNATURE OVER PRINTED NAME OF STUDENT/DATE

Admar Itao 2/28/25
SIGNATURE OVER PRINTED NAME OF PROGRAM CHAIR/DATE

DO NOT WRITE BELOW THIS LINE

CENTER FOR HEALTH SERVICES AND WELLNESS - ENDORSEMENT
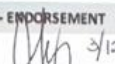
☑ Endorsed for Practicum
☐ Endorsed for Practicum with Monitoring

Christine R. Larin, R
License No. 0320300 3-12-25
SIGNATURE OVER PRINTED NAME OF CHSW PERSONNEL/DATE

CENTER FOR GUIDANCE AND COUNSELING - ENDORSEMENT
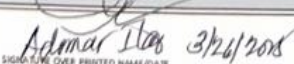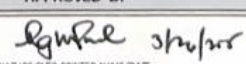
☑ Endorsed for Practicum
☐ Endorsed for Practicum with Intervention

GLADYSMA KATE E. BUGA 3/12/2025
SIGNATURE OVER PRINTED NAME OF CGC PERSONNEL/DATE

APPROVAL

REMARKS/CONDITIONS: Approved For Practicum

RECOMMENDED BY	APPROVED BY
Admar Itao 3/26/2025	3/26/25
SIGNATURE OVER PRINTED NAME/DATE PROGRAM CHAIR	SIGNATURE OVER PRINTED NAME/DATE DEAN/DATE

COPY: (1) STUDENT; (2) PROGRAM CHAIR

OVPAA-016-01

THIS FORM IS AVAILABLE AT THE OFFICE OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS

Appendix G
Week 1 Journal

MCL
Malayan Colleges Laguna
A MAPÚA SCHOOL

DAILY JOURNAL

IMPORTANT INFORMATION
- INCLUDE TASK ASSIGNMENTS OR MOVEMENTS, REFLECTION ON THE DAY'S NEW LEARNING, ACCOMPLISHMENT, CHALLENGES FACED AND HOW YOU RESPONDED, OBSERVATIONS AND RECOMMENDATIONS ON THE IMPROVEMENT OF SYSTEMS / OPERATION / MANAGEMENT, ETC.
- SCANNED COPIES OF THIS FORM SHALL BE SUBMITTED ON A WEEKLY BASIS THROUGH APPROVED LMS.
- HARD COPIES OF THIS FORM SHOULD BE COMPILED AS PART OF THE STUDENT'S PORTFOLIO.

DATE	April 22- 25, 2025 (Week 1)	AREA ASSIGNMENT	GIS BASED TRAINING TRACKER
TASK	Overview of the company and the responsibilities for the upcoming project	SHIFT/TIME	7AM-4PM

Our first week began by onboarding at DOST-FPRDI. It was a warm welcome and orientation.

Our supervisor introduced us to the department members and gave a quick overview of what the company's mission, vision and structure.

We were also given a tour of the building for us to be familiarized with the work environment. Furthermore, we

attended a meeting led by Ms. Margie and Sir Jeriel, our supervisor and our GIS expert in our department where they discussed the projects, including the purpose, expected output,

and the goals of implementation goals. This meeting also included our input in identifying what possible

technologies, tools and features needed for the said project. This helped us understand the importance of aligning

deliverables with the needs of the department. Within these days, we gained valuable into a formal and effective

project planning, formal stakeholder communication. We also tasked to help in their technical seminar, despite the

unfamiliar set up procedure, we adapted by asking questions with respect, documenting plans and most

importantly, collaborating with team members.

Finally, I observed that having more structured onboarding materials, formal project outlines

does improve our operational efficiency and future development.

TRAINEE'S SIGNATURE

Appendix H

Week 2 Journal

MCL
Malayan Colleges Laguna
A MAPÚA SCHOOL

DAILY JOURNAL

IMPORTANT INFORMATION
- INCLUDE TASK ASSIGNMENTS OR MOVEMENTS, REFLECTION ON THE DAY'S NEW LEARNING, ACCOMPLISHMENT, CHALLENGES FACED AND HOW YOU RESPONDED, OBSERVATIONS AND RECOMMENDATIONS ON THE IMPROVEMENT OF SYSTEMS / OPERATION / MANAGEMENT, ETC.
- SCANNED COPIES OF THIS FORM SHALL BE SUBMITTED ON A WEEKLY BASIS THROUGH APPROVED LMS.
- HARD COPIES OF THIS FORM SHOULD BE COMPILED AS PART OF THE STUDENT'S PORTFOLIO.

| DATE | April 28- May 2,2025 (WEEK 2) | AREA ASSIGNMENT | GIS based Training Tracker |
| TASK | Database Population and Initial Front-End Development | SHIFT/TIME | 7AM-4PM |

In this week, We were given all the training seminars from 2014 to 2024. However, it is printed and the soft copy is not in a csv or excel file.

