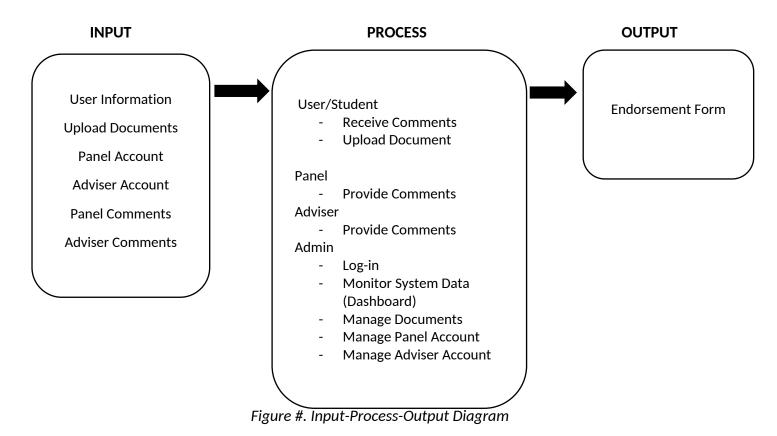
CHAPTER IV

SOFTWARE DEVELOPMENT AND TESTING

This chapter offers a comprehensive description of all major activities involved in the design and testing of the Thesis Routing System (TRS). It comprises a discussion of strategies employed in the system development process, the precise steps taken in the construction process, and activities undertaken for the system's maintenance throughout its entire life.

DEVELOPMENT PROCESS

The systematic software development process of the Online Request of Credentials System (ORCS) is illustrated through the input-process-output diagram shown in Figure #.



Input

The input "User Information," "Upload Documents," "Panel Account," "Adviser Account," "Panel Comments," and "Adviser Comments" represent essential data elements processed within the system. User Information contains details about individuals accessing the system, ensuring proper identification and role assignment. Upload Documents allows users to submit their documents so the panel and adviser can critique them. The Panel Account is assigned to panel members who review submissions and provide expert feedback, while the Adviser Account is designated for advisers guiding users through the process. Panel Comments and Adviser Comments serve as communication tools, enabling panel members and advisers to provide critiques, suggestions, and necessary revisions. These inputs collectively support document management, user authentication, and feedback integration within the system.

Process

The system follows a structured process that provides for various user roles. Users/Students who can upload documents for review and obtain feedback from both panel members and advisers. Panel members are responsible for reviewing all submissions and issuing comments, whereas advisers evaluate the documents and give advice. The admin checks the overall management of the entire process by logging in and monitoring system data through the dashboard, managing documents, and managing both panel and adviser

accounts. This whole workflow guarantees the efficient submission of documents, structured feedback on them, and effective management of the system.

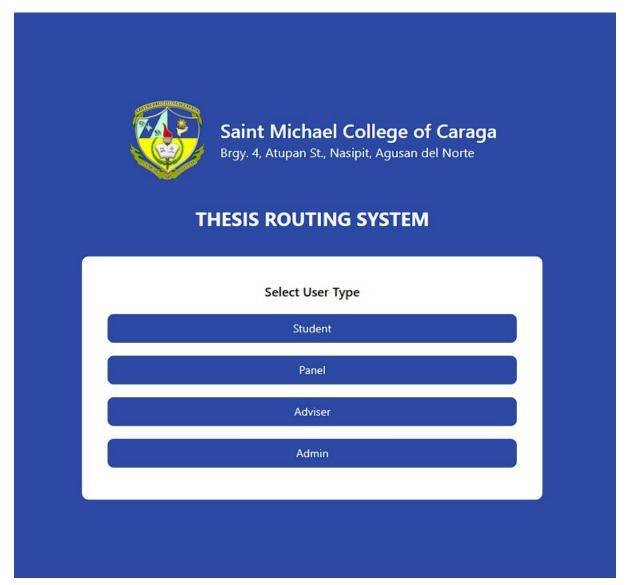


Figure #. Landing Page

Figure # shows the first thing the Users will see when they access the system. The user will choose student, panel, adviser, and admin.

Figure #. Code Snippet for Landing Page

Figure # This JavaScript code, written for a React (Next.js) environment, is designed to allow users to select their role before logging in.



Figure #. Login Page - Student

Figure # This UI is for Student Login Input ID Number, And Password if the student doesn't have an account he/she can register.

```
div className="flex flex-col justify-center bg-white w-[90%] md:w-[60%] lg:w-[40%] rounded-lg mx-auto p-8">
   <h1 className="text-center font-semibold text-xl mb-8">
      Student Login
      label={'ID Number'}
      placeholder={'Enter your ID Number'}
      value={idnumber}
      onChange={(e) => setIdnumber(e.target.value)}
      placeholder={'Enter your password'}
      value={password}
      onChange={(e) => setPassword(e.target.value)}
      type="password"
      label={`${loginLoading ? 'Logging in...' : 'Login'}`}
      onClick={handleLogin}
   No account yet?{' '}
              href="/auth/student/register"
              className="font-semibold text-smccprimary"
              Register here
```

Figure #. Code Snippet for Login Page - Student

Figure # This React (Next.js) component creates a Student Login interface with a responsive, centered design using Tailwind CSS. It includes input fields for ID Number and Password, a login button that updates dynamically, and a registration link for new users.

