



COMPUTER PROGRAMMING

(ITC123_LEC/LAB)

RTU Parking System

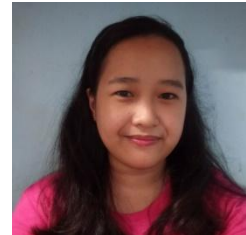
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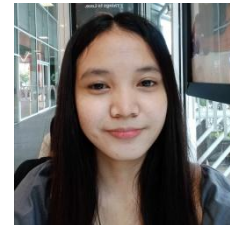
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I. INTRODUCTION

The modern world is now ruled by technology, which has the capability to make human labor simple and efficient. Setting up a system for secured vehicles is one step closer to innovation and another way of creating a safe place for all employees, teachers, and students. A traditional way of parking was just to find a wide or narrow space just to park your vehicles — it takes most of your time finding where your vehicles at. But now we're living in a modern world and want to help vehicle owners find where their vehicle was; we came up with this system.

The developers created a vehicle parking management system that allows vehicle owners to have stress-free, less time-consuming, and hassle-free and it makes information about their vehicles more accessible at any time. A system will allow vehicle owners to easily access information about their vehicles to have the best experience for a better life.

II. DESCRIPTION OF THE PROJECT

A parking management system is a digital method to have information about where your vehicle is. It allows the vehicle owners to lessen their anxiousness, the time consumed finding where their vehicle



is and to avoid confusion about their vehicles; we know that many vehicles have the same style and model and undoubtedly sometimes we mistook them as ours. This project features a log-in system where everyone can create an account to register themselves and a forgot password where you can find your password by entering your student ID.

III. OBJECTIVES

The system's main objective is to develop parking management software using C++ as our programming language that allows vehicle owners to lessen their stress and the time consumed in finding their vehicle in a digital way by giving them a ticket with numbers for them to have a piece of information about their vehicle.

IV. SIGNIFICANCE OF THE STUDY

The developers wanted to have a more secure and stress-free parking lot. This study gave importance to these particular reasons. The system will appeal to students of Rizal Technological University. Moreover, the system is helpful for those who have short-term ~~term~~ loss because they can now have a number to know where their vehicles park at. It allows vehicle owners especially those student who has a vehicle inside the school to lessen their stress and the time consumed by finding where their vehicle at.



V. SCOPE AND DELIMITATIONS

The system focuses on providing users with a more effective, simple, and secure way to park their vehicles. It was designed to make it simple for users to open an account, fill out their information, and then retrieve their password. It's also exclusive only to the students of Rizal Technological University, thus, employees and professors cannot use our system. The program has some limitations. The program doesn't have a feature enabling users to provide more information, such as when they park in and out of their vehicles.

VI. SCREEN OUTPUT

```
-----  
Rizal Technological University  
Boni and Pasig Branch  
-----  
Welcome to the Main Page (RTU Parking)  
-----  
Select within the options:  
  
[1] Log in  
[2] Register New Account  
[3] Forgot Password  
[4] Exit  
-----  
Input your option: |
```

Figure 1. Home Page

Figure 1 shows the option you may choose that include the following:



1. **LOGIN** - this option will let you login in your registered account.
2. **REGISTER** - this option will let you register or create your account.
3. **FORGOT PASSWORD** – this option will let you retrieve your password.
4. **EXIT** - this option will let you exit the home page.

1.

```
-----
Rizal Technological University
Boni and Pasig Branch
-----
Log in with your Respective Account
-----
Enter Student ID: 2022-101010

Enter Password: *****
-----
Login successfull.
Hi, 2022-101010. Welcome!!!

Press any key to proceed . . .|
```

2.

```
-----
Rizal Technological University
Boni and Pasig Branch
-----
Fill up other needed information
-----
Name(Last, First Mi): Kamado, Nezuiko

Birthday(MM/DD/YY): 12/28/1898

Contact Number: 09123456789
-----
Registration successfull!!!
You can now Log In!!!

Press any key to proceed . . .
```

3.

```
-----
Rizal Technological University
Boni and Pasig Branch
-----
Search for Student ID
-----
Please Select:

Press [1] to search your Student ID
Press [2] to go back in Main Page
-----
Enter your choice: 1
-----
Enter your Student ID: 2022-101010

Your Account has been found.
Your Password is: qwerty
-----

Press any key to proceed...|
```

