

COLLEGE OF COMPUTER AND INFORMATION SCIENCE

**Academic Year 2024 – 2025**

**PRACTICUM REPORT DOCUMENT**

Inigo Yvan Borja BAYHON

Course Coordinator: Adomar L. Ilao, DIT

Submitted to the Faculty of Mapúa Malayan Colleges Laguna In

Partial Fulfillment of the Requirements for the degree of

Bachelor of Science in Information Technology

## OVERVIEW OF THE PRACTICUM ENGAGEMENT



iNeed Solutions Inc., founded in 2024 by Jonarc Cardines, is a technology company based in Makati City, Philippines, that specializes in real-time, data-driven parking and mobility solutions. As a key player in the smart parking systems industry, it serves high-traffic urban locations such as malls, condominiums, hospitals, and hotels. The company offers advanced parking management technologies, including QR/barcode scanning, POS integration, predictive analytics, and cloud-based reporting, all aimed at improving operational efficiency and user convenience.

iNeed Solutions Inc. offers a parking management system that uses real-time data and predictive analytics to optimize space usage and reduce congestion. Through a user-friendly mobile app, drivers can easily find available parking spots and view current rates. The system also supports advanced reservations, allowing users to book spaces ahead of time. This smart solution helps eliminate the hassle of searching for parking, saving both time and resources.

## Mission

Connect the parkers to thousands of available and accessible parking spaces anytime and anywhere all online.

## Vision

Transforming all non-performing land space becomes valuable, useful, and efficiently managed for the customers, owners, cities, and for a national scale.

## PRESENTATION OUTPUT

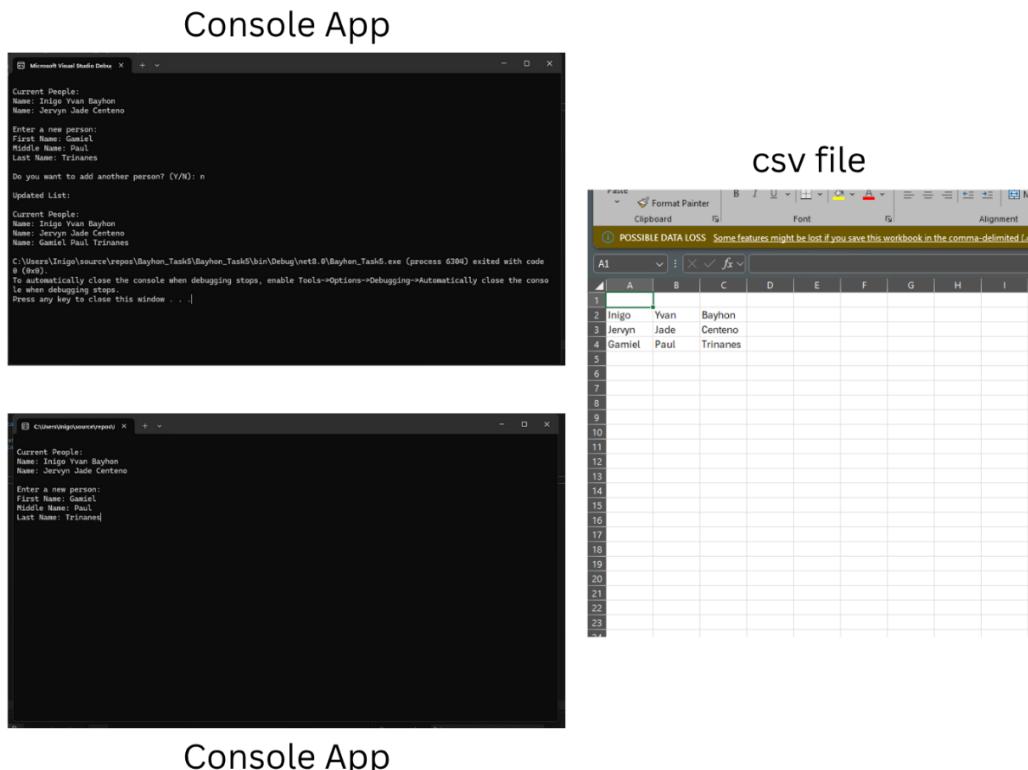


Figure 1. Reading/Writing to an existing .csv File

As shown in Figure 1, a C# console application is used to manage a list of people by displaying current entries and allowing users to add new ones with their first, middle, and last

names. The data is updated in real time based on user input. The person records are also maintained in a spreadsheet format, suggesting integration with an external CSV or Excel file for data storage or synchronization. This setup streamlines data while ensuring that records are consistently saved and accessible for future use.

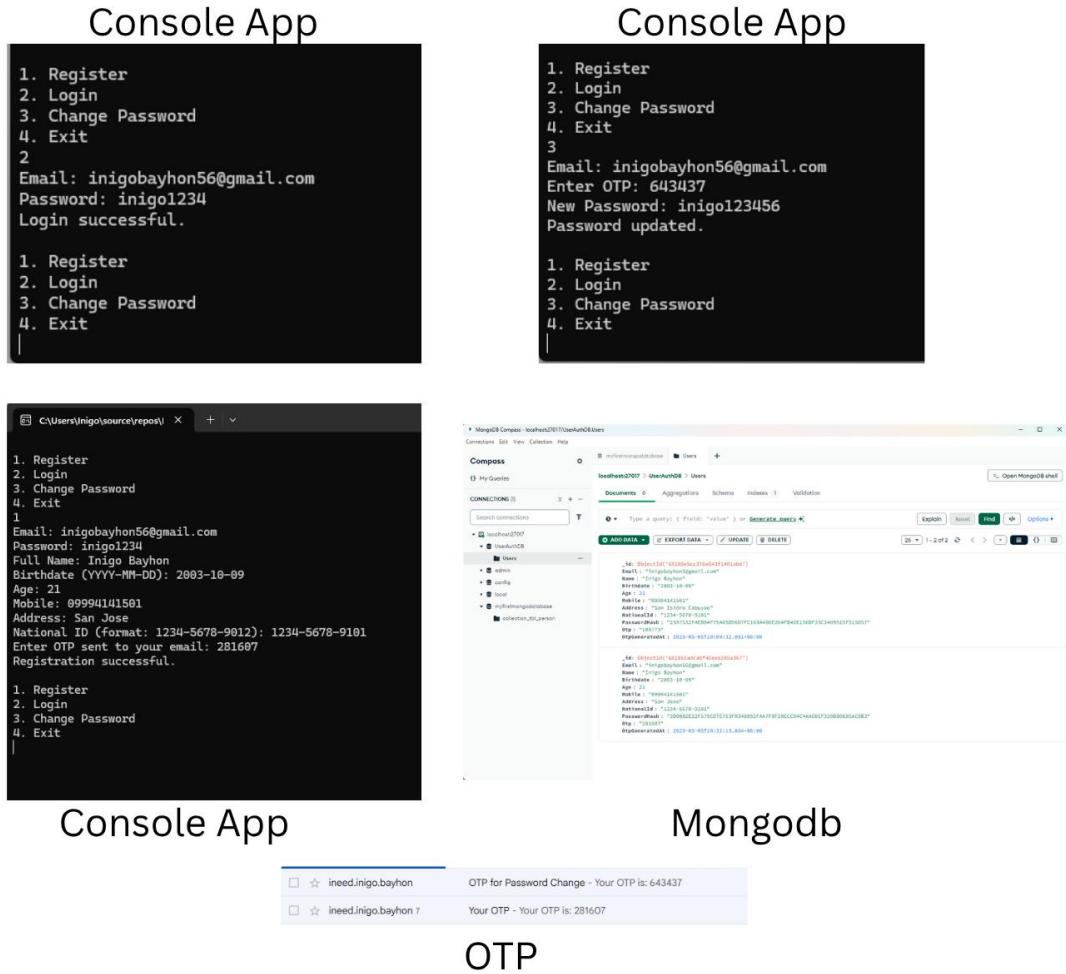
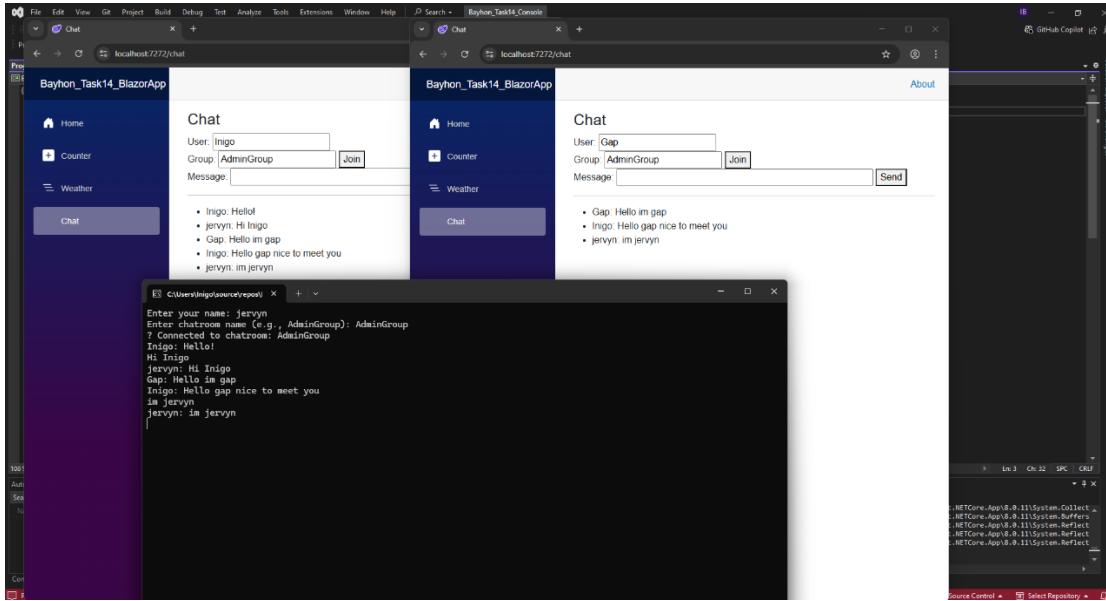


