








# OOP WITH C# PROJECT REPORT

For Land's End Resorts and Spa

Object Oriented Programming with C#

Module Code: CS107.3

-  Title of the Module - Object Oriented Programming with C#
-  Name of the Client - Mr. Sanjaya Perera(Manager of Land's End Resorts and spa)
-  Name of the System - Hotel Management System
-  Name of the Lecturer - Mrs. Sulari Fernando
-  Date of Submission - 7<sup>th</sup> August 2020

## Team members

- |                       |   |          |
|-----------------------|---|----------|
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## ACKNOWLEDGEMENT

On behalf of all members of our group, our gratitude goes to the following,

- ✚ Miss Sulari Fernando, our lecturer in charge of the C# Object Oriented programming language module for rendering her expertise on developing our system according to our client needs.
- ✚ Our client, The Land's End Resorts and Spa, the manager Mr. Sanjaya Perera and all associated with the hotel.  
our heartfelt gratitude, for your time, support and encouragement.
- ✚ The team members of group 28 itself for their dedication and commitment to making this project, not just an assignment success but hopefully more.

*Last but not least, to all who are not mentioned here.....  
our sincere gratitude goes out for you.....*

*Our sincerest thank you and acknowledgement to all  
of you!*

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# **INTRODUCTION**

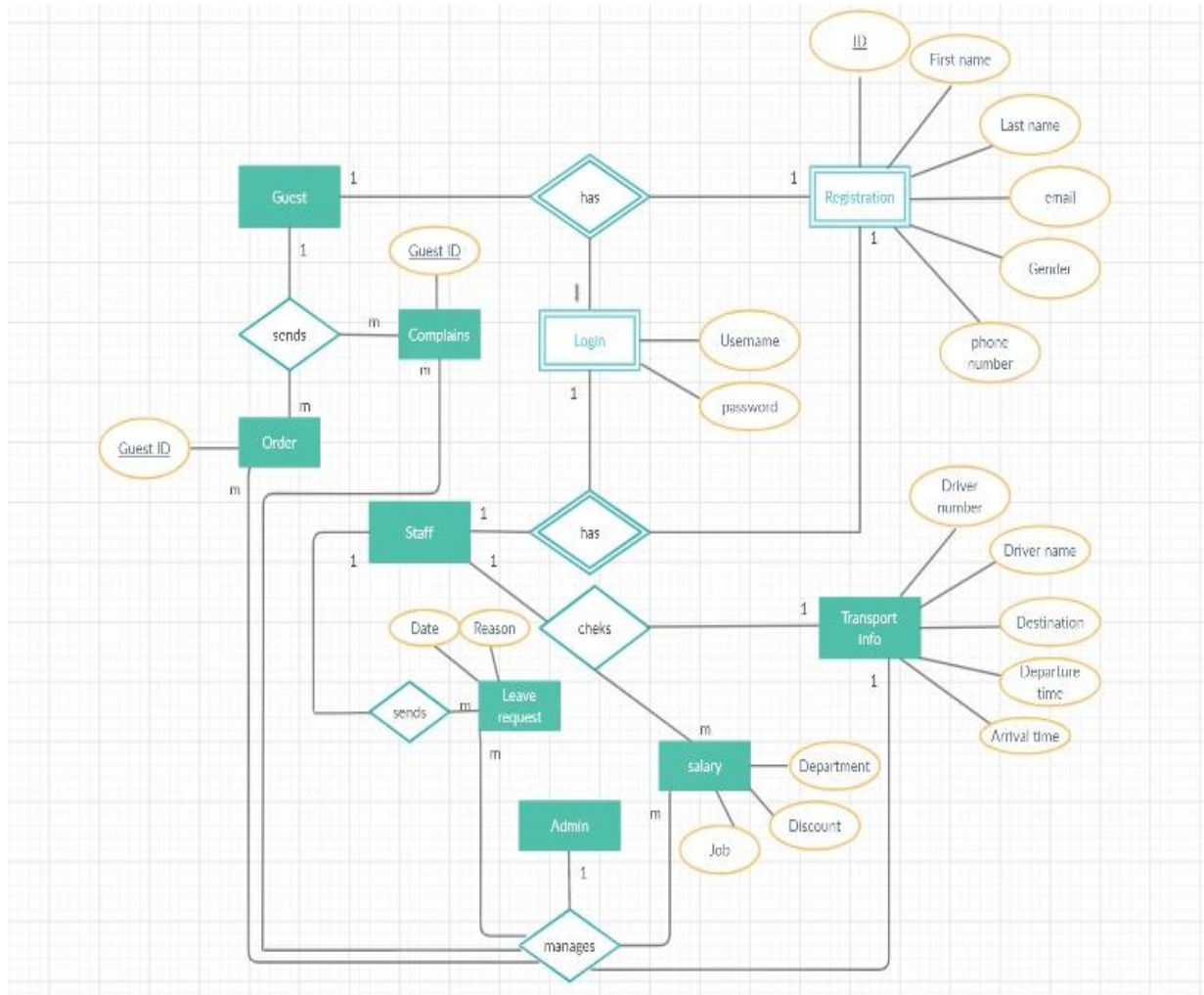
We built this hotel management system for Land's End Resorts and Spa. We have used Object Oriented programming with C# to develop this system. This system has been developed in such a way that both the staff and the guest can be connected for all the activities that take place in the hotel. A new guest can fill the new user form and create an account and then they can fulfill their requirements at the hotel or if someone already have an account, log in to the system and fulfill the requirements. The hotel has five departments. They are Management, Maintenance, Front office, Housekeeping and Food & Beverage. After a guest logs in to the system, the system gives them a form of three departments to choose from to meet their requirements. Then after selecting a one department you can select or type the needs. After submit your needs they go to the hotel management. The hotel management will then cater to your needs.

