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COLLEGE OF TECHNOLOGIES
INFORMATION TECHNOLOGY DEPARTMENT



**TwoWheelsEase System: For Efficient Costumer Management of
RUSI Motorcycle**

A Project Presented to
The Information Technology Department

In Partial Fulfillment of the Requirement for the Course

IT112/CC113 - Computer Programming 2

by

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Chapter 1

Introduction

1.1 Project Description

TwoWheelsEase Management System is a system for the modernize management of the company, RUSI Motorcycle. This system complies the management of the company in terms of viewing records of customers, can add new ones, view motorcycle stock, manage monthly payment, and can search for customers. Generating this system using c programming language provides a concepts of inputting header, variables, data types, loops, conditionals, and functions. The probability usage of personal computers, computers, and laptops compact a significance role in building this system, as well as the software such as, programiz, codeblocks, and coding in C. By applying this principles and concepts of the system, such as looping, strings, conditions and arguments, it will enhance the efficiency and provide better service at the customers of RUSI Motorcycles.

1.2 General Objective

The TwoWheelsEase Management System aimed to achieve the system by which the ways of reviewing the costumer's details are shown upon inputting the selected one when the code is executed using C programming language which applied by skills and knowledge about functions of C programming that leads to the choices in the output. This system is further implied by file handling which means to store data in a format file such as text, word, etc.

1.3 Scope and Limitations

Every system, research, and studies always have its scope and limitation. This addresses the capability and incapacibilities that a certain element is unable to perform.

The following are the list of included content of the project:

- Able to show the customer records
- Add customer
- Manage monthly payment

- Search customer record
- List of available motorcycles

The list of excluded content of the project:

- Online payment
- Ability to add stocks of Motorcycles

The system is able to perform customer's details based on list above by using switch statements to break the decision in order to proceed to the next portion. This implies the usage of conditional statements and looping to execute the program successfully prior to its goal, which to have the needed information inputted as user define. According to the latter list, this system is unable to deal with an online payment such as gcash, paypal, credit cards, and so on, since, the monthly payment only held at its manual way which is cash; it is the limitation of this system in terms of dealing with customer's payment. Furthermore, the system is also not able to add stocks of motorcycles, aligned to the functions of list of available motorcycles because it is declared as predefine.

1.4 Definition of Terms

The following are the definition of terms included in the concepts of TwoWheelsEase Management System:

Variable - a name given to a storage area (memory space) in order for the program to manipulate

Data type - Used to store the variables, such as int, char, float, double etc.

Conditional statement - An expression that generates true or false.

If statement - In order to make the program decide or make choices.

Switch statements - Used as alternative of ladder ifs wherein you can use multiple conditional expressions.

File handling - File handling refers to the set of operations that allow a C program to interact with files, including creating, opening, reading, writing, and closing them.

Chapter 2

Methodology

2.1 Research

To prepare for the development of the TwoWheelsEase Management System, research was conducted to identify the problems that the management faces. This would involve understanding the current process of managing customer records and the way of handling payments, as well as identifying potential areas for improvement.

The conceptualization of the system was approached by how the users would interact with it, from viewing records to making payments. To help visualize the system's architecture, a flowchart was created.

By understanding how the management of RUSI Motorcycle operates at Don Carlos, Bukidnon, and the problems that were faced, a system was developed to enhance efficiency and service quality.

2.1.1 Task Distribution

Members of the TwoWheelsEase Management System are tasked with performing specific tasks. Each of them is required to contribute to the project. The first one will do the program, and the rest will help to have the program and its documents done.

2.2 Conceptualization and Design

This program presented the functions required to have it performed efficiently. Through applying learnings with regards to C programming, the proper execution of the code clearly represents the output.