Figure 2. User Registration via Console App and OTP

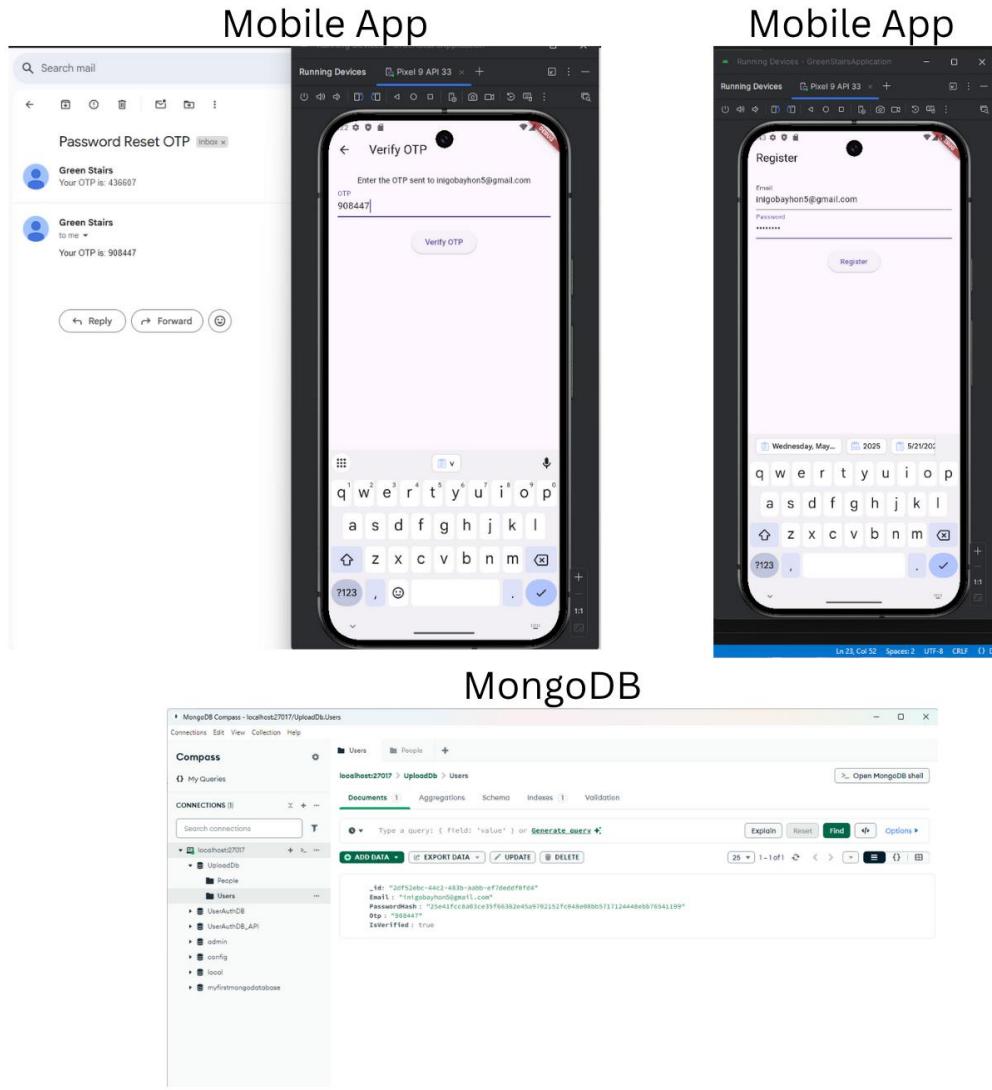
As shown in Figure 2, this setup showcases a C# console application integrated with MongoDB for user registration, login, and password management. The app allows users to register by entering personal details such as email, name, birth date, age, mobile number, address, and national ID. It includes OTP-based verification for both registration and password change, with OTPs sent to the user's email. Successful actions like login and password updates are confirmed within the console. MongoDB is used as the backend database to store and manage user data

securely. This system demonstrates complete user authentication flow with real-time validation and database integration.



*Figure 3. Messaging System using Blazor application and Console application*

As shown in Figure 3, this setup demonstrates a real-time chat application built using SignalR, where users from both a Blazor WebApp and a Console App can communicate within the same chatroom. Users enter their names and join a group (e.g., "AdminGroup") to send and receive messages instantly. The Blazor WebApp features a modern UI with a sidebar for navigation, while the Console App shows text-based interaction in the terminal. Messages are synchronized across all clients, showcasing cross-platform communication in real time. This highlights the effectiveness of SignalR in enabling seamless, bi-directional messaging across different application types.



*Figure 4. User Registration via Mobile application and OTP*

As shown in Figure 4, this setup demonstrates a mobile application with user registration, OTP verification, and password reset functionality integrated with MongoDB as the backend. The registration process allows users to input their email, password, and other personal details, which are then stored securely in MongoDB. Upon registration or password reset, an OTP is sent to the user's email for verification, ensuring secure authentication. The mobile app verifies the OTP before allowing the user to proceed. MongoDB stores relevant user data and OTP verification status, providing a robust and secure data management system for the app.