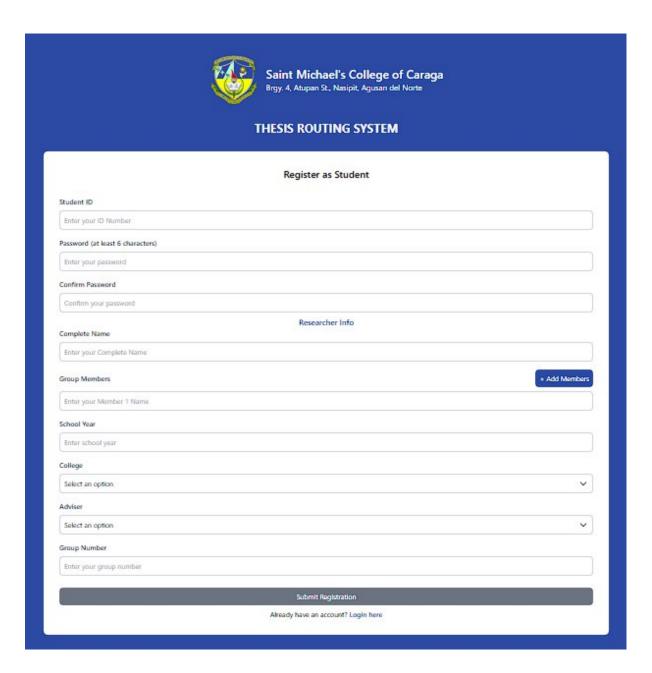


Figure #. Registration Page

Figure # In this UI the Student needs to input their information Student ID, Password,
Complete Name of the Leader, Complete Name of Member, School Year, College or Course,
Adviser, and Group Number.

```
label={'Complete Name'}
    placeholder={'Enter your Complete Name'}
    value={name}
    onChange={(e) => setName(e.target.value)}
        <label className="mb-2 text-sm font-medium text-gray-700">
            Group Members
            className="text-sm bg-smccprimary text-white px-2 py-2 rounded-lg hover:bg-blue-600"
            onClick={() => setMemberCount(memberCount + 1)}
            + Add Members
 {Array.from({ length: memberCount }).map((_, index) => {
            key={index}
            placeholder={`Enter your Member ${index + 1} Name`}
            value={membersList[index] || ''}
            onChange={(e) => {
                const updatedMembersList = [...membersList];
               updatedMembersList[index] = e.target.value;
); /> H
                setMembersList(updatedMembersList);
```

Figure #. Code Snippet (Query) for Registration Page

Figure # this next.js code is for input information for Student.

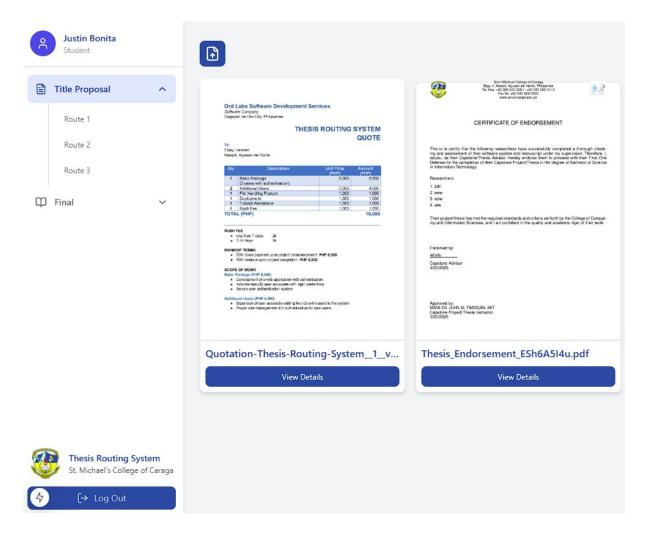


Figure #. Route 1 - Student

Figure # This UI shows the documents that were submitted for the student, and the sidebar has route1, route2, and route3 for the proposal same for the Final.

Figure #. Code Snippet for Documents - Student

Figure # This next.js code grabs all the files submitted by the student.

```
nav className="flex-1 p-3 overflow-y-auto scrollbar-thin scrollbar-thumb-gray-600 scrollbar-track-gray-800">
       icon={FileText}
       title="Title Proposal"
       active={activeSection}
       setActiveSection={setActiveSection}
            { name: 'Route 1', href: '/student/proposal/route-1' },
            { name: 'Route 2', href: '/student/proposal/route-2' },
            { name: 'Route 3', href: '/student/proposal/route-3' },
       onLinkClick={() => setIsOpen(false)}
   <SidebarSection</pre>
       icon={BookOpen}
       title="Final"
       active={activeSection}
       setActiveSection={setActiveSection}
            { name: 'Route 1', href: '/student/final/route-1' }, 
{ name: 'Route 2', href: '/student/final/route-2' },
            { name: 'Route 3', href: '/student/final/route-3' },
       onLinkClick={() => setIsOpen(false)}
```

Figure #. Code Snippet (Query) for Sidebar

Figure # This next.js code is for the sidebar that shows in the students UI.

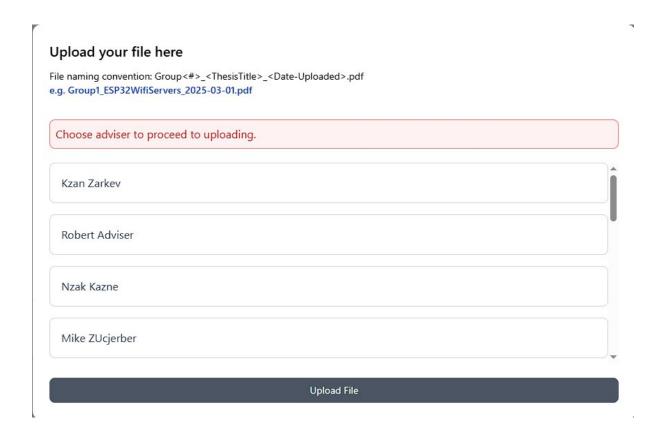


Figure #. Submit Document

Figure # shows the names of advisers and the upload file button.

Figure #. Code Snippet (Query) for Names of Advisers

Figure # This next.js code is for the list of the names of Advisers.

Figure #. Code Snippet (Query) for Submit Button

Figure # This next.js code is the upload button.

```
<Modal isOpen={isMenuOpen} onClose={() => setIsMenuOpen(false)}>
   <h2 className="text-xl font-semibold text-smccprimary mb-4">Details</h2>
   <div className="flex flex-col gap-7 p-3 bg-white rounded-lg">
      {comments.length > 0 ? (
          comments.map((comment, index) => (
              <div key={index} className="flex flex-col gap-3">
                  <div className="flex justify-between">
                     <div className="flex gap-2">
                             className="cursor-pointer"
                             onClick={() => toggleComment(index)}
                         {comment.name}
                      {comment.position ? (
                         comment.approved ? (
                             <span className="text-green-500 flex items-center">
                                <CircleCheck className="mr-1" /> Approved
                                 <CircleXIcon className="mr-1" /> Not Approved
                  <Accordion isCommentOpen={openCommentIndex === index}>
                     <div className="pl-3 border border-gray-300 rounded-lg text-black bg-white space-y-2 py-2">
                         {comment.comment}
          No comments found.
```