A new staff member can fill the new employee form and create their account with this system or if you are already an employee, you can log in to the system and fulfill your needs. After submit your needs, they go to the hotel management. Also we use this system to adjust the salaries of the employees. And staff member can request leaves and view available transport.

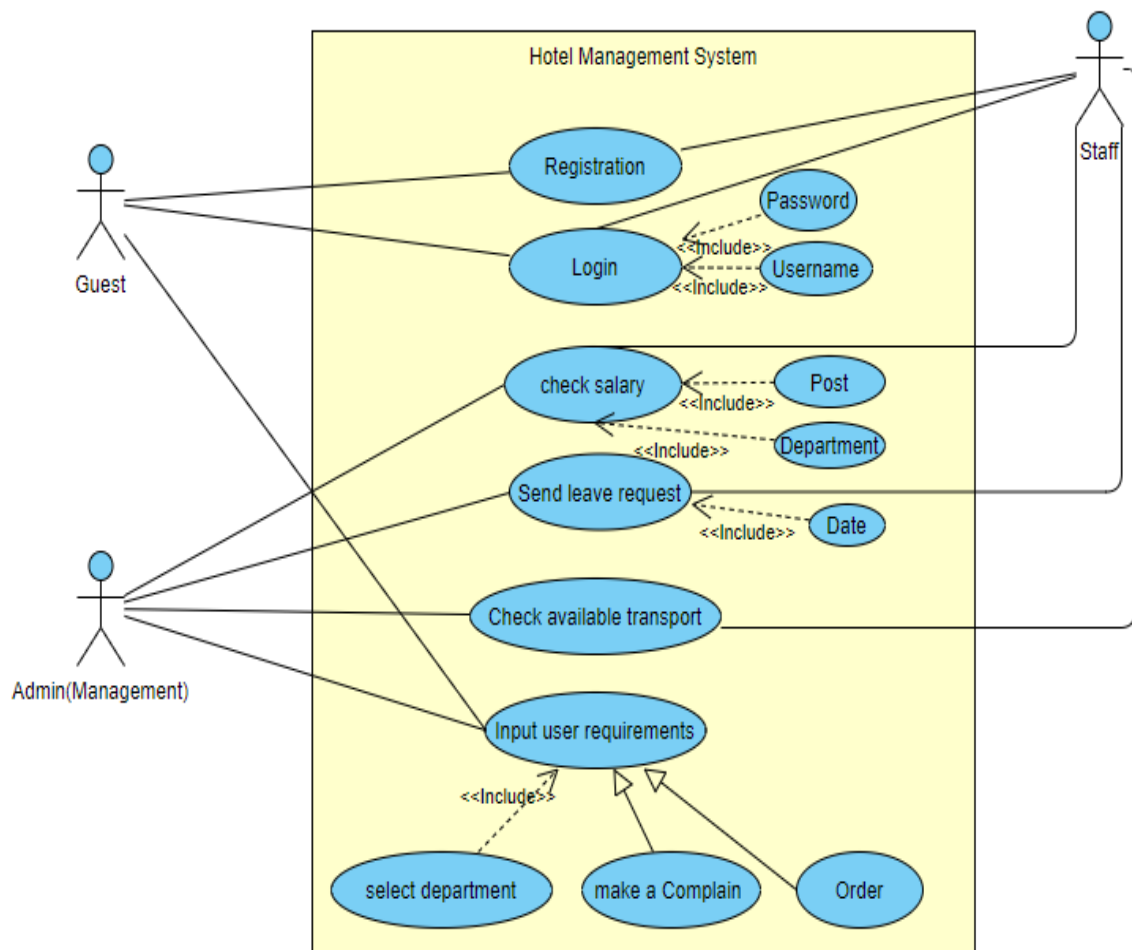
Finally, by developing this system we hope to connect with the hotel in the most convenient way.