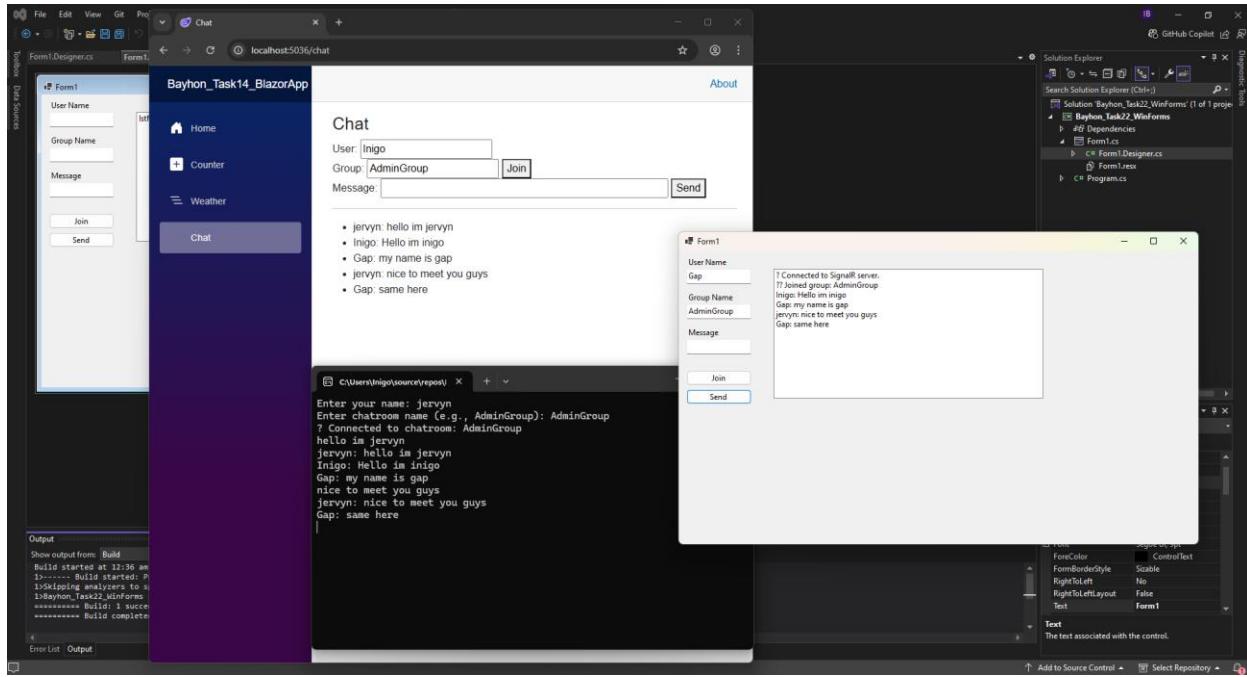


Figure 5. Chat hubs implemented through Blazor application, Console application, and WinForms

As shown in Figure 5, This setup showcases a real-time chat application built with SignalR that connects users across three different platforms: a Blazor WebApp, a WinForms desktop application, and a Console application. Users can join a chat group (e.g., "AdminGroup") by entering their name and group name, and exchange messages that are instantly synchronized across all platforms. The Blazor WebApp features sidebar navigation, while the WinForms app provides a simple form interface, and the Console app offers text-based interaction. This demonstrates how SignalR can effectively enable seamless, cross-platform communication in real-time chat environments. Additionally, it highlights the integration of different .NET technologies within a unified messaging system.

## API Endpoint Testing

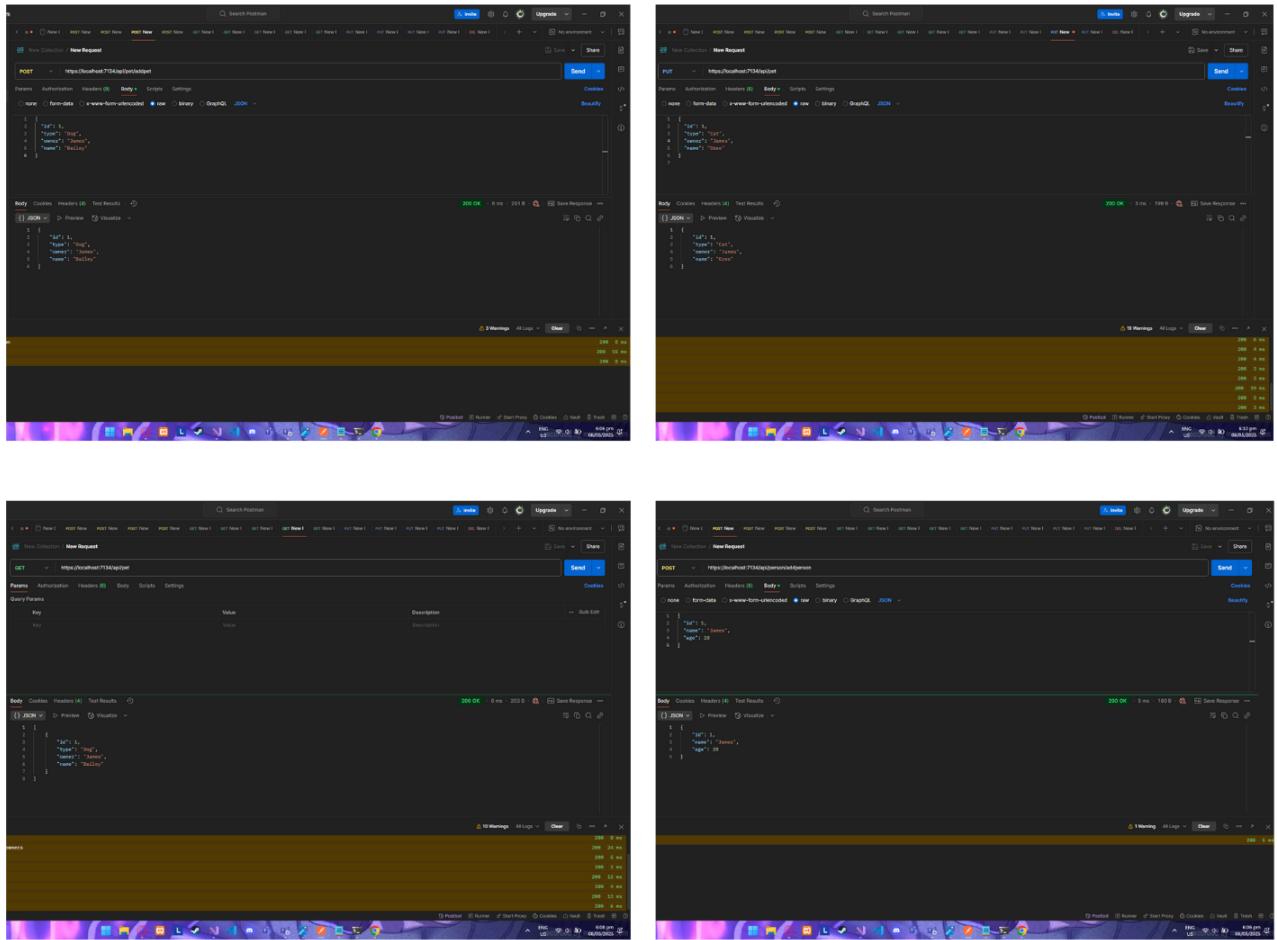


Figure 6. Testing of API Endpoints

As shown in Figure 6, this setup illustrates API endpoint testing using Postman for a user authentication system. Various HTTP requests such as POST and GET are used to test endpoints for functionalities like user registration, login, and password reset. The API responses confirm successful operations with appropriate status codes (e.g., 200 OK) and JSON response bodies. These tests validate that the backend properly handles user data, processes requests accurately, and returns expected outputs, ensuring the reliability and correctness of the API before integration with client applications. This testing approach helps identify potential issues early and ensures smooth communication between the frontend and backend systems.