4.

```
-----
Are you sure you want to exit?
-----
Select within the options:

Input [1] if Yes
Input [2] if Not yet
-----
Input your option: 1
```

```
-----
Thank you for using our system!
-----

9 seconds with return value 0
. . .|
```

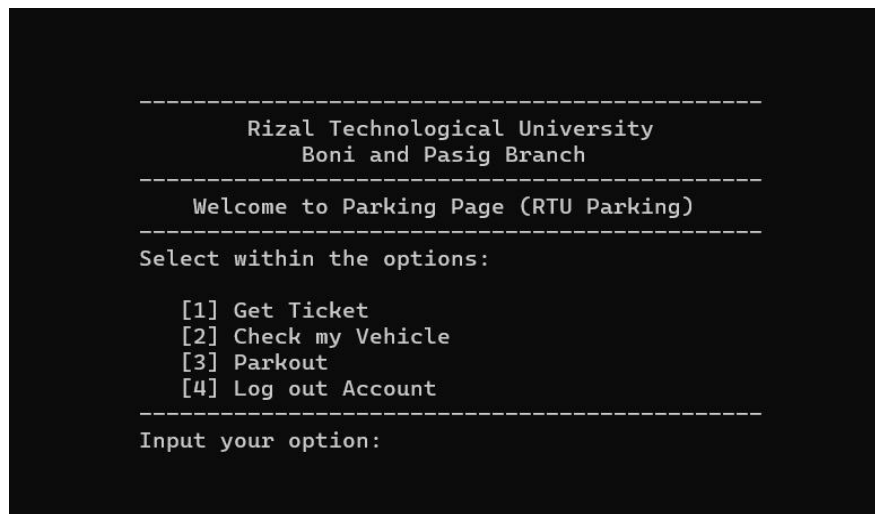


Figure 2. Main Page

Figure 2 shows the main page after you register and login in your account, the following option you can choose are:

- 1. GET TICKET** - this option will let you select options for the type of your vehicle and your vehicle number.
- 2. CHECK MY VEHICLE** - this option will let you see all parking numbers of vehicle.
- 3. PARK OUT** - this option will let you park out your vehicle.
- 4. LOG OUT ACCOUNT** – this option will let you log out on your account.



1

```
-----  
Rizal Technological University  
Boni and Pasig Branch  
-----  
Type of Vehicle You are Using  
-----  
Select within the options:  
  
[1] Car  
[2] Motorcycle  
[3] Bicycle  
-----  
Input your option: 1  
Your Car Number is #1246  
-----  
Press any key to proceed...|
```

```
-----  
Your vehicle is now registered!!!  
You can now park at RTU!!!  
-----  
Press any key to proceed...
```

2.

```
-----  
Rizal Technological University  
Boni and Pasig Branch  
-----  
Check Your Vehicle  
-----  
Select within the options:  
  
[1] Car  
[2] Motorcycle  
[3] Bicycle  
-----  
Input your option: 1|
```




```
-----  
Rizal Technological University  
Boni and Pasig Branch  
-----  
All Parking Numbers For Cars  
-----  
Car Number#1448  
Car Number#1378  
Car Number#1202  
Car Number#1246  
-----  
Press any key to go back to Parking Page...|
```

3.

```
-----  
Are you sure you want to parkout?  
-----  
Select within the options:  
Input [1] if Yes  
Input [2] if Not yet  
-----  
Input your option: 1  
Enter Your Account Name: Kamado, Nezuko  
Enter Your Car Number: 1202  
-----  
All the data is being recorded...  
Press any key to proceed...
```

```
-----  
Thank you for Parking at  
Rizal Technological University!!!  
-----  
Please proceed to Logout your Account...  
Press any key to proceed...
```




4.

```
-----  
                Are you sure you want to exit?  
-----  
Select within the options:  
  
    Input [1] if Yes  
    Input [2] if Not yet  
-----  
Input your option: 1
```

```
                You are now logging out...  
                _____  
                Press any key to proceed...|
```