Figure #. Code Snippet for Comments for Panel and Advisers

Figure # This next.js code is for the panel comment and adviser comment. The panel and adviser comments will show there and identify who comments on the file. The button is for deleting if the student uploads a document so he/she can delete it.

```
// Check if there is an existing pending request for the user
$checkRequestQuery = "SELECT * FROM requests WHERE user_id = ? AND status = 'Pending'";
               $stmtCheck = $connection->prepare($checkRequestQuery);
               $stmtCheck->bind_param("i", $session_id);
               $stmtCheck->execute();
               $resultCheck = $stmtCheck->get_result();
               if ($resultCheck->num_rows > 0) {
                    throw new Exception('You have an existing pending request.');
               $insertQuery = "INSERT INTO requests ('user_id', 'course', 'date_requested') VALUES(?, ?, ?)";
$stmtInsert = $connection->prepare($insertQuery);
               $stmtInsert->bind_param("iss", $session_id, $course, $date_requested);
               $stmtInsert->execute():
               $lastInsertedId = $connection->insert_id; // Get the last inserted request_id
               $insertQuery = "INSERT INTO clearance (`request_id`) VALUES(?)";
               $stmtInsert = $connection->prepare($insertQuery);
               $stmtInsert->bind_param("i", $lastInsertedId);
               $stmtInsert->execute();
               if (!empty($selectedDocs)) {
45
46
                    $insertDocQuery = "INSERT INTO requested_documents (`request_id`, `document_id`) VALUES (?, ?)";
                    $stmtDocInsert = $connection->prepare($insertDocQuery);
                    foreach ($selectedDocs as $document_id) {
                        $stmtDocInsert->bind_param("ii", $lastInsertedId, $document_id); // request_id and document_id
$stmtDocInsert->execute(); // Execute the insert query for each document
               $connection->commit();
```

Figure #. Code Snippet (Query) for Application Form

Figure # this PHP code shows saving on multiple tables, It will first save the request then after it will create a clearance record using the id generated from request table and after all that it will insert all requested documents.

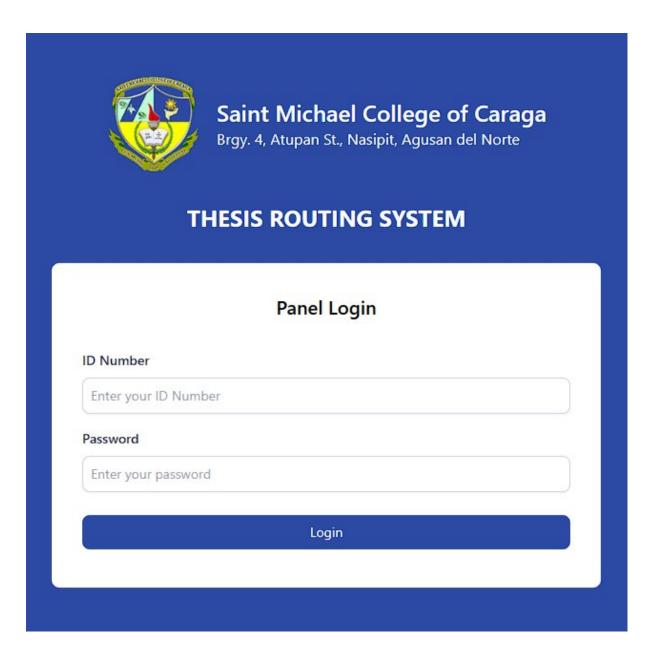


Figure #. Login Page - Student

Figure # This UI is for Panel Login Input ID Number, And Password.

Figure #. Code Snippet for User

This React (Next.js) component creates a Student Login interface with a responsive, centered design using Tailwind CSS. It includes input fields for ID Number and Password, and a login button that updates dynamically.

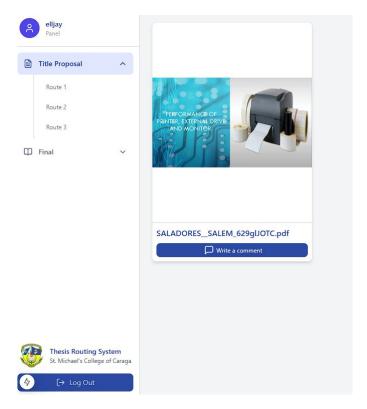


Figure #. Code Snippet (Query) for Documents

Figure # This UI is for the document that is submitted by the student and assigned to the panel.

Figure #. Code Snippet (Query) for Documents

Figure # This next.js code grabs all the files submitted by the student.

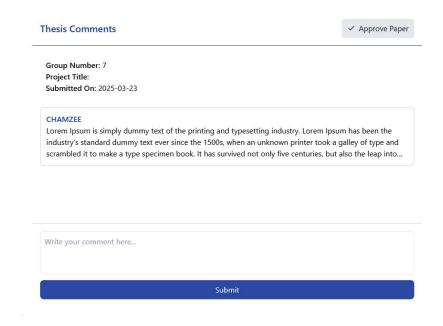


Figure # Comment for Panel

Figure # This UI is for the comments for the Panel and then the submit button if his done. The approve button is if the panel is done commenting then he can approve the file.

Figure # Code Snippet (Query) for Comment of Panel

Figure # This React component creates a comment form with a styled text area and a dynamic submit button.

```
isOpen={!!selectedComment}
onClose={() => setSelectedComment(null)}
className="w-full sm:w-[90%] md:w-[80%] lg:w-[70%] xl:w-[60%] max-w-4xl mx-auto"
<div className="flex flex-col h-[70vh] max-h-[70vh]">
   <h3 className="text-lg font-bold mb-4 py-2 border-b border-gray-700">
       <span className="font-semibold">
           {selectedComment.position?.label ||
              selectedComment.name}
   <div className="flex-grow overflow-y-auto px-2 py-4">
       {selectedComment.comment}
   <div className="mt-4 pt-2 border-t border-gray-700">
          onClick={() => setSelectedComment(null)}
          className="w-full p-3 bg-blue-500 hover:bg-blue-600 text-white rounded-lg
          transition-colors duration-300 ease-in-out
          Close
```

Figure # Comment

Figure # This code is for maximizing the comments of the panel and adviser.

Figure # Comment

Figure # This code is for approving the file if the panel is done commenting.