With this system it is very easy for a guest or staff member of the hotel to connect with the hotel and fulfill their needs.

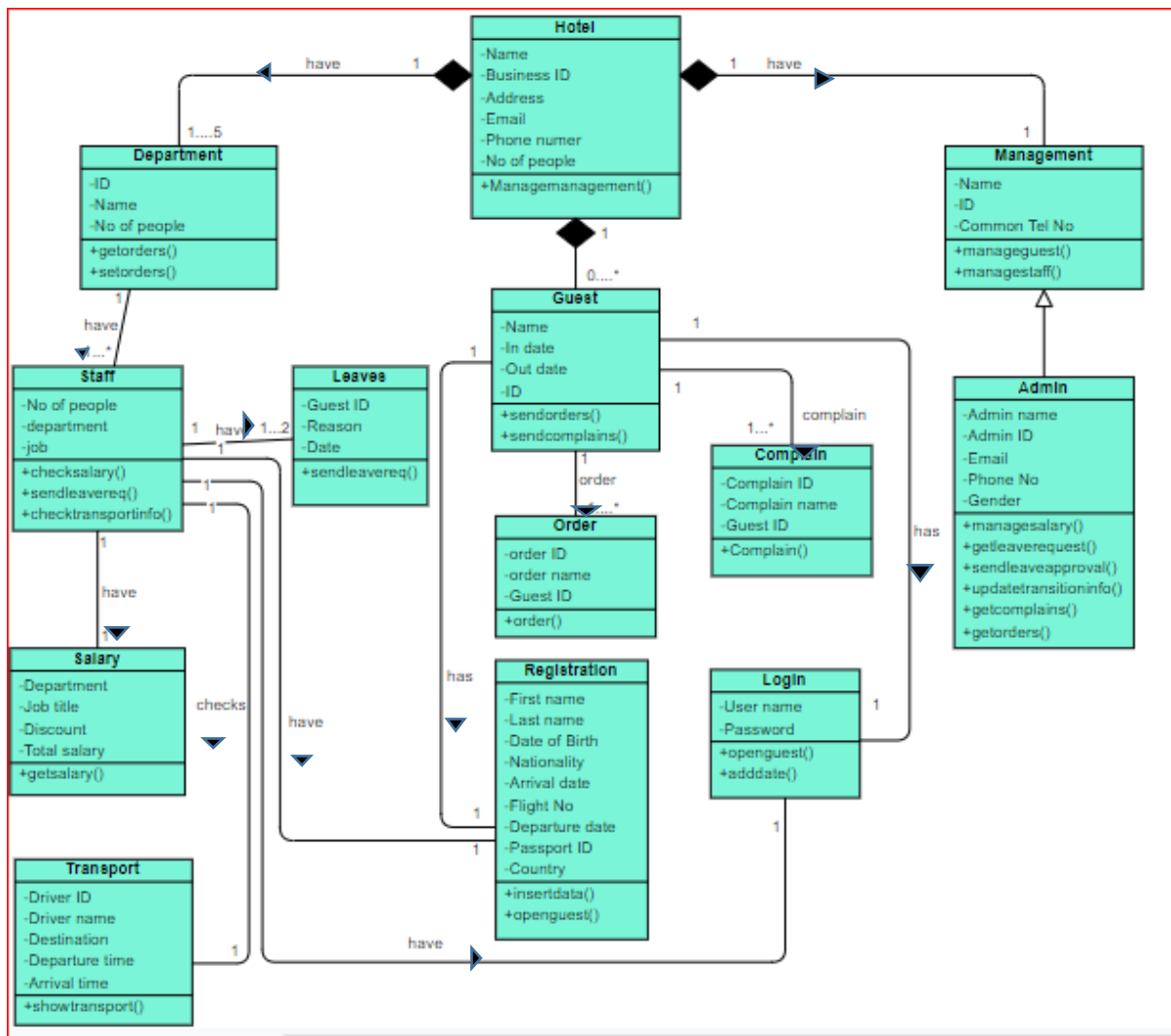
## ENTITY RELATIONSHIP DIAGRAM



## USECASE