VII. SOURCE CODE

```
#include <Windows.h>
```

```
#include <iostream>
```

```
#include <stdio.h>
```

```
#include <fstream>
```

```
#include <cstdlib>
```

```
#include <conio.h>
```

```
#include <string>
```

```
#include <vector>
```

```
#include <ctime>
```

```
using namespace std;
```

```
//LOG IN / LOG OUT SYSTEM//
```

```
void login ();
```



```
void registerr ();
```

```
void forgotpass ();
```

```
void exit ();
```

```
void out ();
```

```
//PARKING SYSTEM//
```

```
void parking ();
```

```
void ticket ();
```

```
void t_notif ();
```

```
void check ();
```

```
void parkout ();
```

```
void logout ();
```

```
void notif ();
```

```
//LOG IN / LOG OUT SYSTEM//
```

```
int main () {
```

```
    int a;
```

```
    cout << "\n\n\n\n";
```

```
    cout << endl;
```

```
    cout << "\t\t\t\t\t....." << endl;
```

```
    cout << "\t\t\t\t\t Rizal Technological University" << endl;
```

```
    cout << "\t\t\t\t\t Boni and Pasig Branch" << endl;
```

```
    cout << "\t\t\t\t\t....." << endl;
```

```
    cout << "\t\t\t\t\t Welcome to the Main Page (RTU Parking)" << endl;
```

```
    cout << "\t\t\t\t\t....." << endl;
```

```
    cout << "\t\t\t\t\t Select within the options:" << endl;
```

```
    cout << endl;
```

```
    cout << "\t\t\t\t\t [1] Log in" << endl;
```

```
    cout << "\t\t\t\t\t [2] Register New Account" << endl;
```







```
while(b != 13) {

    studentPassword.push_back(b);

    cout << '*';

    b = getch();

}

ifstream input("login.txt");

while (input >> ID >> PASS) {

    if (ID == studentID && studentPassword == PASS) {

        inputt = 1;

    }

}

input.close();

if (inputt == 1) {

    cout << "\n\t\t\t\t\t.....-\n";

    cout << "\t\t\t\t\t Login successfull. \n";

    cout << "\t\t\t\t\t Hi, " << studentID << ". Welcome!!! \n";

    cout << "\n\t\t\t\t\t Press any key to proceed . . .";

    getch();

    system("cls");

    parking();

}
```



```
}  
  
else {  
  
    cout << "\n\t\t\t\t\t.....-\n";  
    cout << "\t\t\t\t\t You are not Registered yet!!!";  
    cout << "\n\t\t\t\t\t Please Register.\n";  
    cout<<"\n\n\t\t\t\t\t Press any key to proceed . . .";  
    getch();  
    system("cls");  
    main();  
}  
}
```

```
void registrerr () {  
  
    system ("cls");  
    string studentID, studentPassword, birthday, number;  
    char name[50];  
    system("cls");  
    cout << "\n\n\n\n";  
    cout << endl;  
    cout << "\t\t\t\t\t....." << endl;  
    cout << "\t\t\t\t\t\t\t Rizal Technological University" << endl;  
    cout << "\t\t\t\t\t\t\t Boni and Pasig Branch" << endl;  
    cout << "\t\t\t\t\t\t\t....." << endl;  
    cout << "\t\t\t\t\t\t\t Register New Account" << endl;  
    cout << "\t\t\t\t\t\t\t....." << endl;  
    cout << "\t\t\t\t\t\t\t Enter Student ID: ";  
    cin >> studentID;
```





```
getch();

getline (cin, studentPassword);

system("cls");

main();

}

void forgotpass() {

    system ("cls");

    int options;

    cout << "\n\n\n\n";

    cout << endl;

    cout << "\t\t\t....." << endl;

    cout << "\t\t\t\t\t Rizal Technological University" << endl;

    cout << "\t\t\t\t\t Boni and Pasig Branch" << endl;

    cout << "\t\t\t\t\t....." << endl;

    cout << "\t\t\t\t\t Search for Student ID" << endl;

    cout << "\t\t\t\t\t....." << endl;

    cout << "\t\t\t\t\t Please Select: \n" << endl;

    cout << "\t\t\t\t\t Press [1] to search your Student ID " << endl;

    cout << "\t\t\t\t\t Press [2] to go back in Main Page " << endl;

    cout << "\t\t\t\t\t.....\n";

    cout << "\t\t\t\t\t Enter your choice: ";

    cin >> options;

    switch (options) {

    case 1: {

        int input = 0;
```