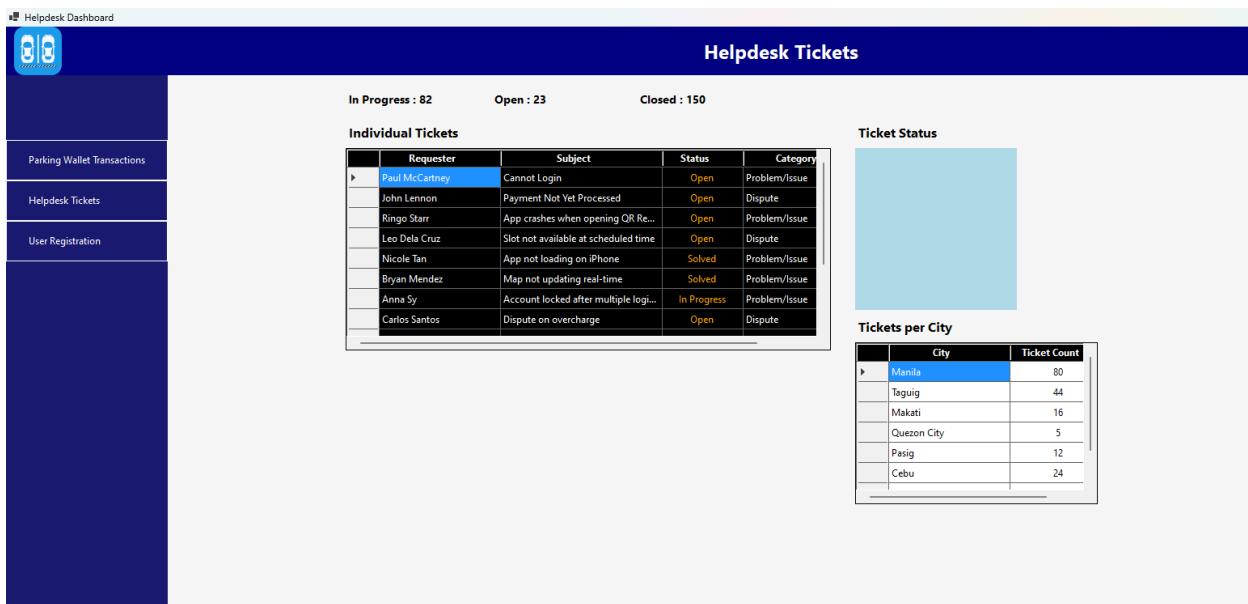


Figure 7. Helpdesk Tickets Dashboard

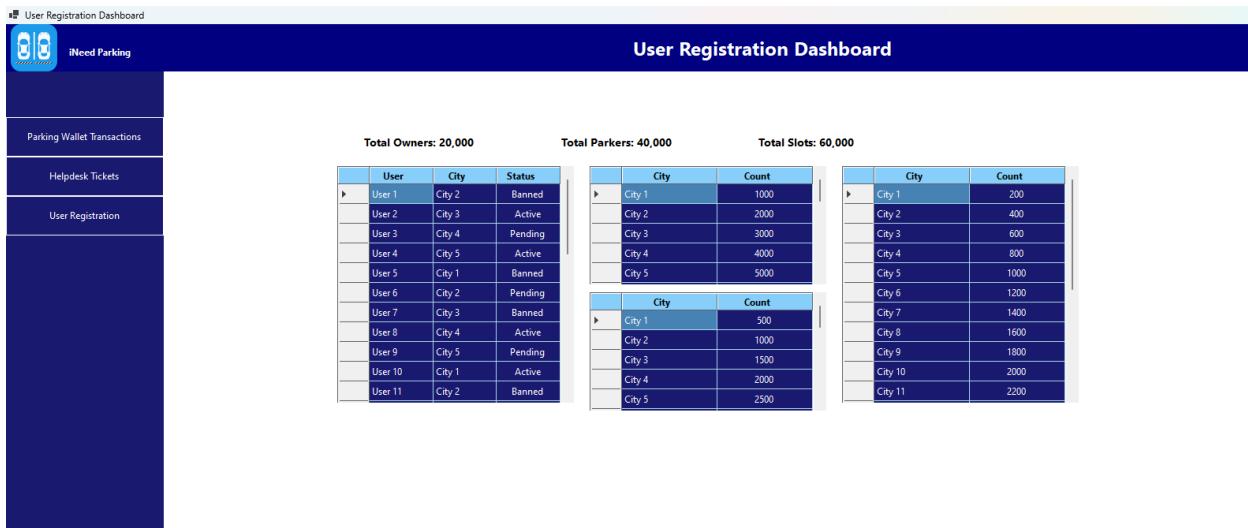


Figure 8. User Registration Dashboard

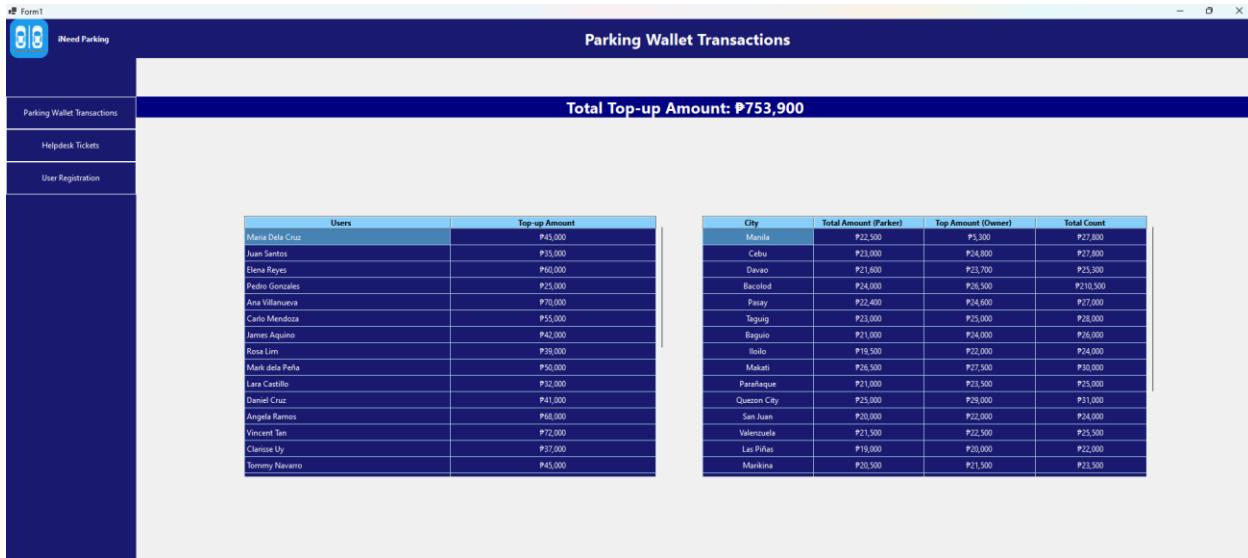


Figure 9. Parking Wallet Transactions

This monitoring system is composed of three main dashboards designed to provide a comprehensive view of operations within the iNeed Parking platform. Each dashboard focuses on a specific aspect of the system: user activity, customer support, and financial transactions. Together, they offer real-time insights that help administrators make informed decisions, ensure service efficiency, and maintain seamless user experience.

