**Web-based Facilities Reservation System for La Salle University - Ozamiz**

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**LORD EMMANUEL C. FIGUERAS**

**June 2024**

**[RESEARCH TITLE]**

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An Undergraduate Capstone Project

Presented to the

Faculty of the College of Computer Studies, Engineering, and Architecture,

La Salle University, Ozamiz City

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In Partial Fulfillment of the Requirements for the Degree of

Bachelor of Science in Information Technology

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

By

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**APPROVAL SHEET**

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# **Abstract**

Credit scoring has been extensively studied in various fields, including banking and accounting, during the past several decades. It has been crucial in financial institutions’ credit risk management. Particularly, credit scoring is essential for the first acceptance of a customer’s credit application. This research examines naïve method and supervised random forest machine learning model to discriminate between good and bad credit applicants.

*Keywords*: algorithm, credit scoring, loan issuance, machine learning, Python

# **Acknowledgement**

First and foremost, I would like to thank our Almighty God for the wisdom and strength He gave me to fulfill my studies…

Secondly, I would like to thank my parents for their unending emotional, spiritual, and, of course, financial support. This thesis would have not been possible…

Thirdly, I have to thank my research supervisors, [Ms Name Surname], [Mr Name Surname] and [Ms Name Surname]. Without their assistance and dedicated involvement in every step throughout the process, this paper would have never been accomplished…

[Source: [https://prothesiswriter.com/blog/how-to-write-an-acknowledgement-for-a-thesis](https://prothesiswriter.com/blog/how-to-write-an-acknowledgement-for-a-thesis?msclkid=99771cebd03611ecaa7a7e7624b91bea)]

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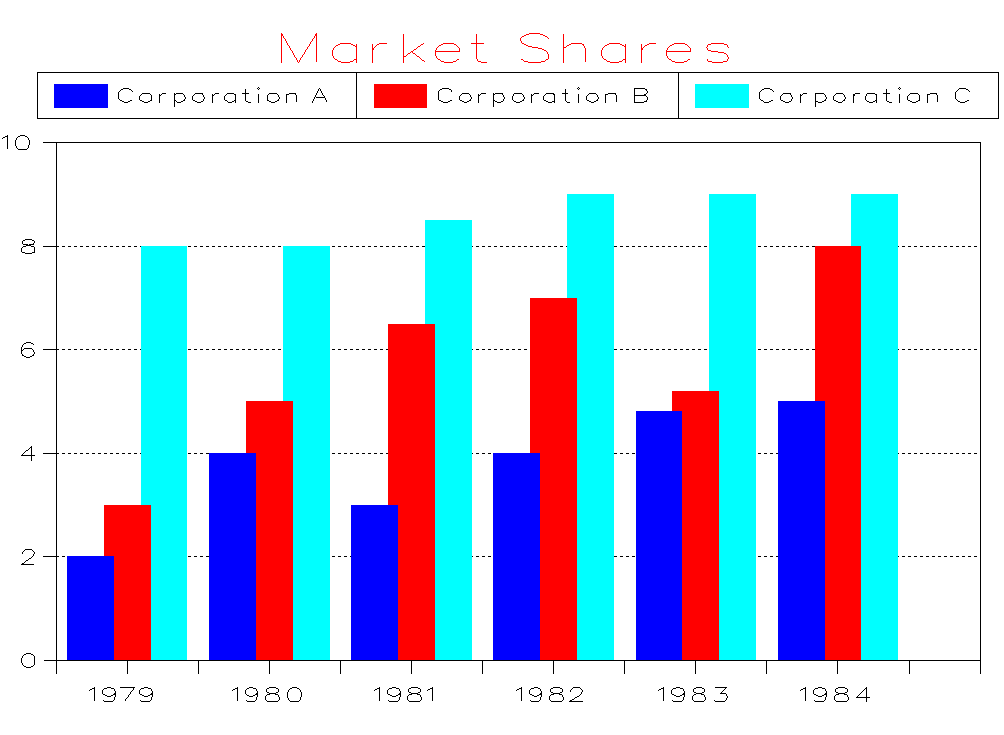
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**Figure 1***Market Shares Summaries*