}





```
int c;

system("cls");

cout << "\n\n\n\n\n\n\n";

cout << endl;

cout << "\t\t\t....." << endl;

cout << "\t\t\t\t Are you sure you want to exit?" << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t Select within the options:" << endl;

cout << endl;

cout << "\t\t\t\t Input [1] if Yes" << endl;

cout << "\t\t\t\t Input [2] if Not yet" << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t Input your option: ";

cin >> c;

switch (c) {

    case 1: {

        system("cls");

        out();

        break;

    }

    case 2: {

        system("cls");

        main(); break;

    }

}
```




```
cout << "\\t\\t\\t....." << endl;

cout << "\\t\\t\\t\\t Rizal Technological University" << endl;

cout << "\\t\\t\\t\\t    Boni and Pasig Branch" << endl;

cout << "\\t\\t\\t\\t....." << endl;

cout << "\\t\\t\\t\\t    Welcome to Parking Page (RTU Parking)" << endl;

cout << "\\t\\t\\t\\t....." << endl;

cout << "\\t\\t\\t\\t Select within the options:" << endl;

cout << endl;

cout << "\\t\\t\\t\\t    [1] Get Ticket" << endl;

cout << "\\t\\t\\t\\t    [2] Check my Vehicle" << endl;

cout << "\\t\\t\\t\\t    [3] Parkout" << endl;

cout << "\\t\\t\\t\\t    [4] Log out Account" << endl;

cout << "\\t\\t\\t\\t....." << endl;

cout << "\\t\\t\\t\\t Input your option: ";

cin >> a;

switch (a) {

case 1: {

    ticket ();

    break;

}

case 2: {

    check ();

    break;

}

case 3: {
```



```
        parkout ();  
        break;  
    }
```

```
case 4: {  
    logout ();  
    break;  
}
```

default:

```
    cout << endl;  
    cout << "\t\t\t Invalid input keys, select within the options." << endl;  
    cout << "\n\n\t\t\t\t\t Press any key to proceed...";  
    getch ();  
    system ("cls");  
    main ();  
}  
}
```

```
void ticket () {
```

```
    int d;  
    system ("cls");  
    cout << "\n\n\n\n";  
    cout << endl;  
    cout << "\t\t\t\t\t....." << endl;  
    cout << "\t\t\t\t\t Rizal Technological University" << endl;  
    cout << "\t\t\t\t\t Boni and Pasig Branch" << endl;
```




```
cout << "\\t\\t\\t....." << endl;
cout << "\\t\\t\\t      Type of Vehicle You are Using" << endl;
cout << "\\t\\t\\t....." << endl;
cout << "\\t\\t\\t Select within the options:" << endl;
cout << endl;
cout << "\\t\\t\\t      [1] Car" << endl;
cout << "\\t\\t\\t      [2] Motorcycle" << endl;
cout << "\\t\\t\\t      [3] Bicycle" << endl;
cout << "\\t\\t\\t....." << endl;
cout << "\\t\\t\\t Input your option: ";
cin >> d;
```

```
switch (d) {
```

```
    case 1: {
```

```
        srand((unsigned) time(0));
```

```
        int rand_car = (rand() % 500) + 1000;
```

```
        ofstream car("generate-car.txt", ios::app);
```

```
        car << "\\t  Car Number#" << rand_car << ' ' << endl;
```

```
        cout << "\\t\\t\\t Your Car Number is #" << rand_car << endl;
```

```
        cout << "\\t\\t\\t....." << endl;
```

```
        cout << "\\t\\t\\t      Press any key to proceed...";
```

```
        getch();
```

```
        t_notif ();
```

```
        break;
```

```
    }
```



case 2: {

```
srand((unsigned) time(0));
```

```
int rand_motorcycle = (rand() % 500) + 1000;
```

```
ofstream motorcycle("generate-motorcycle.txt", ios::app);
```

```
motorcycle << "\tMotorcycle Number#" << rand_motorcycle << ' ' << endl;
```

```
cout << "\t\t\t Your Motorcycle Number is #" << rand_motorcycle << endl;
```

```
cout << "\t\t\t....." << endl;
```

```
cout << "\t\t\t      Press any key to proceed...";
```

```
getch();
```

```
t_notif ();
```

```
break;
```

```
}
```