As shown in Figure 7, This dashboard provides an overview of the support system's performance by tracking the number and status of submitted tickets. It categorizes tickets based on their issue type and resolution status, helping administrators monitor open, in-progress, and resolved concerns efficiently. A summary of tickets by city is also included to assist in identifying geographic trends in reported issues.

As shown in Figure 8, The User Registration Dashboard presents a summary of registered users within the system, including owners and parkers, along with total parking slots. It also displays the status of user accounts and organizes this information by city. This structure allows for easy monitoring of user distribution, activity levels, and account status across different regions.

As shown in Figure 9, This dashboard displays financial data related to wallet top-ups for both parkers and owners. It includes a breakdown of transaction amounts and distribution by city,

offering a clear view of system-wide monetary activity. This allows administrators to evaluate financial engagement, track usage patterns, and assess regional revenue contributions.

## **NATURE OF TASKS GIVEN**

As a Junior Software Engineer intern, Inigo was assigned to the Software Engineering Department of iNeed Parking, where he collaborated with the development team on various modules across web, desktop, and mobile platforms. He contributed to tasks such as API development, implementation of chat hubs, and system testing. His responsibilities included testing API endpoints for both mobile and web systems, implementing real-time chat hubs using Blazor Server, Console Application, and WinForms, and integrating OTP-based user registration through both the mobile app and console application. He was involved in the design and deployment of messaging systems using Blazor and console applications and helped document technical processes to support future development. These experiences allowed him to develop a deeper understanding of multi-platform development, backend integration, and real-time communication workflows within a functional software ecosystem.

## **TOTAL HOURS RENDERED**

To fulfill the practicum requirement, students must complete a minimum of 486 hours. Out of this total, 406 hours were devoted to applying technical skills, which involved coding assigned modules, exploring new features for learning, producing clean and efficient code, and creating technical documentation for developed functionalities. The other 80 hours were set aside for career growth and skill-building activities, including attending workshops and earning relevant certifications.

## **SYNTHESIS OF THE PRACTICUM ENGAGEMENT**

### **LEARNINGS**

Throughout his practicum, Inigo gained extensive hands on experience in real world software development by contributing to key projects across multiple platforms. He enhanced his skills in C#, .NET, Blazor Server, and WinForms while working on real-time communication features such as chat hubs integrated into Blazor, Console, and WinForms applications using SignalR. He also became proficient in developing and testing API endpoints using Postman and working with MongoDB as the backend for user registration systems. Inigo implemented OTP-based verification workflows on both mobile and console applications, further improving his understanding of secure authentication. Through this practicum, Inigo not only strengthened his technical skillset but also developed a solid foundation in system architecture, documentation practices, and cross-platform application development preparing him for future roles in the software industry.

### **REALIZATION**

During the practicum, Inigo realized that strong collaboration and communication are essential when working on interconnected systems across multiple platforms. Engaging with tasks that involved both frontend and backend components taught him the value of aligning with teammates to ensure smooth integration and consistent outputs. He also came to appreciate the importance of adaptability learning new tools and technologies on the fly to meet project needs. Moreover, the experience reinforced the significance of writing modular and well documented code, which not only supports long-term maintainability but also makes teamwork more efficient and productive.

### **CONCLUSION**

The entire practicum experience proved to be a transformative phase in Inigo's journey as an aspiring software engineer. It provided him with the opportunity to apply his technical knowledge in real-world scenarios, deepen his understanding of system integration, and gain

hands-on experience in multi-platform development. Through this exposure, he improved his skills in coding, debugging, documentation, and collaboration while adapting to industry tools and best practices. More importantly, the experience instilled in him a professional mindset focused on continuous learning, problem-solving, and delivering quality software preparing him to take on more complex challenges in future development projects.

## APPENDICES

### Appendix A

#### Competency-Based CV

## INIGO YVAN B. BAYHON

San Isidro Heights, San Isidro Cabuyao Laguna, Block 2 Lot 23 Phase 1 Extension  
inigobayhon@gmail.com  
09994141501

#### PROFILE

My current goal is to secure an On-the-Job Training (OJT) position for my fourth year at university while studying Bachelor of Science in Information Technology. The knowledge I gained from software development classes alongside web and mobile application development and data operations puts me in position to work in teams where I can find solutions and generate new ideas. My professional goals include increasing my knowledge of practical IT operations while bringing substantial value to team projects and advancing my career alongside advancement of innovative technological frameworks.

#### TECHNICAL SKILLS

- Programming Languages: Python, C#, JavaScript
- Web Development: HTML, CSS, PHP, Bootstrap
- API Testing & Integration: Postman, REST APIs
- UI/UX Design Tools: Figma
- Database Management: MySQL, Azure SQL
- Application & Tools: Visual Studio, XAMPP, Postman, Microsoft Azure, GitHub

#### SOFT SKILLS

- Adaptability and Willingness to Learn
- Problem Solving and Logical Thinking
- Team Collaboration
- Positive Attitude
- Dependability and Reliability
- Eagerness to Improve
- Attention to Detail
- Receptiveness to Feedback

#### EDUCATION

**Bachelor of Science in Information Technology**      **2021 - Present**  
Mapua Malayan Colleges Laguna

**Information and communication technology**      **2019 - 2021**  
Mapua Malayan Colleges Laguna

**Junior High School**      **2015 - 2019**  
Don Bosco College Canlubang

#### AWARDS & CERTIFICATIONS

- Dean's List, Within A.Y 2021 - 2024 for 6 terms
- CompTIA IT Fundamentals+ (ITF+) Certification
- Certified Google Cloud Skills Boost: Cloud Computing Fundamentals Finisher
- Certified CodeChum Python Course Graduate
- Philippine Driver's License - DL Code: B

## Appendix B

### Endorsement Letter



28 April 2025

**Dhalia Cardines**

**Corporate IT and Administration**

iNeed Solutions Inc

2nd Floor, Wyce Business Center 9599 Kamagong Barangay San Antonio

Makati City 1203, Philippines

Dear Ms. Cardines,

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 Mr. **Inigo Yvan B. Bayhon** 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,

A handwritten signature in black ink.

**ADOMAR L. ILAO, DIT**

BSIT Program Chair

College of Computer and Information Science

Mapúa Malayan Colleges Laguna

[aillao@mcl.edu.ph](mailto:aillao@mcl.edu.ph)

(049) 832-4076

## Appendix C

### Practicum Confirmation and Acceptance Form

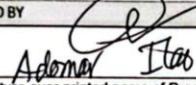
#### PRACTICUM CONFIRMATION AND ACCEPTANCE FORM

##### 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	INIGO YVAN BORJA BAYHON	STUDENT NUMBER	2021160612
COURSE CODE	IT199F	SY/TERM ENROLLED	2024-2025/3rd Term

This is to certify that Inigo Yvan Borja Bayhon (name of student-trainee) has been accepted for practicum at Need Solutions Inc. 2nd Floor, Wyce Business Center 9599 Kamagong Barangay San Antonio Makati City 1203, Philippines (name and address of establishment) and will be attached to the IT 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 15, 2025. Attached is the list of requirements.