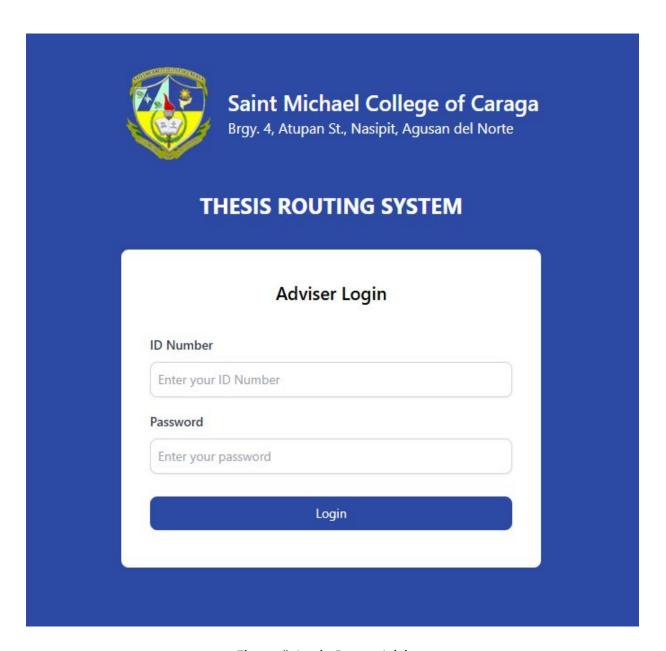


Figure #. Login Page - Adviser

Figure # This UI is for Adviser Login Input ID Number, And Password

Figure #. Code Snippet for Adviser

Figure # The code is a React-based login form for advisers, featuring a styled container, a heading, input fields for ID number and password, and a login button. It includes state management for user input and a dynamic button label that change's based on the login process.

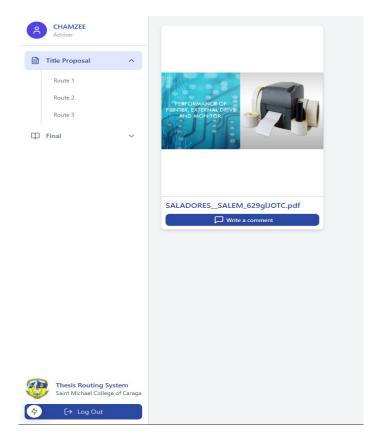


Figure #. Document Submitted

Figure # The adviser receives the students' submitted documents, reviews them, writes comments, and the students and panels can view the feedback on their side.

Figure #. Code Snippet for Managing and Displaying Thesis Papers

Figure # This code is managing and displaying a list of thesis papers for an adviser, showing a loading spinner while fetching data, rendering thesis files if available, and displaying a message if no papers are found.



Figure #. for Adviser Comment

Figure # The adviser reviews and provides feedback on a submitted thesis. It includes thesis details (Group Number, Project Title, and Submission Date), adviser comments, and a

text box for adding new comments with a submit button.

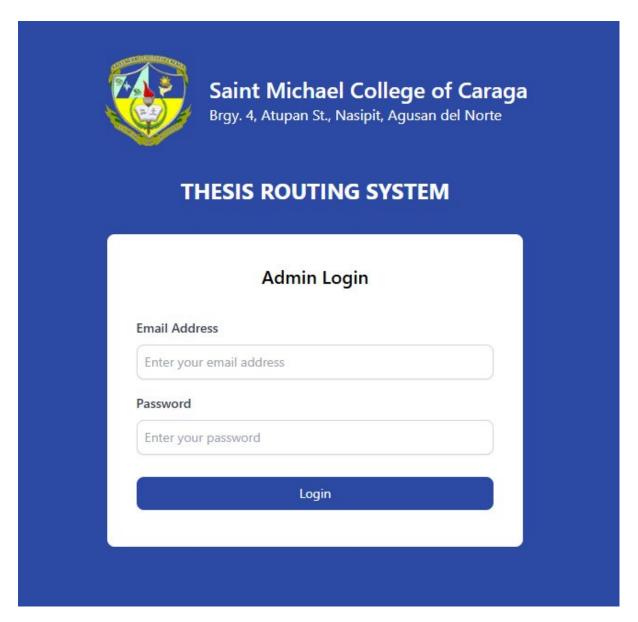


Figure #. Login Page - Admin

Figure # This UI is for Admin Login Input Email Address, And Password

Figure #. Code Snippet for Admin

Figure # This code defines a login form for an Admin, including a heading, input fields for email and password, and a button.

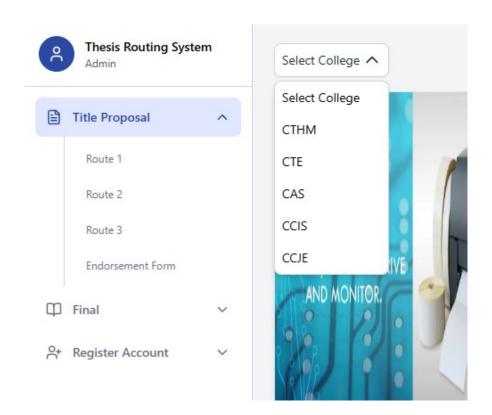


Figure #. Course Selection

Figure # The admin can select different colleges from a dropdown menu to view students' submitted documents.

```
const Page = () => {
   const { theses, loading, getAllThesis, filterPapers } = useThesisStore((state) => state);
   const [selectedCollege, setSelectedCollege] = useState('');
   const getThesisPapers = useCallback(async () => {
       selectedCollege.label === 'Select College' || selectedCollege === '' ?
         await getAllThesis()
         await filterPapers(selectedCollege.label);
     }, [getAllThesis, filterPapers, selectedCollege]);
   const colleges = [
       { value: 'Select College', label: 'Select College' },
       { value: 'CTHM', label: 'CTHM' },
       { value: 'CTE', label: 'CTE' },
       { value: 'CAS', label: 'CAS' },
       { value: 'CCIS', label: 'CCIS' },
       { value: 'CCJE', label: 'CCJE' },
   useEffect(() => {
       getThesisPapers();
   }, [getThesisPapers, selectedCollege]);
       <div className="flex flex-col justify-center md:items-start">
           KTRSDropdown
               options={colleges}
               onSelect={setSelectedCollege}
               innerLabel={'Select College'}
```

Figure #. Code Snippet for Course Selection

Figure # This Code allows an Admin to select a college from a dropdown menu. It retrieves thesis papers based on the selected college. If no specific college is selected, it fetches all thesis papers; otherwise, it filters them according to the chosen college. The dropdown displays a list of college options and updates the selection when the Admin makes a choice.