DIAGRAM



## CLASS DIAGRAM

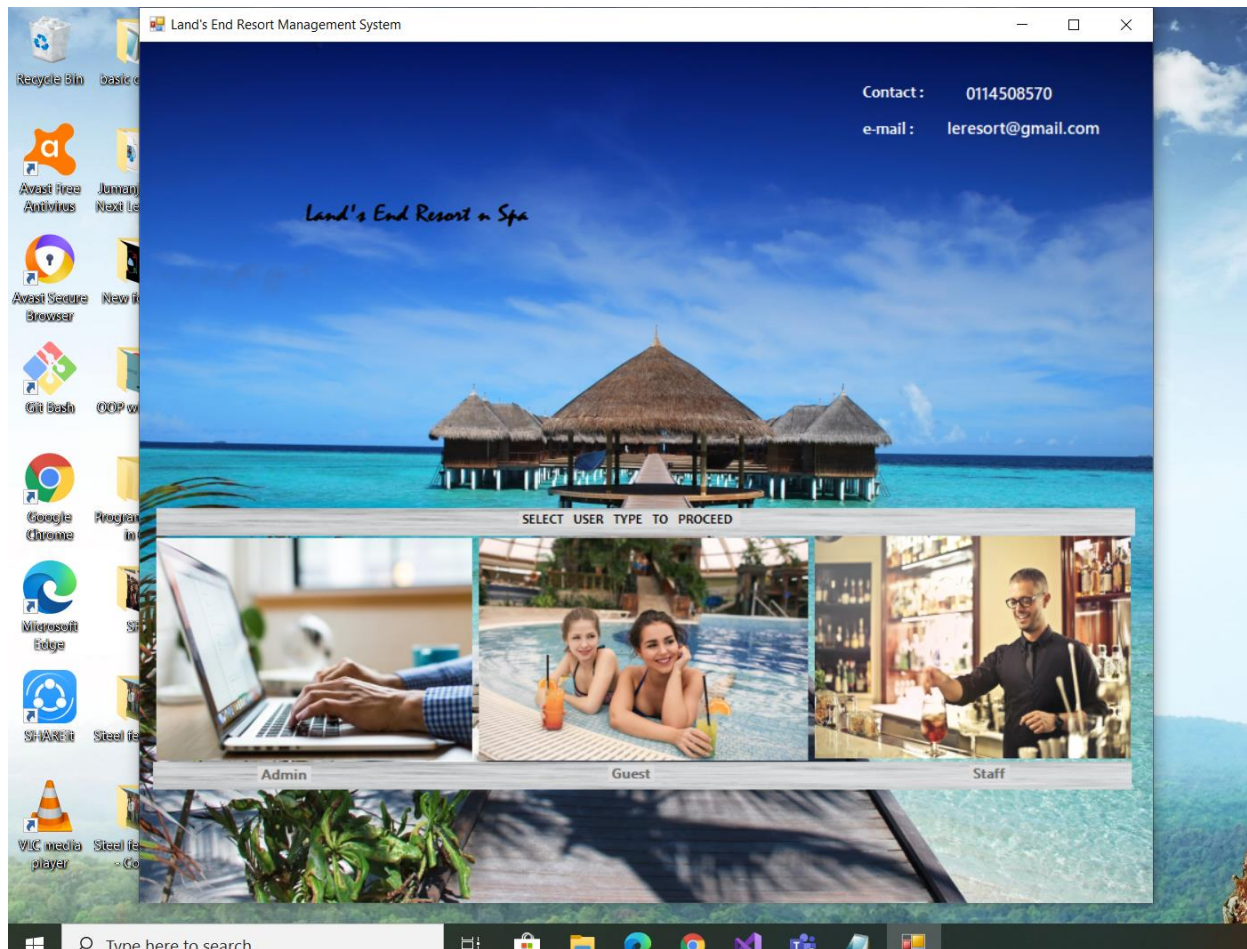




## SCREENSHOTS OF THE SYSTEM

### Welcome UI-

This is the Welcome UI of our system. You can choose your User type as Admin, Guest or Staff.