case 3: {

```
srand((unsigned) time(0));
```

```
int rand_bicycle = (rand() % 200) + 150;
```

```
ofstream bicycle("generate-bicycle.txt", ios::app);
```

```
bicycle << "\tBicycle Number#" << rand_bicycle << ' ' << endl;
```

```
cout << "\t\t\t Your Bicycle Number is #" << rand_bicycle << endl;
```

```
cout << "\t\t\t....." << endl;
```

```
cout << "\t\t\t      Press any key to proceed...";
```



```
    getch();  
    t_notif ();  
    break;  
}
```

default:

```
    cout << endl;  
    cout << "\t\t\t Invalid input keys, select within the options." << endl;  
    cout << "\n\n\t\t\t\t\t Press any key to proceed...";  
    getch ();  
    system ("cls");  
    parking ();  
}  
}
```

void t_notif () {

```
    system("cls");  
    cout << "\n\n\n\n\n\n\n\n\n\n";  
    cout << "\n\t\t\t\t\t Your vehicle is now registered!!!" << endl;  
    cout << "\t\t\t\t\t You can now park at RTU!!!" << endl;  
    cout << "\t\t\t\t\t .....-\n";  
    cout << "\t\t\t\t\t Press any key to proceed...";  
    getch();  
    system("cls");  
    parking ();  
}
```

void check () {



```
int a;

system ("cls");

cout << "\n\n\n\n";

cout << endl;

cout << "\t\t\t....." << endl;

cout << "\t\t\t\t Rizal Technological University" << endl;

cout << "\t\t\t\t\t Boni and Pasig Branch" << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t\t Check Your Vehicle" << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t Select within the options:" << endl;

cout << endl;

cout << "\t\t\t\t\t [1] Car" << endl;

cout << "\t\t\t\t\t [2] Motorcycle" << endl;

cout << "\t\t\t\t\t [3] Bicycle" << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t Input your option: ";

cin >> a;
```

```
switch (a) {
```

```
case 1: {
```

```
system ("cls");

cout << "\n\n\n\n";

cout << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t\t Rizal Technological University" << endl;

cout << "\t\t\t\t\t Boni and Pasig Branch" << endl;
```





case 2: {

```
system ("cls");
```

```
cout << "\n\n\n\n";
```

```
cout << endl;
```

```
cout << "\t\t\t....." << endl;
```

```
cout << "\t\t\t\t Rizal Technological University" << endl;
```

```
cout << "\t\t\t\t Boni and Pasig Branch" << endl;
```

```
cout << "\t\t\t....." << endl;
```

```
cout << "\t\t\t\t All Parking Numbers For Cars" << endl;
```

```
cout << "\t\t\t....." << endl;
```

```
string display;
```

```
ifstream filestream("generate-motorcycle.txt");
```

```
if (filestream.is_open()) {
```

```
while (getline (filestream,display) ) {
```

```
cout << "\n\t\t\t\t " << display << endl;
```

```
}
```

```
cout << "\n\t\t\t.....-";
```

```
filestream.close();
```

```
}
```

```
else {
```

```
cout << " " << endl;
```

```
}
```



```
cout<<"\n\t\t\t\t\t Press any key to go back to Parking Page...";  
getch();  
system("cls");  
parking();  
break;  
}  
  
case 3: {  
  
    system ("cls");  
    cout << "\n\n\n\n";  
    cout << endl;  
    cout << "\t\t\t\t\t....." << endl;  
    cout << "\t\t\t\t\t Rizal Technological University" << endl;  
    cout << "\t\t\t\t\t Boni and Pasig Branch" << endl;  
    cout << "\t\t\t\t\t....." << endl;  
    cout << "\t\t\t\t\t All Parking Numbers For Cars" << endl;  
    cout << "\t\t\t\t\t....." << endl;  
  
    string display;  
  
ifstream filestream("generate-bicycle.txt");  
  
    if (filestream.is_open()) {  
  
while (getline (filestream,display) ) {  
  
cout << "\n\t\t\t\t\t " << display << endl;  
  
}
```