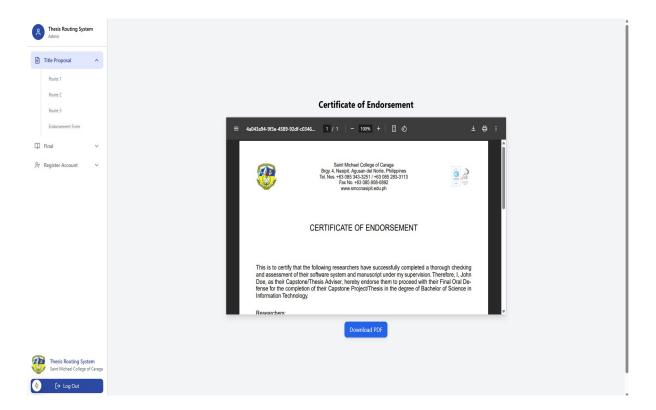


Figure #. Endorsement Form

Figure # This is a Certificate of Endorsement, which students receive after successfully completing all the required routes in the system. The admin has the ability to download the certificate as a PDF file once the process is completed.

```
const CertificateOfEndorsement = ({ date = '', adviserName = 'Unknown Adviser', studentNames = [] }) => {
 return (
   <Document>
     <Page size="A4" style={styles.page}>
       <View style={styles.header}>
         <Image src={leftLogo} style={styles.logo} />
         <View style={styles.headerTextContainer}>
             <Text style={styles.headerText}>Saint Michael College of Caraga</Text>
             <Text style={styles.headerText}>Brgy. 4, Nasipit, Agusan del Norte, Philippines</Text>
             <Text style={styles.headerText}>Tel. Nos. +63 085 343-3251 / +63 085 283-3113</Text>
             <Text style={styles.headerText}>Fax No. +63 085 808-0892</Text>
             <Text style={styles.headerText}>www.smccnasipit.edu.ph</Text>
         </View>
         <Image src={rightLogo} style={styles.logo} />
        </View>
       <Text style={styles.title}>CERTIFICATE OF ENDORSEMENT</Text>
       <View style={styles.section}>
         <Text>
           This is to certify that the following researchers have successfully
           completed a thorough checking and assessment of their software system
           and manuscript under my supervision. Therefore, I, {adviserName}, as their
           Capstone/Thesis Adviser, hereby endorse them to proceed with their
           Final Oral Defense for the completion of their Capstone Project/Thesis
           in the degree of Bachelor of Science in Information Technology.
         </Text>
        </View>
        <View style={[styles.section, { flexDirection: "column", alignItems: "flex-start" }]}>
         <Text>Researchers:</Text>
         <View style={{ marginTop: 10 }}>
           {studentNames.length > 0 ? (
             studentNames.map((name, index) => (
               <Text key={index} style={{ marginBottom: 5 }}>
                 {index + 1}. {name}
               </Text>
             <Text>No researchers found.</Text>
         </View>
        </View>
```

```
<View style={styles.section}>
          <Text>
            Their project/thesis has met the required standards and criteria set
            forth by the College of Computing and Information Sciences, and I am
            confident in the quality and academic rigor of their work.
        </View>
        <View style={styles.signatureSection}>
          <View style={{ marginBottom: 10 }}>
            <Text>Endorsed by:</Text>
              style={{
               borderBottomWidth: 1,
               borderBottomColor: "black",
               textAlign: "center",
               marginTop: 7,
               width: "auto", // Allow dynamic width
                minWidth: 80, // Set a minimum width to avoid very short underlines
                alignSelf: "flex-start", // Align dynamically
              {adviserName}
            </Text>
          </View>
          <Text>Capstone Adviser</Text>
          <Text>{date}</Text>
        </View>
        <View style={styles.signature}>
          <Text>Approved by:</Text>
          <Text>MARLON JUHN M. TIMOGAN, MIT</Text>
          <Text>Capstone Project/Thesis Instructor</Text>
          <Text>{date}</Text>
        </View>
      </Page>
    </Document>
};
export default CertificateOfEndorsement;
```

Figure #. Code Snippet for Endorsement Form

Figure # The code generates a Certificate of Endorsement for students who complete the thesis process. It includes the college name, contact details, student names, adviser's endorsement, and approval by the Capstone Instructor. The document follows an A4 format

with a header, sections for verification, and signatures. It dynamically displays student names and ensures proper authorization.

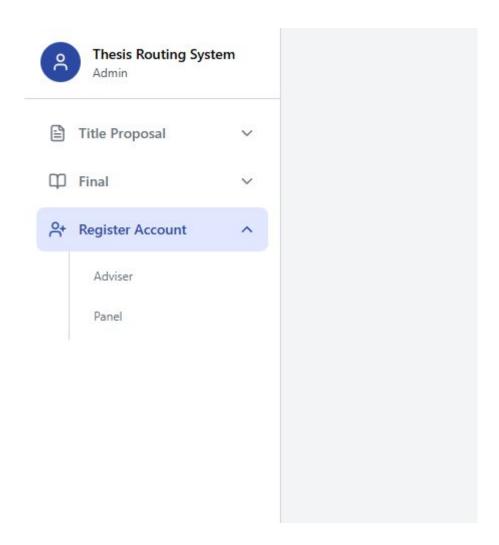


Figure #. Register Accounts

Figure # The Register Account section allows the admin to create accounts for advisers and panel members.