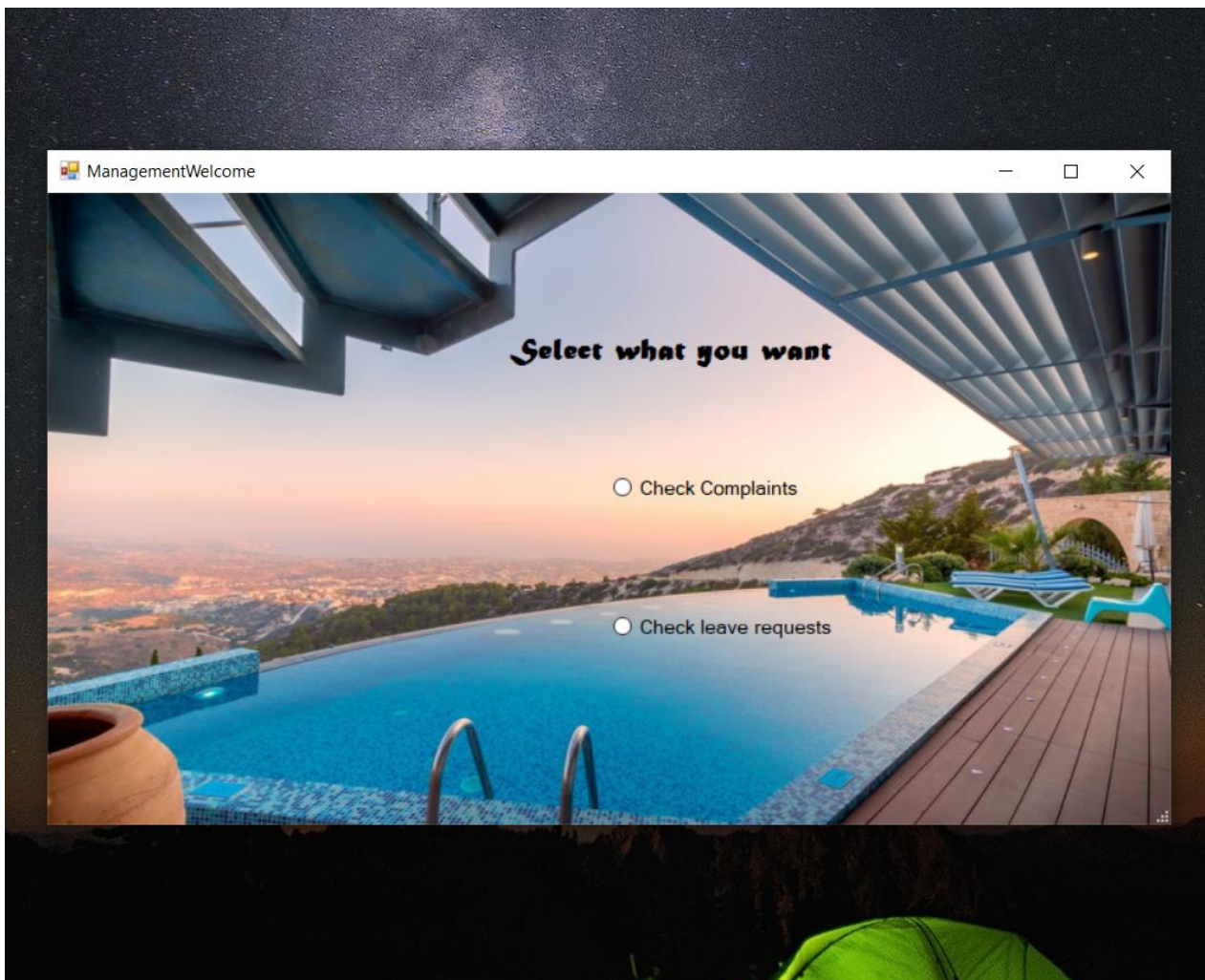
We have divided our main path into 3 sub sections.