We need the csv file for easier importing in our database. With that said, we manually inputted all the training seminars and the needed fields for our project. So, I focused on uploading and structuring data for those years. Moreover, I encountered some issues in inconsistencies of file formatting but this is resolved by cleaning and double checking the data and aligning it with the required fields.

In addition, the planning of structure of the UI, buttons needed and required input fields were discussed between the supervisors. I also successfully established a database connection with the web application.

This week taught me the crucial role of systematic data organization even in hard copies. To ensure seamless front end- back- end interaction. Moreover, one challenge was to manage a large sets of historical data, which solved through batch processing and repeated verification.

Lastly, the accomplishments this week provided a strong foundation for both system's database and user interface components.

TRAINEE'S SIGNATURE

Appendix I

Week 3 Journal

MCL
Malayan Colleges Laguna
A MAPÚA SCHOOL

DAILY JOURNAL

IMPORTANT INFORMATION
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DATE	May 5- May 8 (Week 3)	AREA ASSIGNMENT	GIS Based Training Tracker
TASK	UI Development, Data Filtering Integration for GIS-Based Training Tracker	SHIFT/TIME	7AM-4PM

This week, we continued the development of our assigned project. We first started to work on the front-end and back-end components of the GIS-Based Training Tracker. My task for this week was to create a splash screen, landing page, and to start the sorting page. Moreover, SQL functions were properly initiated and created a simple UI to test if the sorting functions are working properly. Additionally, this week the UI design for the login page is finished. Lots of errors and bugs were also encountered this week especially in the filter page. Certain locations are not sorted properly or no locations can be found in the page, but this is solved by carefully reading the program, identifying what caused it, testing different conditions, and validating data inputs. Moreover, we started creating the navigation rail, navigating icons and ensuring that all pages are properly linked in sequence. Our supervisor, also asked as to show our progress, saying that we did well and ask if we can add a month-range filter function. To enhance data sorting capability and for it to be efficient in their reporting.

This series of tasks helped me deepen my understanding of UI/UX design, data driven filtering using SQL functions and proper system routing. A major problem that we encountered was fixing the filter page as it sorts worth 10 years of training. This experience emphasized the importance of testing every part of the code before combining them. I also noticed that the continuous communication with our supervisor helped ensure the project still aligned with its objective. I also recommend for us to improve development flow was to have a clear outline of the expected structure and visual output beforehand to reduce the repetition of adjustments.

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Appendix J

Week 4 Journal

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DATE	May 12- May 16 (week 4)	AREA ASSIGNMENT	GIS based Training Tracker
TASK	Development of File Management UI, CSV Import Function.	SHIFT/TIME	7 AM- 4PM

In this week of development, I focused on designing and developing the core components of File Management role of the web app. This week is also our integration of the sorting and map functionalities. I began by outlining the UI layout for the file management pages and how would the stakeholders interact to these features. For the file management screen, our supervisor requested to implement a list that displays all training seminars for the selected year. Furthermore, Each seminars includes two buttons with Edit and Delete, these features were created with UI for the mean time. Add and Import button screens are designed and structured carefully enhancing its usability and functionality to support data entry.

One of the challenges, I encountered was I am having a hard time retrieving the seminars according to the dropdown. To manage time efficiently, I prioritized developing the import function, as I reused object-oriented components from my past projects to speed up development. I also encountered limitation where Supabase do not allow create a new table using SQL Functions, I resolved this by implementing a Remote Procedure call that can execute raw SQL commands through PostgREST to enable CSV imports into predefined structures. Usability were ensured through the showing the numbers of training along with all the fields to be inserted in the database.

Finally, this week's accomplishments brought significant functionality to the system and taught me to properly decide what to prioritize to save time while giving a quality output.