COMPANY REPRESENTATIVE			
 Dhalia T. Cardines		Admin	
Signature over Printed Name		Official Designation	
Engineering Department		admin@ineed.com.ph / 0917-771-7275	
Department		Email and Contact Number/s	
NOTED BY			
 Adenor Ito		5/2/2025 Date	
Signature over printed name of Practicum Coordinator			

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

FORM OVPAA 030B

THIS FORM IS AVAILABLE AT THE OVPAA.

## Appendix D

### Liability Waiver



Malayan Colleges Laguna  
A MAPUA 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, Inigo Yvan Borja Bayhon, and a student of MALAYAN COLLEGES LAGUNA (hereinafter referred to as "MCL"), do hereby voluntarily undergo on-the-job training at iNeed Solutions Inc., hereinafter referred to as the "Host Company", located at 2nd Floor, Wynn Business Center 8088 Kamuning Barangay San Antonio Mabalacat City 3013 Philippines, under the following terms and conditions:

- a. That the practicum training will commence on April 22, 2025 and ends on July 15, 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 23rd day of April, 2015.

Inigo Yvan Borja Bayhon

Signature over printed name of Student Trainee

##### WITH OUR CONSENT:

Signature over printed name of Parent/Guardian  
(for minors only)

5/7/16

##### NOTED BY:

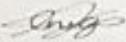
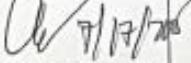
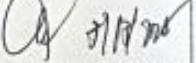
Printed Name and Signature of Practicum Adviser/ Coordinator

Dhalia T. Cardines / iNeed Solution Inc

Printed Name and Signature of Host Company Representative

## Appendix E

### Training Plan

 <b>MCL</b> Malayan Colleges Laguna A MAPUA SCHOOL	 REF ID: L12345678			
<b>TRAINING PLAN</b>				
<b>NAME</b> <input type="text" value="Inigo Yvan B. Bayhon"/> <b>COURSE CODE</b> <input type="text" value="IT199F"/> <b>PROGRAM &amp; STUDENT NO.</b> <input type="text" value="BSIT - 2021160612"/> <b>COURSE TITLE</b> <input type="text" value="IT Practicum"/>				
<b>STUDENT OUTCOMES</b>				
<p>CO1. Identify, analyze, and design business process solutions to the problem faced by the organization.</p> <p>CO2. Apply the different concepts of systems analysis and design, software engineering, database management, and programming courses in the problem-solving process in the organization, and</p> <p>CO3. Acquire new knowledge and experience while in the organization.</p>				
<b>AREAS / PHASES OF TRAINING AND TIME ALLOTMENT</b>				
<p>A. Demonstration of Technical Skills (Software Development, Research, and Implementation) – 406 hours</p> <p>B. Career Planning and Skills Development – 80 hours</p>				
<b>EVALUATION GUIDELINES &amp; COURSE OUTCOMES</b>				
<b>DEMONSTRATION OF SOFT SKILLS (40%)</b> <p><b>KEY AREAS</b></p> <p><b>COMMUNICATION SKILLS (20%)</b></p> <ul style="list-style-type: none"> <li>Relate to co-trainees/supervisors terminologies and rules</li> <li>Recite procedures and instructions needed for the tasks</li> <li>Identify and describe safety signs and symbols</li> <li>Ask critical questions related to the tasks</li> <li>Produce well-written regular and incident reports</li> <li>Prepares and presents reports using Information and Communication Technology (ICT)</li> </ul> <p><b>PROFESSIONAL DEPORTMENT (20%)</b></p> <ul style="list-style-type: none"> <li>Observes proper grooming and attire</li> <li>Reports to work regularly on time and as necessary, even beyond prescribed working hour</li> <li>Acts according to the job description given by the company</li> <li>Willing to accept new tasks apart from the usual routine and responsibilities</li> <li>Delivers quality output on time</li> <li>Demonstrates respect for different individuals</li> </ul> <p><b>INITIATIVE (+5%)</b></p> <ul style="list-style-type: none"> <li>Volunteers to perform tasks beyond routine tasks</li> </ul>	<b>DEMONSTRATION OF TECHNICAL SKILLS (60%)</b> <p><b>KEY AREAS</b></p> <p><b>Demonstration of Technical Skills (40%)</b></p> <ul style="list-style-type: none"> <li>Able to integrate and implement new modules (10%)</li> <li>Able to deliver modules on time (10%)</li> <li>Able to write code that is easy to understand and reusable (10%)</li> <li>Able to identify, analyze, and resolve issues or bugs during development (15%)</li> <li>Able to document features, workflows, and technical details clearly and consistently (5%)</li> </ul> <p><b>Career Planning and Skills Development (20%)</b></p> <ul style="list-style-type: none"> <li>Able to understand and apply workplace frameworks and project management principles and adapt to emerging technologies and understand their relevance in the modern workplace (10%)</li> <li>Able to set career goals and create a personal development plan, and identify personal strengths, demonstrate self-awareness, and develop leadership potential (10%)</li> </ul> <p><b>INITIATIVE (+5%)</b></p> <p>Volunteers to perform tasks beyond routine tasks</p>			
<b>CONFORME</b>  Inigo Yvan B. Bayhon 4-25-2025 SIGNATURE OVER PRINTED NAME OF STUDENT / DATE	<b>CONSENT (FOR MINORS ONLY)</b> <input type="checkbox"/>	<b>NOTED BY</b>  Jonard S. Cardines / 2May25 SIGNATURE OVER PRINTED NAME OF PRACTICUM SUPERVISOR / DATE	<b>ENDORSED BY</b>  SIGNATURE OVER PRINTED NAME OF PRACTICUM ADVISOR / DATE	<b>APPROVED BY</b>  SIGNATURE OVER PRINTED NAME OF PROGRAM HEAD / DATE
COPY: (1) STUDENT, (2) HOST COMPANY, (3) PRACTICUM COORDINATOR				
FORM OVPA-0300 THIS FORM IS AVAILABLE AT THE OVPAA				

## Appendix F

### Host Evaluation



Malayan Colleges Laguna  
A MAPUA SCHOOL

REVISION NO.: 00  
REVISION DATE: May 13, 2016

### STUDENT EVALUATION ON PRACTICUM HOST COMPANY AND TRAINING

#### IMPORTANT INFORMATION

- THIS FORM IS USED TO EVALUATE THE PERFORMANCE OF PRACTICUM HOST COMPANY BY THE STUDENT
- PRACTICUM ADVISER NOTES THE EVALUATION AND DISCUSSES RESULTS WITH THE STUDENT
- NOTED OJT PERFORMANCE EVALUATION REPORT FORMS PART OF THE PRACTICUM REPORT/ PORTFOLIO OF THE STUDENT

NAME OF HOST COMPANY	DEPARTMENT/SECTION/AREA ASSIGNED
iNeed Solutions Inc.	IT
ADDRESS OF COMPANY	2nd Floor, Wyce Business Center 9599 Kamagong Barangay San Antonio Makati City 1203, Philippines

**INSTRUCTIONS:** Please indicate how much you agree with each statement with 1 being that you strongly disagree and 5 being that you strongly agree.