2.2.1 Flowchart

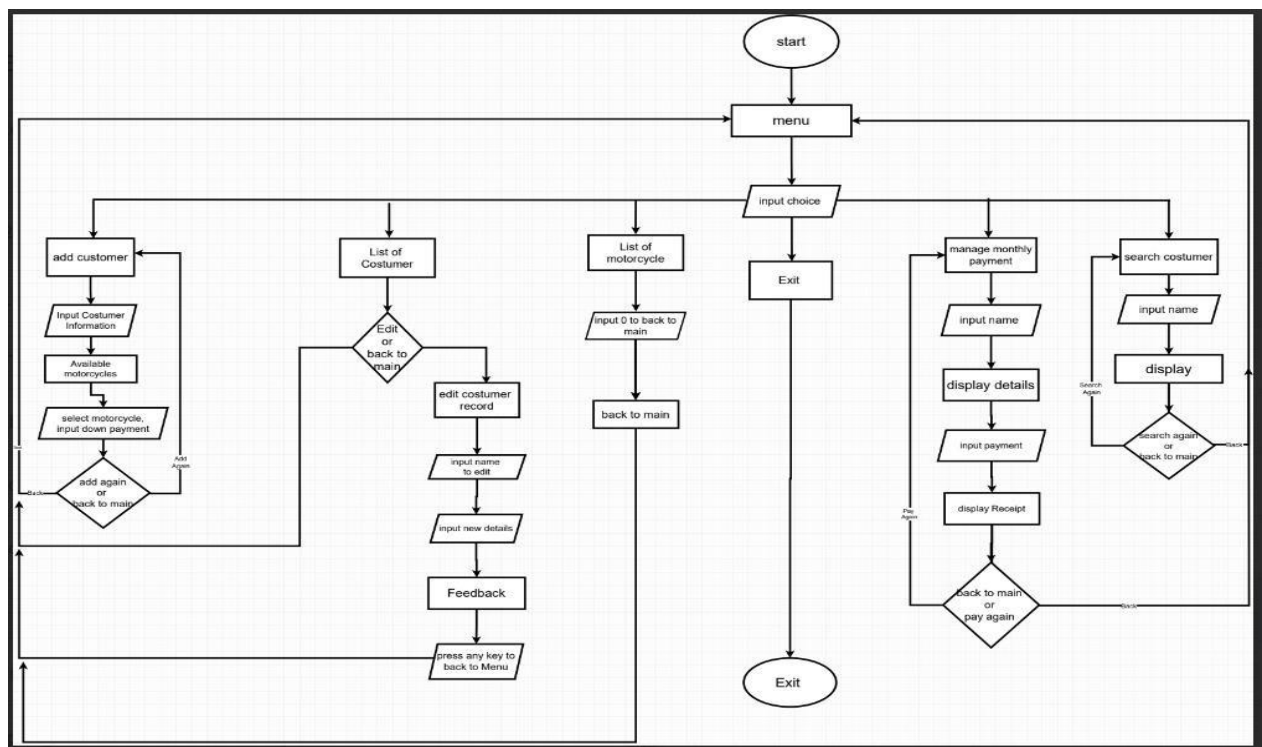


Figure 1. TwoWheelsEase Management System Flowchart

The figure above shows the flow of the TwoWheelEase Management System. First and foremost, it will display the menu. In the menu, it represents the six choices: Add Customer, View customer Record, View Customer Stocks of Motorcycles, Manage Monthly Payment, Search Customer Record, and Exit. Then, the input choices section. There is a choice to add customer. Under Add Customer, the user will input the customer's information and it displays the available motorcycles. Select Motorcycle, input Down Payment, and decision process if the user wants to add a customer again or if the user wants add a customer again or if the user wants to return to the main menu. The second choice is to view the customer record. Under View Customer Record, it displays all customer records and the decision process if the user wants to edit customer records or if the user wants to return to the main menu. Under the edit record, first, input the customer's name the user wants to edit, and display record and inputs new customer's information. The third choice is a list of motorcycle. It displays the pre-defined motorcycle stocks and the input process to return to the main menu. The fourth choice is to manage monthly payments. Under Manage Monthly Payments, input the customer's name who wants to pay, and it will display the customer record. Input the date, input the money, and it will display

the receipt and decision process if the user wants to pay again or return to the main menu. The fifth choice is search customer record. Input the customer's name the user wants to search for, and it will display the record and the decision if the user wants search again or return to the main menu. Then, exit will be the last choice to exit the program.

2.3 Development

For the development of this system, the members came up with the idea of compiling knowledge of coding in the C language. It is done by performing the members specific tasks for the accuracy and readability of the program. Each member is required to meet the standards of the program during its development process.

2.4 Software and Hardware Used

2.4.1 Software

The following are the software tools used to develop the project:

Code: Blocks	A free, open-source compiler, specifically designed for C, C++, and Fortran programming. It is used to compile the system's code and more advantage for it is compatible for the device used.
Coding in C	Refers to an offline application used to code in C language. It is used for the convenience usage through cellular phone.

2.4.2 Hardware Devices and Peripherals

The following are the hardware tools used to develop the project:

Laptop	A laptop is a portable personal computer designed for on-the-go use. This device is convenient to use for compiling the system.
Cellular phone	A cellular phone, also known as a cell phone or mobile phone, is a portable telecommunications device. This is used to perform Coding in C software application.