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Appendix K

Week 5 Journal

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DATE	May 19- May 23 (Week 5)	AREA ASSIGNMENT	GIS - TRAINING TRACKER
TASK	Add Function and Data Validation for Dynamic Table Integration	SHIFT/TIME	7 AM - 4PM

This week, my main task was to develop the logic for the Add function inside the file management system. This function is for adding a training in the recent years. As per the meeting with our supervisors, the process needs to begin with implementing a dropdown for recent database tables. Upon selection the system should generate an automatic unique training ID. My first Issue is new IDs were not generating properly according to the format. I resolved this by querying the last ID in the table and incrementing it by 1. Moreover, another issue involved the submission process where data passed null to the database. I resolved this, by ensuring that all fields in the code matched the database schema and the headers in the uploaded Excel file.

To ensure data integrity, all form validations is implemented. Testing the functions repeatedly helps me identify what part of the function needs refinement.

Through this task, I gained experience in handling backend form processing and dynamic table targeting. This also a practice for me to have consistent naming conventions.

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Appendix L

Week 6 Journal

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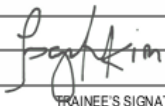## DAILY JOURNAL

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DATE	May 26- May 30 2025 (Week 6)	AREA ASSIGNMENT	GIS Based- Training Tracker
TASK	File Management with Edit and Delete Function	SHIFT/TIME	7 AM- 4PM

In these week, my focus was the creation of a fully functional File Management Page.

Other functions such as add and import are already done. This week, I developed viewing, deleting and editing record based on user interaction. The edit functionality was one of the functions I always struggled.

The fields were not updating correctly because the system can't retrieve the selected data.

However, I noticed that the selected data in the file management page is not correctly passed in the Edit page. So, i solved it by revising the way how data is fetched and passed correctly to the edit page. To ensure that no duplicates are made, I added condition to prevent same entries inside the table. Moreover, since the data that we are handling are crucial, I implemented a confirmation dialog to prevent accidental deletions. This ensures that users will be fully aware before removing a record.

This week taught me the importance of data integrity, backend consistency as well as correct state management in the code especially in handling dynamic content.

Overall, despite the struggles all features of file management are done improving the system's interactivity.

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Appendix M

Week 7 Journal

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DATE	June 2-6 2025 (Week 7)	AREA ASSIGNMENT	GIS based training tracker
TASK	System Testing, Validation, and Supervisor Review	SHIFT/TIME	7AM-4PM

This week was focused on validation and testing of all features, although our progress was slower due to our defense schedule. There were days that I couldn't attend my OJT, but I used the remaining days of the week to double check all functionalities, to ensure that they are working as intended.

I conducted test across different scenarios to identify bugs or even missing validations and note any issues for further refinements. Additionally, we presented the current version of the web application to our OJT supervisor, Ms. Marj who provided insightful and helpful feedback. Minor changes and feature adjustments were suggested, which will be addressed all in the upcoming development week.

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Appendix N

Week 8 Journal

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DATE	June 9 - June 13, 2025 (week 8)	AREA ASSIGNMENT	GIS based Training Activities
TASK	Map Page Integration with Region-Based Zoom and Training Results Display	SHIFT/TIME	7AM-4PM

In this week, our focus was improving the Map Page by enabling the zoom feature based on the selected filters such as region, province, and city from the sorting page. The result box now displays a list of filtered trainings and clicking on any result is intended to locate it in the map and also display the detailed information below. However, we encountered challenges such as finding the right Map API. We studied and tested APIs including OpenStreerMap, Nominatim, Mapbox and Google Maps, and after careful research some API is not working and concluded that the Google Maps API is the most viable option because of ease of use. Unfortunately, google map requires a billing account for activation and currently, we are still waiting for the host company to provide access. We also need to use a manual GeoJSON for labeling the map.

While we are waiting, we continue to plan and explore how can we implement this feature best. This zoom page is expected to be one of the final additions to the system.

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Week 9 Journal

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DATE	Week 9	AREA ASSIGNMENT	Batch Training Certificate Generator
TASK	Requirements Gathering and System Planning	SHIFT/TIME	7am-4pm

In this week, I started my second project for my internship. This is about Batch Training Certificate Generator. I focused on gathering and organizing detailed requirements for the certificate generator system. I conducted an in-depth analysis of the manual certificate process to identify what should I improve and what inefficiencies are present such as time-consuming verification of participant eligibooty across 3 csv forms and the repetitive encoding names into the certificates.