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*The following is the format on how to write a table and a caption.*

**Table 1***Entrepreneurs Used for Analysis*

| **Category** | **Successful** | **Unsuccessful** | **Total** |
| --- | --- | --- | --- |
| Urban | 351 | 264 | 615 |
| Rural | 319 | 174 | 493 |
| Total | 670 | 438 | 1,108 |
| Excluded | 157 | 119 | 276 |

# Chapter 1 **THE RESEARCH DESCRIPTION**

## Introduction

Instructors are not only given the task to properly educate students but also manage a course throughout the semester. One responsibility of an instructor is to monitor the attendance of students by using index cards. The proposed mobile app would offer an alternative to monitoring grades through their smartphones and even refer to the smartphone wherever they are in case the instructor wants to monitor absent students.

[Source: <https://flowcite.com/how-to-write-a-problem-statement-for-a-thesis/>]

## Research Objectives

The study aims to figure out problems in coding style format encountered by programmers furthermore improving their productivity in writing their code, it will also help in analyzing and rewriting the code for formatting or minifying the output.

Specifically, this study aims to:

1. identify the problems encountered by programmers in terms of coding style formats.
2. identify the standard programming styles and formats.
3. identify the steps in parsing, formatting, and minifying a code according to the programming style standard.
4. identify the programming languages that will support parsing, formatting, and minifying.
5. design and develop a JavaScript-Based Code Parser, Formatter, and Minifier.

## Scope and Limitations

Because this project strives to research the impact of sleep quality on productivity, the researchers ultimately decided that to study student productivity for students of *<school name>* between the ages of 18 and 19.

## Significance of the Study

The study of dehydration technology and fabrication can be a learning paradigm in the secondary level and vocational schools to enhance the students’ knowledge and entrepreneurial skills as well. The project’s goal is designed to help students improve academic competence, develop employability skills, implement a career plan and participate in a career pathway in preparation for post-secondary education or careers in the food manufacturing or services sector after graduating from high school.

[Source: <http://thesisnotes.com/thesis-writing/writing-thesis-significance-of-the-study/>]

## Definition of Terms

The following terms are defined according to how they are used in this study.

**Code.** A set of program instructions.

**IDE.** Integrated development environment (IDE) is a software application that provides comprehensive facilities to computer programmers for software development.

**Parser.**  A software component that accepts input data (often text) and builds a data structure, such as a parse tree, an abstract syntax tree, or other hierarchical structure, providing a structural representation of the input while validating the syntax.

# Chapter 2 **REVIEW OF RELATED LITERATURE AND STUDIES**

In this chapter, the researchers have made a concerted effort to learn about and examine the research relating to the issue under study.

## Technical Background

*It includes an in-depth discussion on the relevant technical aspects of the project and should be placed before the review of related literature proper. This is in order for the reader to gain substantial understanding about the subject matter before providing what has been said and what has been done about the project.*

### WordPress Content Management System

WordPress is a free and open-source content management system (CMS) that allows users to create and manage websites, blogs, and online applications. WordPress is written in PHP and uses MySQL or MariaDB as its database. WordPress is one of the most popular CMS platforms in the world, powering more than 40% of all websites on the internet (Aturdido, 2015).

WordPress has several features that make it suitable for developing an online shopping website, such as:

Themes: WordPress allows users to customize the appearance and functionality of their websites by using themes. Themes are collections of files that define the layout, style, and features of a website. Users can choose from thousands of free and premium themes available on the WordPress theme directory or create their own themes using HTML, CSS, PHP, and JavaScript.

Plugins: WordPress allows users to extend the functionality and features of their websites by using plugins. Plugins are pieces of code that can be installed and activated on a WordPress website to add new capabilities or modify existing ones. Users can choose from over 58,000 free and premium plugins available on the WordPress plugin directory or create their own plugins using PHP and other web technologies.