Chapter 3

Results, Discussion and Recommendation

3.1 Recommendations

The TwoWheelsEase Management System is designed to perform the showcasing of customers' details once they are inputted. However, there are some lapses in functions that the system is unable to provide: the inability to add motorcycle stocks and the inability to delete customer records. The system only provides the predefine function in the section where the list of motorcycle stocks is located. Also, the development of this system indulged in the difficulty of having a readable and accurate output and thus concluded to make it simple. Therefore, to address the gap in this system for future modifications, the capability of the system to add stocks to the list can be conducted. Furthermore, the system output of TwoWheel Management system lacks in terms of user define of payments, number of unit of stocks of motorcycle (the availability), and the arrangement of a file handling of table format.

For further consideration of adding this matters in the system will make an amendment for better output of the system, it is recommended for future developers of this system, since its current developers are unable to make it because of scarcity of time. The system should be able to perform what it should be according to the desires of users, as well as, the customers of RUSI Motorcycle company

As this project was distributed, it took less time to reach an accurate outlook for the project. Supposedly, this system commits modifications from future developers; time management is a crucial first thing to consider for the betterment of its outlook. Spending enough or more time to perform this project will constantly finish the desired output of the final project. Its progress will be more productive since enough time is distributed and the provision sufficiently arrives ahead of time.

3.2 Difficulties Encountered

The progress made with the TwoWheelsEase Management System is quite difficult. On its first progress, it was planned accordingly to the desired output by the members. The TwoWheelsEase Management System should have a delete customer icon and be able to add the names of stocks on the list of motorcycles. Due to errors encountered while performing the program, those were eliminated to fix the output of the program. It takes time for the performer to have the code of the project fixed. To have this addressed, it ended up using a pre-defined function on a list of motorcycles rather than a user-defined one. It brings difficulty to arrange the output on that part, for it terminates immediately the execution process of the program. On the other hand, the delete customer icon is constantly eliminated for the reason that it burdens more on the tasks of members.

As the members are tasked with executing their contribution, a certain device was unable to show the execution of the program, such as the user defined. The environment of the device is not supported by the compiler that is used by the member; it is only possible to execute when the program is predefined. This thus favors using the other device that supports the execution of a compiler that writes the code.

3.3 Conclusion

The development of the TwoWheelsEase Management System is a challenging task, technically due to technical limitations and a hardware constraint encountered during the development of the system. The project understood the significance of thorough planning and the flexibility to adjust plans as needed. Simplifying the features of the system can be a lot more stable, and the consistency and determination to push through the system are also important. Time management is also important since it occupies crucial circumstances that happen daily. Given more time, the project could have included additional features like adding stock. Ensure that resources are available, including access to the necessary software and hardware. The journey through the development of the system was challenging yet enlightening, teaching the impact of user feedback.

References

GeeksforGeeks. (2024, March 11). *C Programming Language tutorial*. GeeksforGeeks.

<https://www.geeksforgeeks.org/c-programming-language/>

Google. (n.d.). <https://www.google.com/>

Learn C Programming. (n.d.). <https://programiz.pro/course/learn-c-programming>

The Unknown Coder. (2022, July 25). *Insert, read, update & delete data in Text file // File*