LEGEND: 5 – Strongly Agree    4 – Agree    3 – Neutral    2 – Disagree    1 – Strongly Disagree    NA – Not applicable

#### PART I: EVALUATION ON PRACTICUM HOST COMPANY

STATEMENTS	RATING (please encircle one)	5	4	3	2	1	NA
1. I was given an orientation about the company rules, regulations, and enough explanation of my practicum assignment at the beginning of the training.	(5)	4	3	2	1	NA	
2. The employees I worked with served as resource persons, sharing ideas and materials.	(5)	4	3	2	1	NA	
3. The people I worked with were perceptive of my needs.	5	(4)	3	2	1	NA	
4. The practicum supervisor spent time observing my performance.	(5)	4	3	2	1	NA	
5. The practicum supervisor provided me with enough constructive criticism.	(5)	4	3	2	1	NA	
6. The practicum supervisor sufficiently answered my questions and clarifications.	5	(4)	3	2	1	NA	
7. The practicum supervisor was objective when critiquing my skills.	5	(4)	3	2	1	NA	
8. The demands placed upon me were realistic in this practicum experience.	(5)	4	3	2	1	NA	
9. I felt comfortable in my overall relationship with the people in the host company	(5)	4	3	2	1	NA	
10. The practicum supervisor was fair in her/his judgment of my skills.	(5)	4	3	2	1	NA	
11. I benefited from the supervision provided by the practicum supervisor.	5	(4)	3	2	1	NA	
12. I was given sufficient opportunities for the development of my skills and abilities	(5)	4	3	2	1	NA	
13. The practicum supervisor served a good professional model.	(5)	4	3	2	1	NA	
14. The company promotes a healthy working environment	(5)	4	3	2	1	NA	

#### ADDITIONAL COMMENTS (STRENGTHS AND AREAS TO IMPROVE)

The practicum host company provided a supportive and professional environment that helped me grow both personally and professionally. My supervisor was approachable and gave constructive feedback that improved my skills. I appreciated the opportunities to apply what I learned in real situations.

**PART II: EVALUATION ON PRACTICUM TRAINING**

STATEMENTS	RATING (please encircle one)					
1. The training permitted me to generate the minimum number of direct contact hours required within a specified timeframe.	(5)	4	3	2	1	NA
2. The training provided me with experiences that encouraged and developed my interpersonal skills.	(5)	4	3	2	1	NA
3. The training provided me with experiences that encouraged and developed my technical skills.	5	(4)	3	2	1	NA
4. The training provided me with experiences that encouraged and developed my analytical skills.	(5)	4	3	2	1	NA
5. The training provided me with experiences that encouraged and developed my management skills.	(5)	4	3	2	1	NA
6. The training provided me with experiences that encouraged and developed my customer relations skills.	5	(4)	3	2	1	NA
7. Facilities and equipment are adequate and made available for the training	(5)	4	3	2	1	NA
8. Overall, the establishment provided me with a good on-the-job training	(5)	4	3	2	1	NA

**ADDITIONAL COMMENTS (STRENGTHS AND AREAS TO IMPROVE)**

The training gave me valuable hands-on experience that strengthened both my technical and interpersonal skills. I learned a lot in a supportive and well-equipped environment. The activities provided were relevant and helped build my confidence in real work situations. It would be even better if there were more opportunities for team-based tasks or project involvement.

Inigo Yvan B. Bayhon

SIGNATURE OVER PRINTED NAME OF STUDENT

## Appendix G

## Weekly Journal – Week 1



**Malayan Colleges Laguna**  
A MAPÚA SCHOOL

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

## 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.
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DATE	April 22, 2025 - April 25, 2025	AREA ASSIGNMENT	Software development exercises
TASK	Task 1 - 4	SHIFT/TIME	8am - 5pm

On Tuesday, April 22, 2025, the day began with completing the preparedness checklist, followed by reviewing the basics of the C# programming language. On Wednesday, April 23, 2025, Task 3 was completed, which involved reading and writing .txt files through a console application. Additionally, concepts related to Task 3 were reviewed, including methods, functions, and console input/output operations. On Thursday, April 24, 2025, Task 2 and Task 4 were completed. Task 2 focused on creating a console application that generates triangle patterns based on user selection, while Task 4 involved developing a task scheduler through a console app. Finally, on Friday, April 25, 2025, the day started with attending the weekly Friday meeting, where discussions centered around classes, lists, methods, and tasks involving CSV files and related code implementations.

**ANSWER**

**TRAINEE'S SIGNATURE**

## Appendix H

## Weekly Journal – Week 2



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

## DAILY JOURNAL

## **IMPORTANT INFORMATION**

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DATE	April 28, 2025 - May 2, 2025	AREA ASSIGNMENT	Software development exercises
TASK	Task 5 - 8	SHIFT/TIME	8am - 5pm

On Monday, April 28, 2025, Task 5 was completed, which involved writing and reading CSV files through a console application. The next day, Tuesday, April 29, 2025, Task 6 was completed, focusing on sending automated emails via a console application along with a task scheduler. A weekly meeting was also attended where MongoDB was discussed. On Wednesday, April 30, 2025, Task 7 was completed, which involved editing the code from Task 2 to implement classes and methods for the logical structure. On Thursday, May 1, 2025, Task 8 was initiated, centering on CRUD operations in a console application, with data connected to a MongoDB database. Finally, on Friday, May 2, 2025, Task 8 was completed. These tasks contributed to improving both backend logic and external data integration through C# console-based applications.

For more information about the study, please contact Dr. John Smith at (555) 123-4567 or via email at [john.smith@researchinstitute.org](mailto:john.smith@researchinstitute.org).

**TRAINEE'S SIGNATURE**

## Appendix I

### Weekly Journal – Week 3



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

#### 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.
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DATE	May 5, 2025 - May 9, 2025	AREA ASSIGNMENT	Software development exercises
TASK	Task 9 - 13	SHIFT/TIME	8am - 5pm

From Monday, May 5 to Friday, May 9, 2025, several key development tasks were completed. On May 5, Task 9 was accomplished, which involved building a user registration console application that utilized OTP for verification and uploaded user data to a MongoDB database. On May 6, Task 10 was completed, focusing on creating an ASP.NET MVC application that implemented HTTP methods (GET, POST, PUT, DELETE) and tested their functionality using tools like Postman or Insomnia. On May 8, both Task 11 and Task 12 were successfully completed. Task 11 involved building a user registration ASP.NET MVC application that used an API, OTP functionality, and connected to MongoDB. Task 12 complemented this by developing an ASP.NET MVC application for APIs along with a console application to upload user data to MongoDB. Finally, on May 9, Task 13 was completed, which focused on restructuring an API for a parking management system using principles like single responsibility, dependency injection, and clean architecture, as well as setting up an email sender API.

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TRINEE'S SIGNATURE

## Appendix J

### Weekly Journal – Week 4



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

#### DAILY JOURNAL

##### IMPORTANT INFORMATION

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DATE	May 13, 2025 - May 16, 2025	AREA ASSIGNMENT	Software development exercises
TASK	Task 14 - 15	SHIFT/TIME	8am - 5pm

From Tuesday, May 13 to Friday, May 16, 2025, development efforts focused on building real-time communication functionality and exploring cross-platform technologies. On May 13, Task 14 was initiated, which involved developing real-time messaging applications using both a BlazorApp and a ConsoleApp. The goal was to enable users to join a chatroom specifically “AdminGroup” for the BlazorApp without requiring a login, simply by entering their name, and allowing them to send and receive messages in real time. The BlazorApp was designed to support multiple users across different tabs. On May 14, Task 14 was completed and Task 15 (Review) was also accomplished. On May 15, Task 16 and Task 17 were started. Finally, on May 16, the weekly Friday meeting was attended, during which discussions were held regarding Flutter development.