Widgets: WordPress allows users to add content and features to their website’s sidebar or other widget-ready areas by using widgets. Widgets are small blocks of code that can display various types of information or functionality, such as menus, calendars, search boxes, social media icons, etc. Users can choose from the default widgets provided by WordPress or install widgets from plugins or themes.

Shortcodes: WordPress allows users to insert complex or dynamic content into their website’s posts or pages by using shortcodes. Shortcodes are simple codes that can be written inside square brackets [ ] in the WordPress editor. When a shortcode is processed by WordPress, it is replaced by the corresponding output, such as a gallery, a video, a form, etc. Users can use the default shortcodes provided by WordPress or create custom shortcodes using PHP.

### WooCommerce E-Commerce Platform

WooCommerce is a free and open-source plugin that adds e-commerce functionality to a WordPress website. WooCommerce allows users to create and manage an online store, sell products or services, accept payments, track orders, manage inventory, etc. WooCommerce is one of the most popular e-commerce platforms in the world, powering more than 28% of all online stores on the internet (Automattic, 2023).

WooCommerce has several features that make it suitable for developing an online shopping website, such as:

Products: WooCommerce allows users to create and manage different types of products, such as simple products, variable products, grouped products, virtual products, downloadable products, etc. Users can also add product attributes, categories, tags, images, reviews, ratings, etc. to their products.

Cart: WooCommerce allows users to add a shopping cart functionality to their website, where customers can add or remove products, view subtotal, taxes, shipping costs, etc. before proceeding to checkout.

Checkout: WooCommerce allows users to add a checkout functionality to their website, where customers can enter their billing and shipping details, choose a payment method, place an order, etc. WooCommerce supports various payment gateways, such as PayPal, Stripe, Amazon Pay, etc., as well as offline payment methods, such as cash on delivery (COD), bank transfer (BACS), cheque payment (CHEQUE), etc.

Orders: WooCommerce allows users to manage their orders from the WordPress dashboard or from the WooCommerce mobile app. Users can view order details, status, history, notes, etc., as well as edit, cancel, refund, or fulfill orders.

Reports: WooCommerce allows users to generate various reports on their sales, customers, products, stock, taxes, etc., from the WordPress dashboard or from the WooCommerce mobile app. Users can also export reports to CSV files for further analysis.

Extensions: WooCommerce allows users to enhance the functionality and features of their online store by using extensions. Extensions are additional plugins that can be installed and activated on a WooCommerce website to add new capabilities or modify existing ones. Users can choose from over 400 free and premium extensions available on the WooCommerce extension store or create their own extensions using PHP and other web technologies.

## Cyberbullying by mobile phone among adolescents

Cyberbullying gives the bully a much larger spectrum to choose from when it comes to how exactly they want to intimidate their victims, which may be why it is often easier for them to carry out the act. Of all the different ways to cyberbully Faucher et al. (2014) found the most common platforms for cyberbullying to be social media, text messaging, and email, which were used to bully students about half of the time followed up by blogs forums and chat rooms which were 25 percent. This is no surprise that social media is the most common platform for cyberbullying because it can allow for the bully to remain completely anonymous to your average victim. This allows people who may not fit the mold of your average bully to create a fake account and build their own persona in order to bully others.

[Source: <https://www.thesishelpers.com/blog/thesis-literature-review/>]

# Chapter 3 **RESEARCH METHODOLOGY**

*You will explain what type of research you did and how you did it, allowing readers to evaluate the reliability and validity. It should include the following sections:*

* *Research Environment*
* *Research Method*

*Use future tense.*

This chapter will align the focus of the study with the objectives and outline a roadmap on how to conduct and assess the research.

## Research Environment

The research location is stationed at Integrated Bus and Jeepney Terminal of Ozamiz City, Ozamiz City, Clarin, and Tudela Misamis Occidental. The team chose Ozamiz-Tudela Transport Express Corporation as the client for this research. This transport business is operating with the Ozamiz-Tudela route and has 11 “Balik-Balik” transport vehicles.