INFORMATION TECHNOLOGY DEPARTMENT



```
cout << "\n\n\n\n";

cout << endl;

cout << "\t\t\t....." << endl;

cout << "\t\t\t\t\t Rizal Technological University" << endl;

cout << "\t\t\t\t\t Boni and Pasig Branch" << endl;

cout << "\t\t\t\t\t....." << endl;

cout << "\t\t\t\t\t Welcome to Parkout Page" << endl;

cout << "\t\t\t\t\t....." << endl;

cout << "\t\t\t\t\t Select within the options:" << endl;

cout << endl;

cout << "\t\t\t\t\t [1] Car" << endl;

cout << "\t\t\t\t\t [2] Motorcycle" << endl;

cout << "\t\t\t\t\t [3] Bicycle" << endl;

cout << "\t\t\t\t\t....." << endl;

cout << "\t\t\t\t\t Input your option: ";

cin >> a;

switch (a) {

    case 1: {

        int b;

        system ("cls");

        cout << "\n\n\n\n\n\n\n\n";

        cout << endl;

        cout << "\t\t\t\t\t....." << endl;

        cout << "\t\t\t\t\t Are you sure you want to parkout?" << endl;

        cout << "\t\t\t\t\t....." << endl;

        cout << "\t\t\t\t\t Select within the options:" << endl;

        cout << endl;
```



```
cout << "\\t\\t\\t\\t    Input [1] if Yes" << endl;

cout << "\\t\\t\\t\\t    Input [2] if Not yet" << endl;

cout << "\\t\\t\\t\\t....." << endl;

cout << "\\t\\t\\t\\t    Input your option: ";

cin >> b;

cout << endl;
```

```
switch (b) {
```

```
case 1: {
```

```
    string car_num;
    char accName[50];
```

```
    cout << "\\t\\t\\t\\t Enter Your Account Name: ";
    cin.ignore(256, '\\n');
```

```
    cin.getline(accName, 50);
```

```
    cout << "\\t\\t\\t\\t Enter Your Car Number: ";
    cin >> car_num;
    cout << "\\n\\t\\t\\t\\t.....-" << endl;
    cout << "\\t\\t\\t\\t\\t All the data is being recorded...";
    cout << "\\n\\t\\t\\t\\t        Press any key to proceed...";
    getch();
```

```
    ofstream parkout("parkout-records.txt", ios::app);
    parkout << "Account Name: " << accName << '\\n' << "Car Number: " << car_num << '\\n' << endl;
```

```
    system("cls");
    cout << "\\n\\n\\n\\n\\n\\n\\n\\n\\n\\n";
    cout << "\\t\\t\\t\\t        Thank you for Parking at" << endl;
```



INFORMATION TECHNOLOGY DEPARTMENT



```
system ("cls");

cout << "\n\n\n\n\n\n\n";

cout << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t Are you sure you want to parkout?" << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t Select within the options:" << endl;

cout << endl;

cout << "\t\t\t\t Input [1] if Yes" << endl;

cout << "\t\t\t\t Input [2] if Not yet" << endl;

cout << "\t\t\t\t....." << endl;

cout << "\t\t\t\t Input your option: ";

cin >> c;

cout << endl;
```

```
switch (c) {
```