- Admin
- Guest
- Staff

## Admin

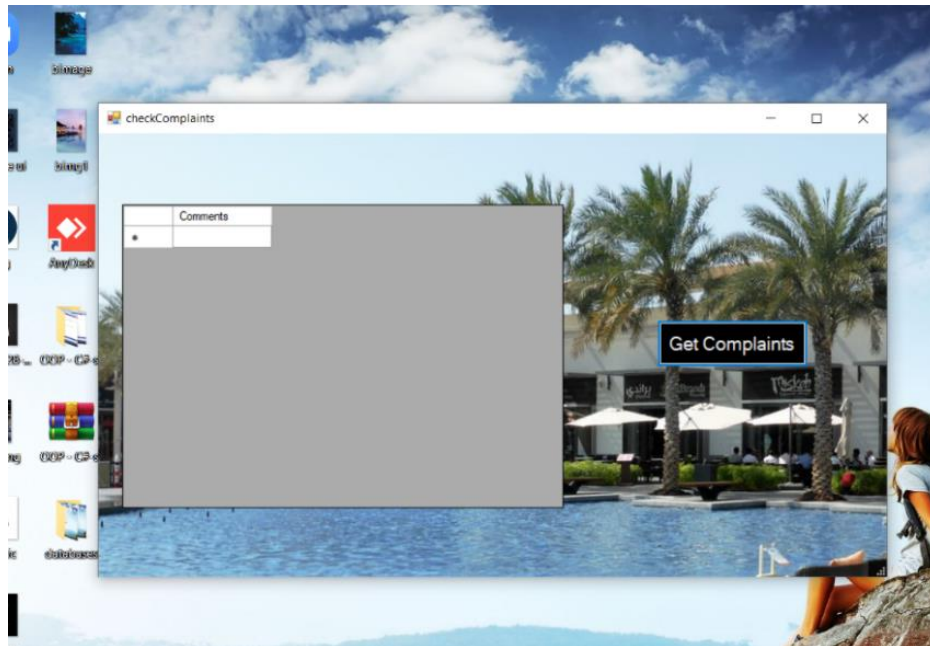
Administrative Manager:

Admins or the management crew who control the functions of the hotel management system has given the access to application and this is the main user interface for them. They can select to view guest complaints or the orders and handle the leave requests sent by staff members

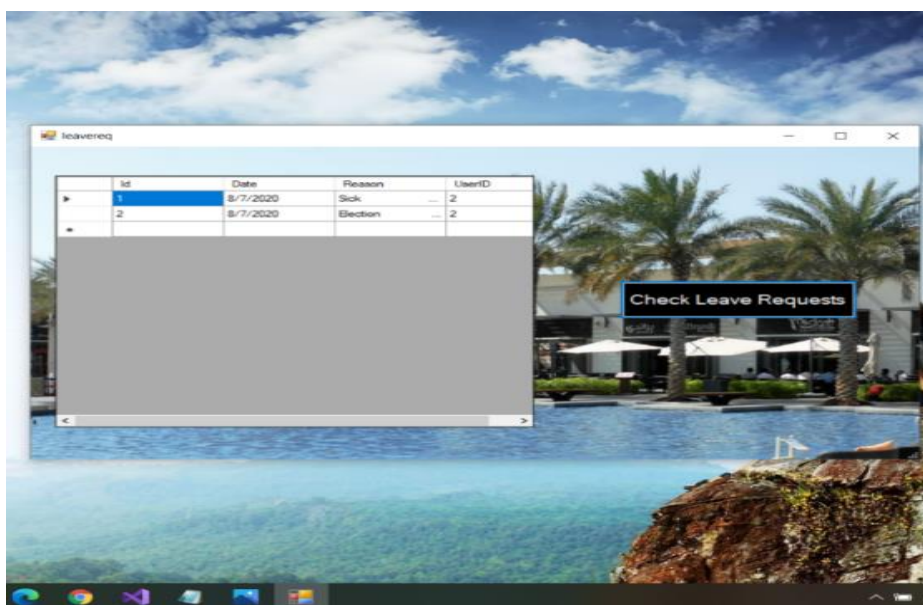


An admin can handle the system in two ways .