Also in this week, I started to plan the core software components, designed initial navigations, outline the main pages, screens and what elements and functions present to establish a clear and user friendly workflow.

Technical documentation such as project scope, objectives and functional score are also drafted in this week. I outlined a checklist of all current manual steps to ensure that there are addressed properly.

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Week 10 Journal

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DATE	June 23- 27, 2025	AREA ASSIGNMENT	Batch Training Certificate Generator
TASK	UI Development, Logic Implementation, and Testing	SHIFT/TIME	7AM-4PM

This week, my focus was to build and integrate the splash screen for the certificate generator application. This is to improve the user experience during the initial loading of the web app. Furthermore, I also developed and implemented the sorting of the participants based on the csv forms required to accurately determined which participants are qualified for certification. I started to fix major issues related to template handling, such as all names of the participants were rendered onto one certificate instead of generating individual certificates each participant. The template placement and visibility logic is also corrected to ensure that all certificates are displayed correctly with properly positioned names.

In the technical testing and documentation, I throughly tested the participant sorting and filtering functionality in different set of csv training files to ensure that participants were correctly categorized. Moreover, test cases were executed to confirm that template is rendering is accurate and only single participant appears in each certificate, as well as the steps taken to solve them. Lastly, the test documentations included updated instructions for template placement and test logs verifying that fixes were applied successfully.

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Week 11 Journal

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DATE	June 30 - July 4, 2025 - week 11	AREA ASSIGNMENT	Batch Training Certificate Generator
TASK	Feature Enhancements, Bug Fixes, and Testing	SHIFT/TIME	7 AM- 4PM

During this week, I had a big progress in both software development and technical/ documentation. On the development of front end, several key features were successfully implemented to enhance the functionality and user experience of the user. I included the export buttons, enabling users to download generated certificates in a zip format and a pdf format. The integration of save and load template, allows users to reuse the customized certificate template. Moreover, the addition of different font styles, size and alignment provides a flexible design when formatting the recipient names and the text of certificate. A draggable name positioning was integrated, that will give the user full control to move the name element anywhere within the loaded template.

In addition, multiple bugs and issues were addressed, including fixing problem where font styles were not changing as intended, also resolved text alignment errors and corrected issues with the group renaming and formatting process during large data entry.

From the technical testing and documentation, all new features were thoroughly tested for reliability and usability. Functional testing was performed on export actions, template saving/loading, font style switching, and movable text positioning. Usability testing confirmed that the drag-and-drop feature worked easily and consistently. Bug fixes were validated to ensure fonts applied correctly and alignment worked as expected. Bulk renaming functionality was also tested again to confirm proper formatting throughout all imported names. Overall, this week marked good progress in both the stability and capabilities of the Certificate Editor.

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Week 12 Journal

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DATE	July 7 – July 11, 2025	AREA ASSIGNMENT	BATCH TRAINING CERTIFICATE GENERATOR
TASK	Improving Stability and Export Functionality	SHIFT/TIME	7AM-4PM

Week twelve prioritized on refining export features to ensure accuracy, efficiency, and user-friendly certificate handling. this focuses on debugging, optimizing, and validating these features to align fully with expected system responses.

On the Software Development, enhancements were made to the certificate export system. The Save Current and Save All functions were successfully developed, enabling users to export individual or multiple certificates as needed. we have focused on ensuring with the consistency with name saving and file outputs, which previously caused mismatches and confusion. The export process was also optimized, especially for mass exports using ZIP packaging. This included improvements in performance and reliability when handling multiple certificate files. Additionally, export-related crashes were analyzed and resolved to make it easier for the user.

Also, for Technical Documentation and Testing, validation tasks were conducted to confirm that the Save Current and Save All features functioned accurately and correct. We've verified that the exported ZIP files correctly matched the state of the editor at the time of export. previously we have experienced minor issues, such as crashes during batch exports conflicts in saved names, were identified and fixed. These testing efforts helped ensure that both single and bulk export features functions as intended throughout multiple testing. Overall, the export system had reached a more stable and consistent state, allowing for reliable certificate output in different ways it might be used.

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