case 1: {

```
string motorcycle_num;  
char accName[50];
```

```
cout << "\t\t\t Enter Your Account Name: ";  
  
cin.ignore(256, '\n');
```

```
cin.getline(accName, 50);
```

```
cout << "\t\t\t Enter Your Motorcycle Number: ";

cin >> motorcycle_num;

cout << "\n\t\t\t.....-" << endl;

cout << "\t\t\t All the data is being recorded...";

cout << "\n\t\t\t      Press any key to proceed...";
```




```
        system ("cls");

        parking ();

    }

    break;

}

case 3: {

    int d;

    system ("cls");

    cout << "\n\n\n\n\n\n\n";

    cout << endl;

    cout << "\t\t\t....." << endl;

    cout << "\t\t\t\t Are you sure you want to parkout?" << endl;

    cout << "\t\t\t....." << endl;

    cout << "\t\t\t\t Select within the options:" << endl;

    cout << endl;

    cout << "\t\t\t\t Input [1] if Yes" << endl;

    cout << "\t\t\t\t Input [2] if Not yet" << endl;

    cout << "\t\t\t....." << endl;

    cout << "\t\t\t\t Input your option: ";

    cin >> d;

    cout << endl;

    switch (d) {

    case 1: {

        string bicycle_num;

        char accName[50];
```




```
cout << "\t\t\t Enter Your Account Name: ";

cin.ignore(256, '\n');

cin.getline(accName, 50);

cout << "\t\t\t Enter Your Bicycle Number: ";

cin >> bicycle_num;

cout << "\n\t\t\t.....-" << endl;

cout << "\t\t\t All the data is being recorded...";

cout << "\n\t\t\t      Press any key to proceed...";

getch();

ofstream parkout("parkout-records.txt", ios::app);

parkout << "Account Name: " << accName << '\n' << "Bicycle Number: " << bicycle_num << '\n' << endl;

system("cls");

cout << "\n\n\n\n\n\n\n\n\n\n";

cout << "\t\t\t      Thank you for Parking at" << endl;

cout << "\t\t\t      Rizal Technological University!!!" << endl;

cout << "\t\t\t      ..... \n";

cout << "\t\t\t      Please proceed to Logout your Account...";

cout << "\n\t\t\t      Press any key to proceed...";

getch();

system("cls");

parking();

break;

}

case 2: {

    system("cls");

    parking();
```



```
void logout () {

    int c;

    system ("cls");

    cout << "\n\n\n\n\n\n\n\n\n\n";

    cout << endl;

    cout << "\t\t\t\t\t....." << endl;

    cout << "\t\t\t\t\t Are you sure you want to exit?" << endl;

    cout << "\t\t\t\t\t....." << endl;

    cout << "\t\t\t\t\t Select within the options:" << endl;

    cout << endl;

    cout << "\t\t\t\t\t Input [1] if Yes" << endl;

    cout << "\t\t\t\t\t Input [2] if Not yet" << endl;
```



```
cout << "\t\t\t....." << endl;

cout << "\t\t\t Input your option: ";

cin >> c;

cout << endl;


switch (c) {

case 1: {

        system("cls");

        notif(); break;

    }

case 2: {

        system("cls");

        parking();

        break;

    }

default:

    cout << endl;

    cout << "\t\t\t Invalid input keys, select within the options." << endl;

    cout << "\n\n\t\t\t Press any key to proceed...";

    getch ();

    system ("cls");

    logout ();

}

}
```



```
void notif () {
```

```
    int bar = 219, back = 177;
```

```
    system("COLOR 0f");
```

```
    system("cls");
```

```
    printf("\e[?251]");
```

```
    SetConsoleCP(437);
```

```
    SetConsoleOutputCP(437);
```

```
    cout << "\n\n\n\n\n\n\n\n\n";
```

```
    cout << endl;
```

```
    cout << "\t\t\t\t\t You are now logging out..." << endl;
```

```
    cout << "\n\t\t\t\t\t";
```

```
    for(int i = 0; i < 36; i++) {
```

```
        cout << (char)back;
```

```
        cout << "\r";
```

```
        cout << "\t\t\t\t\t";
```

```
    }
```

```
    for (int i = 0; i < 36; i++) {
```

```
        cout << (char)bar;
```

```
        Sleep(150);
```

```
    }
```

```
    cout << "\n\n\t\t\t\t\t Press any key to proceed...";
```



```
getch ();  
  
system("cls");  
  
main();  
  
}
```



VIII. CONCLUSION

A developer creates a parking system using C++ programming, and it can be seen that the C++ programming language is able to make activities simple and convenient. The developers created this parking system mixed with a log-in system to provide a secure and stress-free environment for the students of Rizal Technological University. Parking systems are helpful, reduce the amount of traffic on campus and the stress that is involved with trying to find a parking spot on campus and lower the amount of time spent looking for a parking space, provide vital data on parking availability, and precise mapping of parking spaces. Rather than fighting for parking and sometimes even losing a parking spot, it will be easier with the parking system. In addition to this, it will be easier to get parking and avoid stress because you just log in and you can get a parking slot.