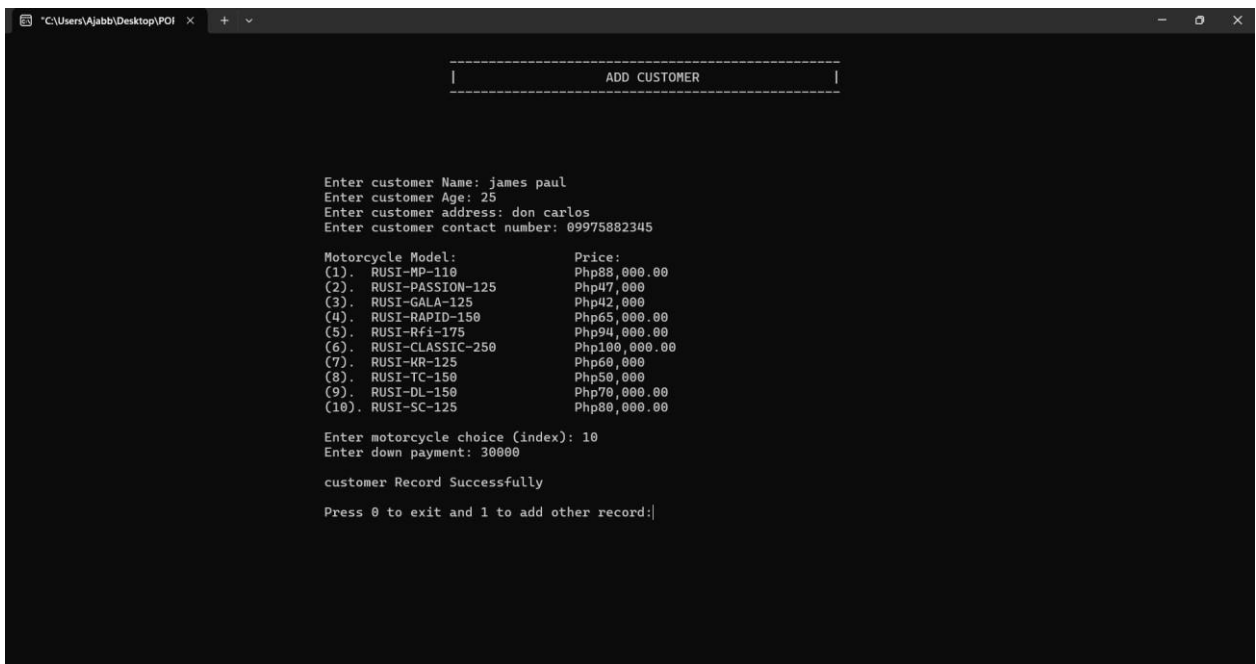
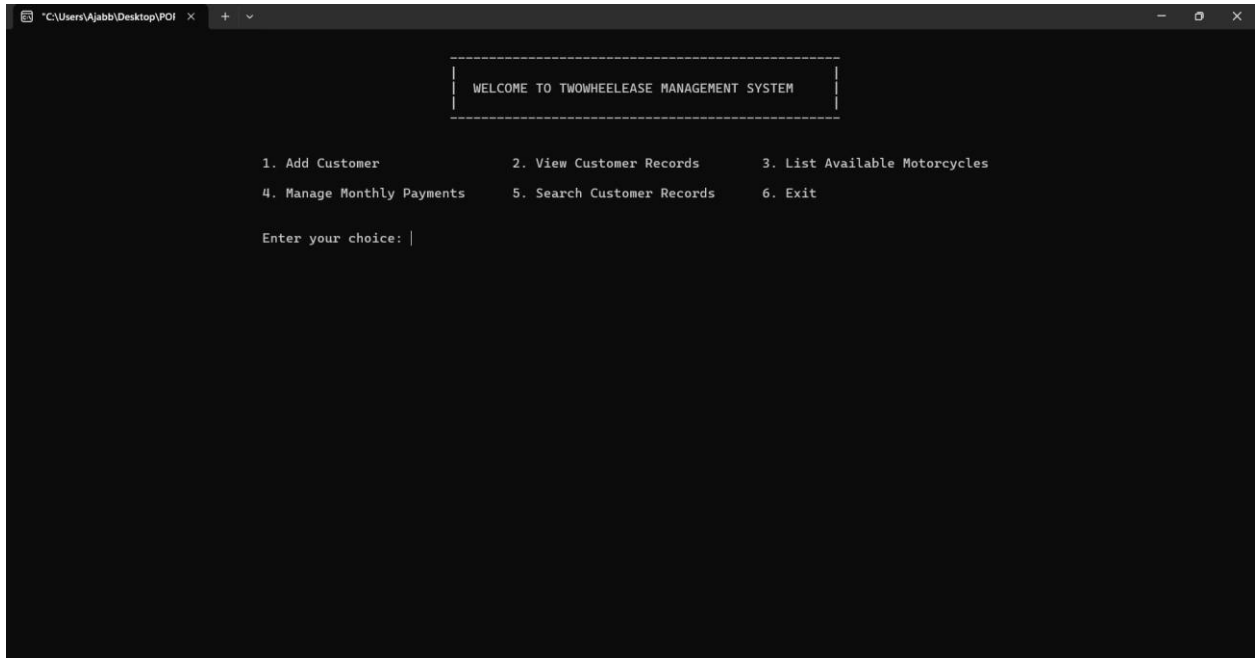
Handling in C // The Unknown Coder [Video]. YouTube.