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TRINEE'S SIGNATURE

## Appendix K

### Weekly Journal – Week 5



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

#### 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.
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DATE	May 19, 2025 - May 23, 2025	AREA ASSIGNMENT	Software development exercises
TASK	Task 16 - 20	SHIFT/TIME	8am - 5pm

From Monday, May 19 to Friday, May 23, 2025, several tasks were completed focusing on planning, API deployment, and Flutter development. On May 19, Task 16 was completed, which involved writing or drawing a conceptual car-parking transaction use-case scenario for a mobile application platform. This included defining roles such as "Parking Owner" and "Parker," and illustrating the flow through a workflow diagram and UI wireframe. Task 17 was also started. On May 20, Task 17 continued, and Task 19 was completed. Task 19 involved hosting the API created in Task 13 on Internet Information Services (IIS) using Port 4544, ensuring it auto-starts as a background service and verifying its functionality by connecting to it from the console app after a PC restart. On May 21, Task 17 was finished along with Task 18, which required building a Flutter mobile app that demonstrated basic UI controls and included a bottom navigation bar to mimic a UI wireframe. Task 20 was also started on the same day. On May 22, Task 20 was completed. Finally, on May 23, Tasks 21 and 22 were started, and the weekly Friday meeting was attended, during which discussions revolved around GitHub and group activities.

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TRINEE'S SIGNATURE

## Appendix L

### Weekly Journal – Week 6



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

#### DAILY JOURNAL

##### IMPORTANT INFORMATION

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DATE	May 26, 2025 - May 30, 2025	AREA ASSIGNMENT	Software development exercises
TASK	Task 21 - 24	SHIFT/TIME	8am - 5pm

From Monday, May 26 to Friday, May 30, 2025, various tasks focused on video documentation, chat integration, and user registration features were completed. On May 26, a video presentation was recorded for Task 17 and Task 18. On May 27, another video presentation was recorded, this time for Task 19 and Task 20. On May 28, Task 21 was completed, which involved integrating a Flutter mobile app into the real-time chat system from Task 14. This demonstrated seamless communication between the Flutter app, web app, and console app, supported by a basic architecture diagram and explanation. Additionally, Task 22 was completed, requiring the creation of a WinForms application that could also connect to the real-time chat group and included its own architecture overview. On May 29, Task 23 was completed, implementing JWT authentication for a user registration API. This included handling unauthorized access errors and setting up a MongoDB user with restricted access. Task 24 was also finished, which involved creating a BlazorApp for user registration with full features such as OTP verification, login/logout, profile editing, picture uploads, and password changes, utilizing the API from Task 13. On May 30, documentation and review continued as part of the ongoing development process.

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## Appendix M

### Weekly Journal – Week 7



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

#### DAILY JOURNAL

##### IMPORTANT INFORMATION

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DATE	June 2, 2025 - June 6, 2025	AREA ASSIGNMENT	Group Project
TASK	Group Project Preparation	SHIFT/TIME	8am - 5pm

From Monday, June 2 to Friday, June 6, 2025, we were grouped into teams and assigned different modules to handle. The focus for this week was to prepare the necessary tools and software for our upcoming group project. My group was assigned the module for the HQ Monitoring Dashboard, which is responsible for displaying all the user data from the app. To set up our required tools, we coordinated with our trainer to ensure we had the correct software versions updated and installed. We also familiarized ourselves with how to use GitHub, our main platform for uploading and reviewing code contributions from each group. Our trainer guided us on how to safely upload and download files using GitHub. This preparation week was essential, as it provided us with the foundational knowledge needed for the successful execution of our project.

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TRAINEE'S SIGNATURE

## Appendix N

## Weekly Journal – Week 8



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

## DAILY JOURNAL

## **IMPORTANT INFORMATION**

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DATE	June 9, 2025 - June 13, 2025	AREA ASSIGNMENT	Group Project
TASK	Group Project Preparation	SHIFT/TIME	8am - 5pm

From Monday, June 9 to Friday, June 13, 2025, we were tasked with creating a user story, use case diagram, UI wireframe, class diagram, and a list of API endpoints for our assigned module. My team was responsible for the HQ Monitoring module. As the group leader appointed by our trainer, I delegated tasks among my groupmates to evenly split the workload. This assignment served as a simple schematic or blueprint for what the final output of our system would become. It also helped our group enhance our skills in planning, designing, and structuring a new system effectively. Overall, this task laid the foundation for a more organized and collaborative development process in the coming weeks.

**ANSWER** The answer is 1000.

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**TRAINEE'S SIGNATURE**

## Appendix O

## Weekly Journal – Week 9



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

## DAILY JOURNAL

## **IMPORTANT INFORMATION**

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DATE	June 16, 2025 - June 20, 2025	AREA ASSIGNMENT	Software Development
TASK	Planning	SHIFT/TIME	8am - 5pm

From Monday, June 16 to Friday, June 20, 2025, our team began planning the design layout of the HQ Monitoring Dashboard. We also started brainstorming the core functionalities needed to ensure proper connectivity between the dashboard and our backend. This phase allowed us to align our design approach with the technical requirements of the system.

**ANSWER** The answer is 1000.

**TRAINEE'S SIGNATURE**

## Appendix P

## Weekly Journal – Week 10



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

## DAILY JOURNAL

## **IMPORTANT INFORMATION**

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DATE	June 23, 2025 - June 27, 2025	AREA ASSIGNMENT	Software Development
TASK	Project Development	SHIFT/TIME	8am - 5pm

From Monday, June 23 to Friday, June 27, 2025, our team began developing the frontend of our assigned module, the HQ Monitoring Dashboards. We aimed to make the interface closely match our initial schematics to ensure better visibility and design consistency. During this phase, we also prepared the frontend to handle and display data retrieved from the backend, specifically from the MongoDB database. Additionally, we received some design revision feedback from our trainer, which helped us improve the overall layout and flow of the dashboard.

**ANSWER** The answer is 1000.

**TRAINEE'S SIGNATURE**

## Appendix Q

## Weekly Journal – Week 11



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

## DAILY JOURNAL

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**IMPORTANT INFORMATION**

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DATE	June 30, 2025 - July 4, 2025	AREA ASSIGNMENT	Software Development
TASK	Project Development	SHIFT/TIME	8am - 5pm

From Monday, June 30 to Friday, July 4, 2025, our team continued developing the frontend of the HQ Monitoring Dashboard based on the revisions provided by our trainer. Alongside frontend improvements, we began implementing backend functionalities and started developing the necessary APIs that these functions would connect to. We also conducted initial testing of the APIs using Postman to ensure they were functioning correctly and ready for integration. This week marked the beginning of connecting our system's interface with dynamic data handling.

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## Appendix R

## Weekly Journal – Week 12



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

## DAILY JOURNAL

## **IMPORTANT INFORMATION**

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DATE	July 7, 2025 - July 11, 2025	AREA ASSIGNMENT	Software Development
TASK	Project Development	SHIFT/TIME	8am - 5pm

From Monday, July 7 to Friday, July 11, 2025, our team continued developing both the frontend and backend components of the HQ Monitoring Dashboard module. During this time, all teams were instructed to merge or push their code to the shared GitHub repository named [G9000\\_API](#) to test compatibility across all modules. To ensure a smooth integration process, our trainer provided a step-by-step guide on how each group should properly merge their code, one at a time. This process was essential in maintaining code integrity and avoiding potential conflicts between modules. It also allowed us to better understand collaborative workflows and version control practices in a team-based development environment.

**ANSWER** The answer is 1000. The area of the rectangle is 1000 square centimeters.

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**TRAINEE'S SIGNATURE**