## Research Method

*Research methods are broadly divided into six main categories: 1) Experimental Research Methods, 2) Descriptive Research Methods, 3) Historical Research Methods, 4) Quantitative Research Methods, 5) Qualitative Research Methods, or 6) Mixed Methods of Research.*

*Read more here:* [Research Methods for Dissertation - Research Prospect](https://www.researchprospect.com/what-are-the-different-research-methods-for-dissertation/) *(https://www.researchprospect.com/what-are-the-different-research-methods-for-dissertation/)*

Data gathering for the system development was done through survey questionnaires and interviews. The project analyst used a closed-ended questionnaire for the survey which takes the objectives into account. On the other hand, the interview used an open-ended method in order to elaborate on the client’s business needs that guided the team for the system development.

Furthermore, the project development team also used online document resources related to the study to further the needed information for the development

### Research Respondents

The researchers had chosen the Vice President of Ozamiz-Tudela Transport Express Corporation, in the name of Mr. Allan M. Manapol, as the interviewee for this project since he is the nearest to consult. The team had also chosen respondents within Ozamiz City, Clarin, and Tudela to answer the survey questionnaire.

### Sampling Method

Purposive sampling was used in order to represent the whole population of the transport business’ maximum passengers. Moreover, the system standards operation (ISO) checking was conducted through 5 transport operators, 5 IT enthusiast, 6 IT students, and 5 passengers to ensure that the system adheres to the recent standards of operation and technology needs.

### Treatment of Data

All data and information gathered was tallied and arranged based on how it relates to the system's objectives. The information gathered acted as a reference in the foundation of the appropriate predefined requirements and the architecture of the system.

The formula for calculating the percentages of the tallied survey questionnaire results is:

Answers of the respondents from the provided survey questionnaires were tallied and scaled with the following descriptions:

5 – Strongly Agree

4 – Agree

3 – Neutral

2 – Disagree

1 – Strongly Disagree

The mean scores are interpreted as follows:

**Table 2  
Mean Scores Interpretation**

| Range | Verbal Interpretation |
| --- | --- |
| 4.20 – 5.00 | Strongly Agree |
| 3.40 – 4.19 | Agree |
| 2.60 – 3.39 | Neutral |
| 1.80 – 2.59 | Disagree |
| 1.00 – 1.79 | Strongly Disagree |

# Chapter 4 **REQUIREMENTS ANALYSIS**

This chapter describes the overall perspective, features and characteristics, the user’s characteristics, and what we are limited upon. The system will be explained in its own context to show how the system interacts with other systems and introduce its functionalities.

This chapter also describes the assumptions we have the user and other stakeholders must meet in order to use our application library. The constraints along with its assumptions will also be presented.

## Evaluation Stakeholders

*Discuss who were the parties involved in your initial interview.*

## Core Evaluation Questions

In fulfilling the purposes of the evaluation, the following core questions were addressed:

1. …
2. …
3. …

## Product Features

*Write the main features of your project here and describe each of them. Write them in subsections (Heading 3 and Heading 4) where applicable. You can also expand in bullet form if necessary.*

According to initial interview with the client, the current priorities are the following:

The website shall consist of 6 main features other than the static pages (home, about, contact, etc.) These are product archives (browse by category, tag, search, etc.), product comparison, checkout, reviews, wishlist, and administration dashboard.

### Feature #1: Product Comparison

This feature allows customers to compare the features and prices of different products on the website. Customers can select up to four products to compare and view them side by side in a table. Customers can also filter and sort the products by various criteria, such as category, rating, price, popularity, etc.

### Feature #2: Minifying

This feature allows customers to save the products they are interested in for later purchase. Customers can create and manage multiple wishlists, add and remove products from the wishlists, and share the wishlists with others via email or social media.