<https://www.youtube.com/watch?v=WGMgZE0gJHc>

UNStOP - competitions, quizzes, hackathons, scholarships and internships for students and

corporates. (n.d.). <https://unstop.com/>

Appendices



CUSTOMER RECORDS										
Name	Age	Address	Contact Number	Motorcycle	Total Price	Down Payment	Balance	Monthly	Term	Date
Jino Taer	24	Don Carlos	09987654321	RUSI-MP-110	88000.00	30000.00	58000.00	2636.36	22	23/23/2222
taer jinis	21	San france	09876543234	RUSI-SC-125	80000.00	20000.00	54000.00	2727.27	22	23/22/2333
Steve Jun	54	Don carlos	09876543212	RUSI-KR-125	60000.00	15000.00	45000.00	2045.45	22	5/9/2024

Enter (1 to Edit Record), or (0 back to Main):

EDIT CUSTOMER RECORD										
----------------------	--	--	--	--	--	--	--	--	--	--

Enter the name of the customer whose info you want to change: Jino Taer

Name	Age	Address	Contact Number	Motorcycle	Total Price	Down Payment	Balance	Monthly	Term	Date
Jino Taer	24	Don Carlos	09987654321	RUSI-MP-110	88000.00	30000.00	58000.00	2636.36	22	23/23/2222

Enter the Date Today: 23/23/3333

Enter New customer Name: Taer Jino
Enter New customer Age: 25
Enter New customer address: Don Carlos
Enter New customer contact number: 09987654321

Motorcycle Model:	Price:
(1). RUSI-MP-110	Php88,000.00
(2). RUSI-PASSION-125	Php47,000
(3). RUSI-GALA-125	Php42,000
(4). RUSI-RAPID-150	Php65,000.00
(5). RUSI-Rfi-175	Php94,000.00
(6). RUSI-CLASSIC-250	Php100,000.00
(7). RUSI-KR-125	Php60,000
(8). RUSI-TC-150	Php50,000
(9). RUSI-DL-150	Php70,000.00
(10). RUSI-SC-125	Php80,000.00

Enter New motorcycle choice (index): 1
Enter down payment: 50000
Enter loan term (in months): 12

Customer Record Successfully
Press any key to return to main....]

```
*C:\Users\Ajabb\Desktop\PCI x + v - [ ] x

-----
| LIST AVAILABLE MOTORCYCLES |
-----

Motorcycle Model:      Price:
(1). RUSI-MP-110       Php88,000.00
(2). RUSI-PASSION-125  Php47,000
(3). RUSI-GALA-125     Php42,000
(4). RUSI-RAPID-150    Php65,000.00
(5). RUSI-Rfi-175      Php94,000.00
(6). RUSI-CLASSIC-250  Php100,000.00
(7). RUSI-KR-125       Php60,000
(8). RUSI-TC-150       Php50,000
(9). RUSI-DL-150       Php70,000.00
(10). RUSI-SC-125      Php80,000.00

Enter 0 to return to main menu: |
```

```
*C:\Users\Ajabb\OneDrive\De x + v - [ ] x

-----
| MANAGE MONTHLY PAYMENT |
-----

Enter the name of the Customer: Taer Jino

Name      Age      Address      Contact Number      Motorcycle      Total Price      Down Payment      Balance      Monthly      Term      Date
-----
Taer Jino      25      Don Carlos      09987654321      RUSI-MP-110      88000.00      50000.00      34834.00      3166.67      12      23/23/3333
-----

Date Today ex.(mm/dd/yyyy): 23/23/2333
Enter Monthly Payment: 3166|
```

```
"C:\Users\Ajabb\OneDrive\De  x  +  v  -  o  x

=====
|                               |
|          TWMHHEELASE         |
| Purok - 7, Sayre Hwy, Don Carlos, Bukidnon, 8712 |
| Contact: 09955238525         |
|-----|
| Receipt                      |
|                               |
|                               | Date: 23/23/2333 |
|-----|
| RECEIVED from: Taer Jino    with TIN: 721-432-123 |
| and address at:  Don Carlos  engaged in the      |
| Business style of:  N/A      the sum pesos       |
| (P: 3166) in partial/full payment for Motorcycle |
|-----|
| Item Description:           |
| Motorcycle Model: RUSI-MP-110 |
| Remaining Balance: 31668.00  |
|-----|
| NOTE:                       |
| No account will be recognized as all paid, without |
| the Original signed by the company's authorized  |
| Officer                                           |
|-----|
|                               |
|                               | Signed |
|                               |
|-----|
|                               |
|-----|

Enter 0 to Pay Again, or 1 to return to the main menu: |
```

```
"C:\Users\Ajabb\OneDrive\De  x  +  v  -  o  x

|-----|
|          SEARCH CUSTOMER RECORD          |
|-----|

Enter the name of the customer you want to search: Taer Jino

Name      Age      Address      Contact Number      Motorcycle      Total Price      Down Payment      Balance      Monthly      Term      Date
-----
Taer Jino      25      Don Carlos      09987654321      RUSI-MP-110      88000.00      50000.00      31668.00      3166.67      12      23/23/3333
-----

Enter 1 to Search Again, or 0 to return to main menu: |
```