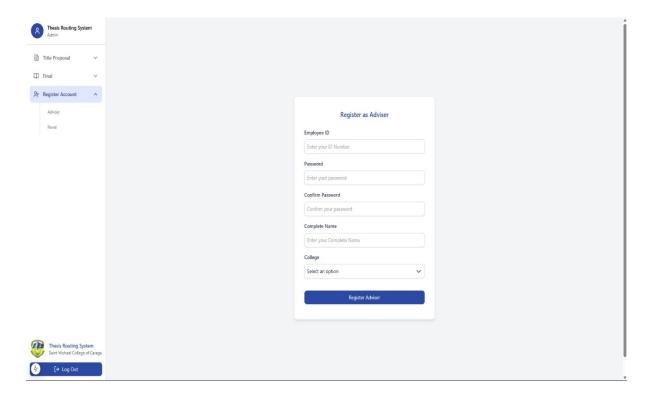


Figure #. Adviser Registration

Figure # The Adviser Registration page allows the admin to create an adviser account by entering details such as Employee ID, Password, Confirm Password, Full Name, and the College they are affiliated with, which oversees their assigned courses.

```
<div className="flex items-center justify-center min-h-screen p-4">
   <div className="bg-white shadow-md rounded-lg w-full max-w-md p-8">
       <h1 className="text-lg font-semibold text-center text-smccprimary mb-6">
           Register as Adviser
       <div className="space-y-4">
               label="Employee ID"
               placeholder="Enter your ID Number"
               value={idnumber}
               onChange={(e) => setIdnumber(e.target.value)}
               label="Password"
               placeholder="Enter your password"
               value={password}
               onChange={(e) => setPassword(e.target.value)}
               type="password"
           TRSInput
               label="Confirm Password"
               placeholder="Confirm your password"
               value={confirmPassword}
               onChange={(e) => setConfirmPassword(e.target.value)}
               type="password"
               label="Complete Name"
               placeholder="Enter your Complete Name"
               value={name}
               onChange={(e) => setName(e.target.value)}
           KIRSDropdown
               label="College"
               options={departmentOptions}
               onSelect={setDepartment}
               value={department} // Ensure the value is controlled
       <div className="mt-6 text-center">
           TRSButton
               label={`${registerLoading ? 'Loading...' : 'Register Adviser'}`}
               onClick={handleRegister}
               className="w-full bg-smccprimary text-white py-2 rounded-lg hover:bg-blue-700 transition hover:shadow-lg"
```

Figure #. Code Snippet for Adviser Registration

Figure # The code represents a form for Registering.an adviser. It includes input fields for Employee ID, Password, Confirm Password, Full Name, and a dropdown for selecting the College. The form uses state management to handle input changes and includes a submit button that dynamically updates based on the registration process.

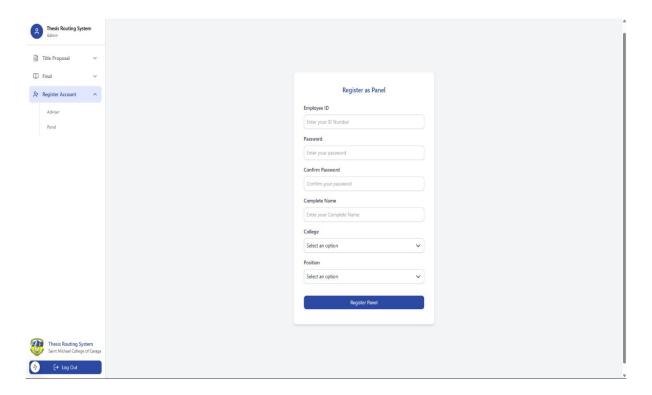


Figure #. Panel Registration

Figure # The admin can register a panel member by providing the Employee ID,

Password, Confirm Password, Complete Name, and selecting the College and position from

dropdown menus. The registration is completed by clicking the Register Panel button.

```
<div className="flex items-center justify-center min-h-screen p-4">
   <div className="bg-white shadow-md rounded-lg w-full max-w-md p-8">
       <h1 className="text-lg font-semibold text-center text-smccprimary mb-6">
           Register as Panel
       <TRSInput
           label="Employee ID"
           placeholder="Enter your ID Number"
           value={idnumber}
           onChange={(e) => setIdnumber(e.target.value)}
       <TRSInput
           label="Password"
           placeholder="Enter your password"
           value={password}
           onChange={(e) => setPassword(e.target.value)}
           type="password"
       <TRSInput
           label="Confirm Password"
           placeholder="Confirm your password"
           value={confirmPassword}
           onChange={(e) => setConfirmPassword(e.target.value)}
           type="password"
       <TRSInput
           label="Complete Name"
           placeholder="Enter your Complete Name"
           value={name}
           onChange={(e) => setName(e.target.value)}
       <TRSDropdown
           label="College"
           options={departmentOptions}
           onSelect={setDepartment}
           value={department}
       <TRSDropdown
           label="Position"
           options={positionOptions}
           onSelect={setPosition}
           value={position}
       <div className="mt-6 text-center">
           <TRSButton
               label={`${registerLoading ? 'Loading...' : 'Register Panel'}`}
               onClick={handleRegister}
```

Figure #. Code Snippet for Panel Registration

Figure # This code is a Panel Registration Form. It includes input fields for Employee ID, Password, Confirm Password, Complete Name, College, and Position. The form dynamically updates the state when values are entered. A register button is provided to handle the panel registration process, with a loading state to indicate progress.

CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATION

SUMMARY OF FINDINGS

Based on the testing process conducted, the Thesis Routing System for Saint Michael College of Caraga was evaluated for its accuracy, functionality, and overall performance using a survey instrument adapted from the ISO 25010 Software Product Quality Standards. The evaluation focused on three major aspects: functional suitability, performance efficiency, and usability.

The results of the evaluation affirm that the system is "Very Functional" with a mean score of 3.25. This suggests that it effectively satisfies the specific tasks and objectives required for its implementation. It also scored well in functional completeness, correctness and appropriateness to ensure that users are given precise results and a smooth operation of the system.

In terms of performance efficiency, the system was rated as "Very Efficient" with a mean score of 3.25. It performed well regarding time behavior and resource use, showing its ability to respond quickly to requests while using system resources effectively. Capacity management could be improved to maintain optimal performance levels during periods of heavy usage.

Overall, the system was rated "Strongly Acceptable" with a grand mean of 3.50. which means that it is highly acceptable to users and performs well in meeting their needs in terms of functionality, performance efficiency, and usability. The system shows strong

performance in major areas like functional completeness, time behavior, resource usage, and ease of use, and also offers a user-friendly experience.

CONCLUSION

In conclusion, the system has excellent functional suitability with its attributes accomplishing the assigned tasks and user goals. The system gives proper results, accomplishes all needed functions, and supports task realization efficiently. But there is a scope to extend its functional completeness and suitability in order to more closely align itself with user needs.

RECOMMENDATION

To further enhance the system's effectiveness and overall user experience, the following recommendations are suggested:

- 1. Improve Missing Functionalities: Implementing a list format for viewing documents and adding features like page numbers and comment location will support better navigation and ease of use, making the system more efficient for users when reviewing documents.
- 2. **Enhance Panel Connection:** Allowing direct connections on the paper/file instead of relying solely on the "commenting" feature will support clearer interaction between the panel and the paper, improving user understanding and reducing confusion.
- 3. **Enhance Department Separation:** Separating the CTHM and CBM departments and adding announcements will support better organization, ensuring users can easily navigate the system and access relevant information for each department, enhancing overall usability.