*Some text omitted…*

## User Characteristics

*Write the characteristics of your users and groups. For example, your groups may consist of first, the administrative users, then followed by the support users, and finally the general users. Describe what level of technical knowledge you expect them and what roles they fill to meet your project’s objectives.*

*Use Heading 3 and Heading 4 to write each in a subsection.*

For a WooCommerce website, the different users include the following:

### Online Shoppers

The **online shoppers** are the users who want to buy products from the website. These users have access to the internet and a web browser that supports WooCommerce functionality. The users have different levels of familiarity with online shopping and WooCommerce features. Some users may be beginners who need guidance and assistance, while others may be experts who prefer efficiency and customization.

### WordPress editors

The **WordPress editors** are the users who want to create and edit content on their sites. They should have a good level of familiarity with WordPress management and its features as mistakes in updating and/or removing content may affect the overall usability of the website or even incur business losses.

## Constraints

The project library will be tested with browsers with the following versions: Mozilla Firefox v56 and Google Chrome v61. Git will be used as the code versioning control system (VCS) and will be hosted on GitHub.

## Assumptions

It is assumed that users who use this software must use the current browser versions or newer ones to assure full functionality. It is assumed that the performance of the software depends on the user’s computer performance or the length of the provided input. It is assumed that users must have an active internet connection to load the web application.

# Chapter 5 **SYSTEM DESCRIPTION**

*This section will contain the following:*

1. *System Overview (serves as introduction)*
2. *System Objectives (General and Specific)*
3. *System Scope and Limitations*
4. *Implementation Plan (all implementation diagrams and processes from SPMP and SRS)*
   1. *Software Development Model*
   2. *UI Design Plan*
   3. *Use Case.*
   4. *Activity Diagrams*
   5. *Class Diagrams*
   6. *Sequence Diagrams*
   7. *Architectural Diagram*
   8. *Entity-Relationship Diagram (if using SQL database)  
      All details should be on another Appendix.*
5. *Testing Plan (all testing diagrams and processes from SPMP and SRS).  
   You should also describe what tests you are going to perform. Choose only tests that are appropriate for your project. This might include (list not exhaustive):*
   1. *Black box testing*
      1. *UI visual test (does it look how it is expected to look like on different devices, screens, etc.) if applicable*
      2. *Use case tests*
      3. *Performance tests*
   2. *White box testing*
      1. *Unit testing*
      2. *Integration testing*

*Write each subsection with Heading 2 and Heading 3.*

[Source: <https://www.scribbr.com/dissertation/methodology/>]

This chapter explains how the researchers will develop the project and as well test the project outcomes.

# Chapter 6 **RESULTS AND OBSERVATIONS**

*Separate each section with Heading 2 and Heading 3. Don’t forget to give a brief introduction for each section. Use past tense for this chapter and onwards.*

## System Results and Observations

*The System Results and Observations will contain results, observations, conclusions, and recommendations for the system (as discussed by chapter 4’s system objectives, e.g., did you meet your system objectives?).*

## Research Results and Observations

*The Research Results and Observations will contain results and observation only related to research such as survey results, discussions with clients, etc., as discussed in chapter 3 research methodology.*

# Chapter 7 **CONCLUSION AND RECOMMENDATIONS**

## Conclusion

After identifying the coding style or programming style formats necessary to create the formatter, the steps necessary to parse, format or minify the code to produce the desired output, and the programming languages that will support parsing, formatting, and minifying, the researchers were able to design and develop a JavaScript-Based Code Parser, Formatter, and Minifier.

## Recommendations

To the future researchers or users who intend to integrate the system to their own projects, the researchers recommends that support for more programming languages that may also be formatted or minified.

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# Appendix A **TITLE GOES HERE**

*Any supplementary information to the chapters above should be included in the appendices. For example, if your work plan only outlines the major activities of the project, you can write the detailed worked plan that includes sub-activities here.*

*You may also include initial interview questions and results with the client, participation letters/requests/forms, and supplemental tables/figures/graphs/images.*

*Use Heading 1 and separate with a line break (SHIFT + ENTER) for each appendix heading.*

*Appendices appear in the order in which they are introduced in the text.*

# Appendix B **CURRICULUM VITAE**

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