1. Get Complaints-when user do complaints, an admin can see them using this UI by clicking Get Complaints button.



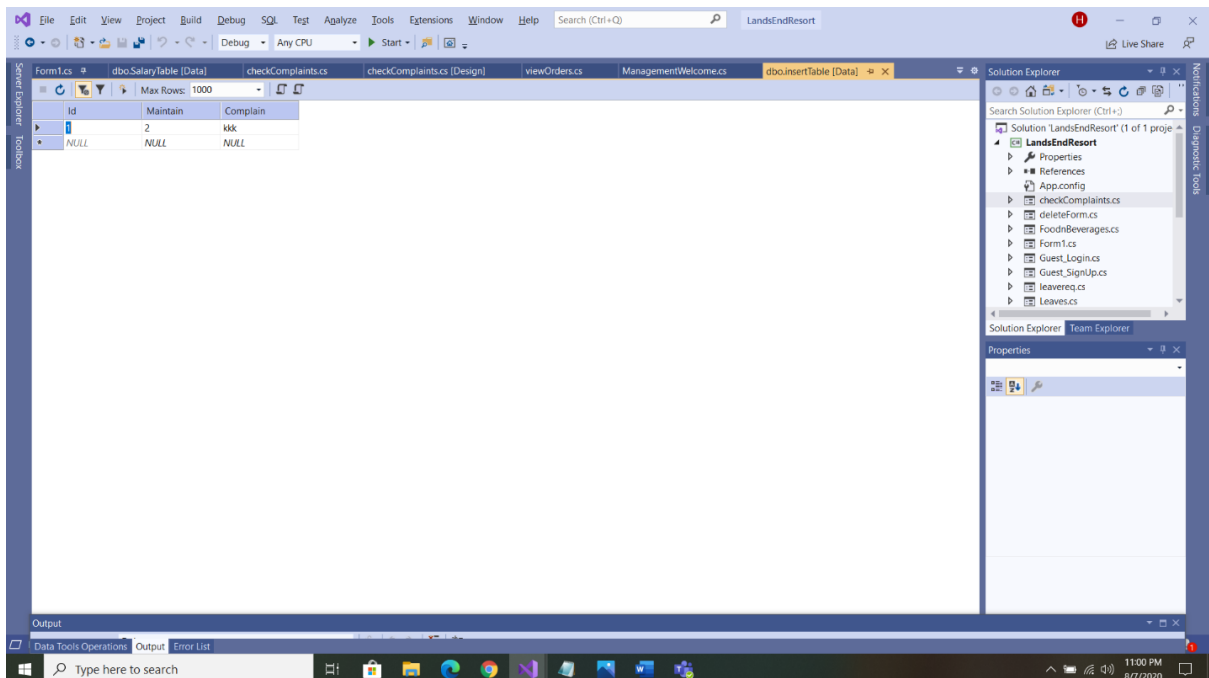
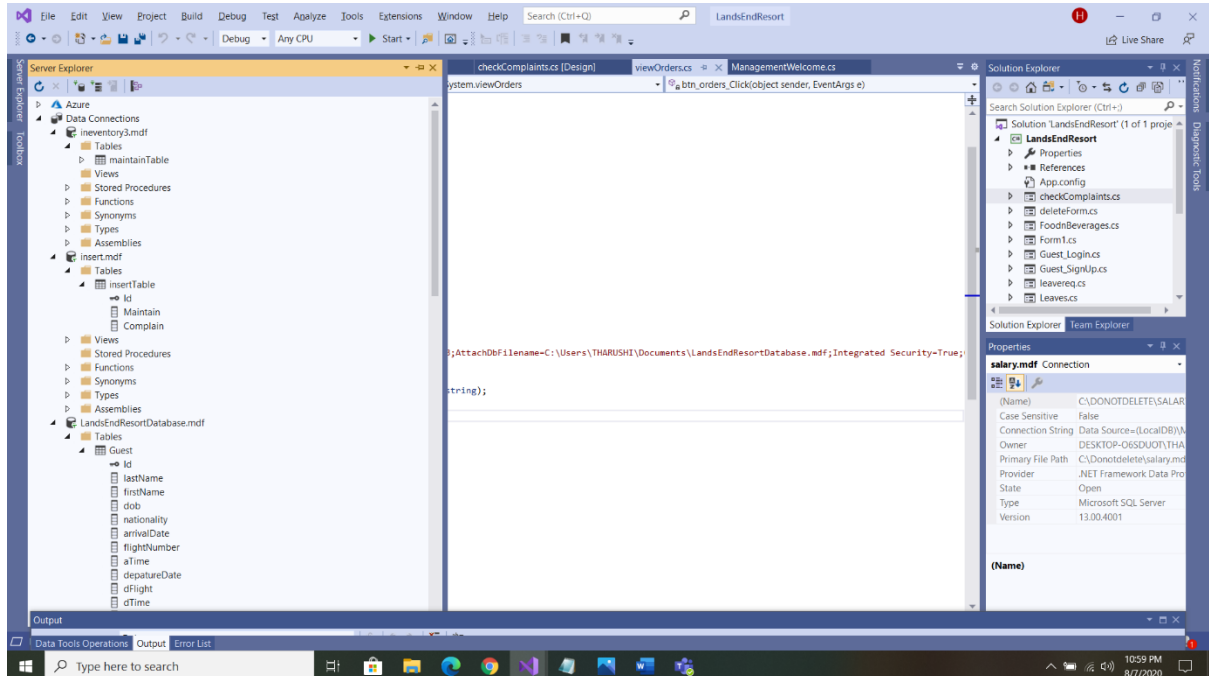
2. Check Leave Request – When staff applies requests for leave, an admin can look them from using Check Leave Request option.