By implementing these recommendations, the system can maximize its efficiency, usability, and overall user experience, making the operations smoother, interactions clearer, and organization improved. This will enhance the sustainability and long-term effectiveness of the system, allowing it to be more reliable and user-friendly to all stakeholders.

REFERENCES

- [1] F. L. R. Geanne, C. Y. De Guzman et al. (2016), "Design and implementation of a web-based thesis coordinator system (TCS)", Available: https://ieeexplore.ieee.org/abstract/document/7848535/authors#authors
- [2] S. B. Nursyazwana (2011). "E-THESIS MANAGEMENT SYSTEM (ETMS)", Available: https://core.ac.uk/download/pdf/159179882.pdf
- [3] Q. B. Joseph (2022), "Seize the day or seize theses? The challenges in undergraduate thesis writing", Available: https://www.iier.org.au/iier32/quinto.pdf
- [4] R. D. Elin et al. (2016), "A CCS IT Thesis Portal with Electronic Document Management System", Available: https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/research-congress-proceedings/2016/HCT/HCT-II-01.pdf
- [5] M. Bagoes, Feriyansyah, S. D. Ressy (2022), "The Design of Web-based Thesis Management Information System to Increase the Quality and Efficiency of Guiding Process and Document Management", Available:
- https://seaninstitute.org/infor/index.php/infokum/article/view/1000/789
- [6] I. G. N. A. C. Putra, P. Cokorda, M. A. Raharja, I. W. Supriana., I. K. GSuhartana, N. K. E. Dianasari (2024), "Web-Based Thesis Guidance Monitoring Information System Based on Quick Response Code Technology", Available: https://www.atlantis-press.com/proceedings/icamsac-23/125999723

int.com/pdf/638257264856784026.%20Esther%20B.%20Chio%20Thesis-6.12-22..pdf

- [8] H. W. Hsiu et al. (2019), "Investigation on the Benefits and Satisfaction Degree of the Electronic Official Document Online Submission and Approval System—A Case Study of a Medical Center in Southern Taiwan", Available: https://pdfs.semanticscholar.org/63f2/a9ccef3f31e444ca3de07e73a233417deec0.pdf
- [9] M. Arkon, O. T. Ibrahim (2017), "Design and Implementation of an Electronic Document Management System", Available:

https://dergipark.org.tr/tr/pub/makuubd/issue/28686/321093

- [10] Z. S. Simona et al. (2023), "Managing Document Management Systems' Life Cycle in Relation to an Organization's Maturity for Digital Transformation", Available: https://www.mdpi.com/2071-1050/15/21/15212
- [11] W. Yong, S. D. Christian (2021), "The Effects of Providing and Receiving Peer Feedback on Writing Performance and Learning of Secondary School Students", Available: https://files.eric.ed.gov/fulltext/EJ1294485.pdf
- [12] W. Yong, S. D. Christian (2019), "From feedback to revisions: Effects of feedback features and perceptions", Available: https://www.lrdc.pitt.edu/schunn/papers/Wu-schunn-FeedbackFeaturesToRevisionsCEP.pdf
- [13] B. A. Mamoon et al. (2016), "The Value and Effectiveness of Feedback in Improving Students' Learning and Professionalizing Teaching in Higher Education", Available: https://files.eric.ed.gov/fulltext/EJ1105282.pdf
- [14] R. A. Abdullah, E. H. Sarafat (2022), "Automation of Thesis Management", Available: https://dspace.bracu.ac.bd/xmlui/bitstream/handle/10361/18309/17301084%2C%2017301
 047 CSE.pdf?sequence=1&isAllowed=y
- [15] A. M. Samuel (2023), "Design and Implementation of a Web-based Document Management System", Available:

- https://www.researchgate.net/publication/370534584_Design_and_Implementation_of_a_ Web-based_Document_Management_System
- [16] H. Sang-Hyung et al. (2013), "Development of a Document Management System for the Standardization of Clinical Laboratory Documents", Available: <u>Development of a Document Management System for the Standardization of Clinical Laboratory Documents</u> (annlabmed.org)
- [17] A. T. Dante et al. (2023), "Development and Implementation of Document Management System for Ilocos Sur Polytechnic State College, Tagudin Campus", Available: https://ispsc.edu.ph/e-dawa-hpcb6748
- [18] W. Sri (2017), "The Effect of Different Feedback on Writing Quality of College Students with Different Cognitive Styles", Available: https://eric.ed.gov/?id=EJ1146488
- [19] D. Phillip et al. (2018), "What makes for effective feedback: staff and student perspectives", Available: https://www.tandfonline.com/doi/epdf/10.1080/02602938.2018.14
 67877? needAccess=true
- [20] L. Taizhi, Z. Jun (2019), "The Design and Implementation of Graduation Thesis Management System", Available: https://www.francis-press.com/uploads/papers/5aFw1CCOgwh5vi4STRO9eLX5MgE9WvPKeNxrxCP5.pdf
- [21] L. Qi (2018), "Research on Paper Submission Management System by Using Automatic

 Text Categorization", Available: https://link.springer.com/chapter/10.1007/978-3-319-60011-6 17
- [22] A. Rahmat et al. (2020), "Analysis of the Effect of Electronic Document Management System, Organizational Commitment and Work Satisfaction on Employee Performance", Available: https://ijisrt.com/assets/upload/files/IJISRT20AUG554.pdf

- [23] I.N. Burtylev, K.V. Mokhun, Y.V. Bodnya, D.N. Yukhnevich (2013), "Development of Electronic Document Management Systems: Advantage and Efficiency", Available: http://article.sapub.org/pdf/10.5923.s.scit.201301.01.pdf
- [24] A. Manzoor, T. Martin, F. Rimesha (2021), "The Impact of Teacher Feedback on Students' Academic Performance: A Mediating Role of Self-efficacy", Available:

 https://jdss.org.pk/issues/v2/3/the-impact-of-teacher-feedback-on-students-academic-performance-a-mediating-role-of-self-efficacy.pdf
- [25] W. Andi (2019), "Investigating Written Feedback on Students' Academic Writing", Available: https://www.atlantis-press.com/proceedings/icosihess-19/125919840
- [26] W. Andrew (2024), "Delivering Effective Student Feedback in Higher Education: An Evaluation of the Challenges and Best Practice", Available: https://files.eric.ed.gov/fulltext/EJ1426687.pdf
- [27] G. Dimitris, D. Olivier, L. M. Pierre (2024), "Continuous Performance Feedback: Investigating the Effects of Feedback Content and Feedback Sources on Performance, Motivation to Improve Performance and Task Engagement", Available: https://www.tandfonline.com/doi/epdf/10.1080/01608061.2023.2238029?needAccess=tru
- [28] O. Torunn, H. John (2024), "Improving students' learning—the role of formative feedback: experiences from a crash course for business students in academic writing", Available:

https://www.tandfonline.com/doi/full/10.1080/02602938.2023.2187744?scroll=top&needA

ccess=true#abstract

- [29] H. Bart et al. (2018), "Peer feedback on academic writing: undergraduate students' peer feedback role, peer feedback perceptions and essay performance", Available: https://www.tandfonline.com/doi/full/10.1080/02602938.2018.1424318#abstract
- [30] F. K. Ibnu (2020), "SIMONTA: Responsive WebBased Thesis Management", Available:

 https://repository.unesa.ac.id/sysop/files/2021-11
 22 Similarity:%20Prosiding%2016 yuni%20y.pdf
- [31] H. Pandu et al. (2024), "Designing a Web-Based Online Thesis Guidance Application for the Computer Science Study Program, Bina Bangsa University", Available: https://jpabdimas.idjournal.eu/index.php/jinav/article/view/2918
- [32] P. Juti et al (2020), "Data Management System for Thesis Monitoring at STMIK IBBI Using B-Model", Available: https://ieeexplore.ieee.org/abstract/document/9166671
- [33] A.M. Eladio, N. A. J. Marah, H. A. Marla, A. A. Caroline (2014), "Enhancing Theses Recording and Monitoring Using a Customized Database Management System (DBMS)", Available:

 https://www.nvsu.edu.ph/assets/downloads/journal/vol1-

2/NVSURJ Vol.1 02 2014 3.pdf

[34] E. M. J. Paul et at. (2023), "A WEB-BASED DOCUMENT MANAGEMENT SYSTEM FOR EXTENSION OFFICE", Available:

https://www.researchgate.net/publication/365634863_A_WEB-

BASED DOCUMENT MANAGEMENT SYSTEM FOR EXTENSION OFFICE

- [35] P. Paul, P. Steve, B. David (2000), "The Development of an Online Submission and Peer Review System", Available: https://core.ac.uk/download/pdf/98058.pdf
- [36] C. Arnab et at. (2020), "Dynamic Role-Based Access Control for Decentralized Applications", Available: https://link.springer.com/chapter/10.1007/978-3-030-59638-5 13

- [37] T. M. M. Khin et at. (2009), "Security of Healthcare System using Role-Based Access Control", Available: https://onlineresource.ucsy.edu.mm/handle/123456789/1413
- [38] U. Mumina, I. Shareeful, A. Ameer (2019), "A Dynamic Access Control Model Using Authorising Workflow and Task-Role-Based Access Control ", Available: https://ieeexplore.ieee.org/abstract/document/8868170/
- [39] G. Rubina et al. (2020), "Intelligent Role-Based Access Control Model and Framework

 Using Semantic Business Roles in Multi-Domain Environments", Available:

 https://ieeexplore.ieee.org/abstract/document/8954638
- [40] L. Gang et al. (2020), "Extended Role-Based Access Control with Context-Based Role Filtering", Available: https://koreascience.kr/article/JAKO202011161035965.page
- [41] J. C. D. A. Marcelo et al. (2018), "Health Information System Role-Based Access Control Current Security Trends and Challenges", Available: https://onlinelibrary.wiley.com/doi/full/10.1155/2018/6510249

APPENDICES

A. System Source Code

B. User's Manual

C. Letter of Permission



D. Documented Undertaking





Creating a detailed document that encompasses

Chapters 1 through 3. Creating a comprehensive Gantt chart



During Title Hearing



Creating Document for Chapter 1 - 3



This moment marks the significant occasion when we presented our title proposal

E. Certificate of Implementation

F. Research Locale

SAINT MICHAEL COLLEGE OF CARAGA



Name : Ell jay Lacaran

Address : D-3 Camagong Nasipit, ADN

Contact No. : 09453391491

Email : Elljay lacaran@smccnasipit.edu.ph



Personal Details

Date of Birth: July 21, 2003

Gender : Male

Civil Status : Single

Age : 21

Citizenship : Filipino

Educational Background

Elementary : Camagong Elementary School

Junior High School : Saint Michael College of Caraga

Junior High School : Saint Michael College of Caraga

Skills

- Video Editing
- Photo Editing

Programming

Membership School Organization

N/A

G. Curriculum Vitae

Name : Jake Castillon

Address : Address Poblacion 4, Nasipit, ADN

Contact No. : 09275334409

Email : jake_castillon@smccnasipit.edu.ph



Personal Details

Date of Birth: February 4, 2002

Gender : Male

Civil Status : Single

Age : 22

Citizenship : Filipino

Educational Background

Elementary : Siquijor Elementary School

Junior High School : Siquijor National High School

Junior High School : Toledo National High School

Skills

Graphic Design

Name : Jenessa Suazo Ocay

Address: Gumabon Magsaysay Misamis Oriental

Contact No. : 09063951734

Email : jenessa ocay@smccnasipit.edu.ph



Personal Details

Date of Birth: September 30,2002

Gender : Female

Civil Status : Single

Age : 22

Citizenship : Filipino

Educational Background

Elementary : Gumabon Elementary school

Junior High School : Consuelo National Highschool

Junior High School : Consuelo National Highschool

Skills

• Basic web Development

Name : John Lester Saladores

Address : District 6 Punta Nasipit ADN

Contact No. : 09944517839

Email : johnlester_saladores@smccnasipit.edu.ph



Personal Details

Date of Birth: September 14 2003

Gender : Male

Civil Status : Single

Age : 21

Citizenship : Filipino

Educational Background

Elementary: Punta Elementary School

Junior High School : Saint Michael College of Caraga

Junior High School : Saint Michael College of Caraga

Skills

Digital Art

Name : Rylvin Celnar D. Tiempo

Address : Culit, Nasipit Agusan Del Norte

Contact No. : 09758026676

Email : rylvincelnar_tiempo@smccnasipit.edu.ph



Personal Details

Date of Birth: December 07, 2002

Gender : Male

Civil Status : Single

Age : 22

Citizenship : Filipino

Educational Background

Elementary : Culit elementary school

Junior High School : Culit National High school

Junior High School : Culit National high school

Skills

• Microsoft Office Suite

• N/A