Related databases:

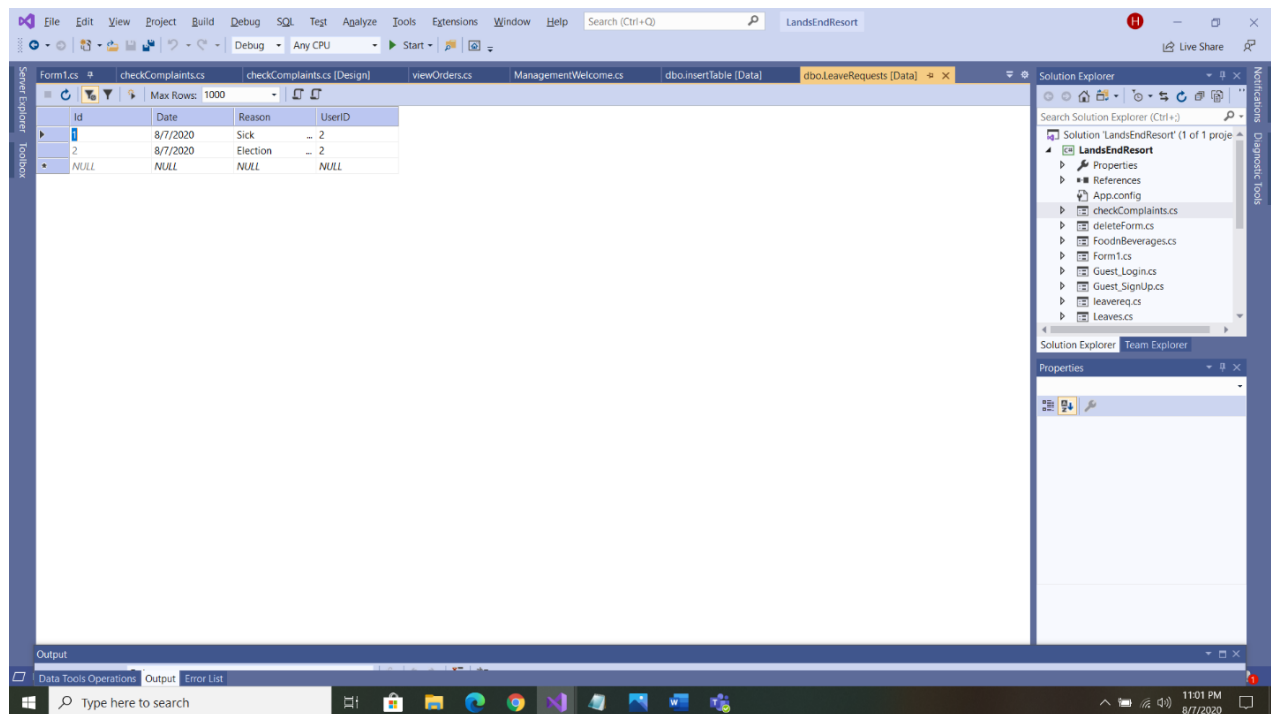
Admin can retrieve data from the databases

Complain in insert table:





## Leave Request Table :



The screenshot shows the Visual Studio IDE with the 'dbo.LeaveRequests [Data]' table open. The table has four columns: Id, Date, Reason, and UserID. It contains three rows of data. The Solution Explorer on the right shows the project structure for 'LandsEndResort', including files like App.config, checkComplaints.cs, deleteForms.cs, FoodnBeverages.cs, Form1.cs, Guest\_Login.cs, Guest\_SignUp.cs, leaveReq.cs, and Leaves.cs. The Properties window is also visible on the right.

Id	Date	Reason	UserID
1	8/7/2020	Sick	2
2	8/7/2020	Election	2
NULL	NULL	NULL	NULL

## Guest

Assume that you are a new guest for The Land's End Resorts & Spa, this is your starting point of our system. After the Welcome UI, if you choose this guest option this is the first window.

### Guest Registration:

You must be a member of our system before going through it. For that first you have to register using this registration UI.

By entering guest booking details and guest personal details ,you can be registered.

The screenshot shows a desktop environment with a window titled "Form1" containing a "GUEST REGISTRATION" form. The form is divided into two main sections: "BOOKING DETAILS" and "GUEST DETAILS".

**BOOKING DETAILS**

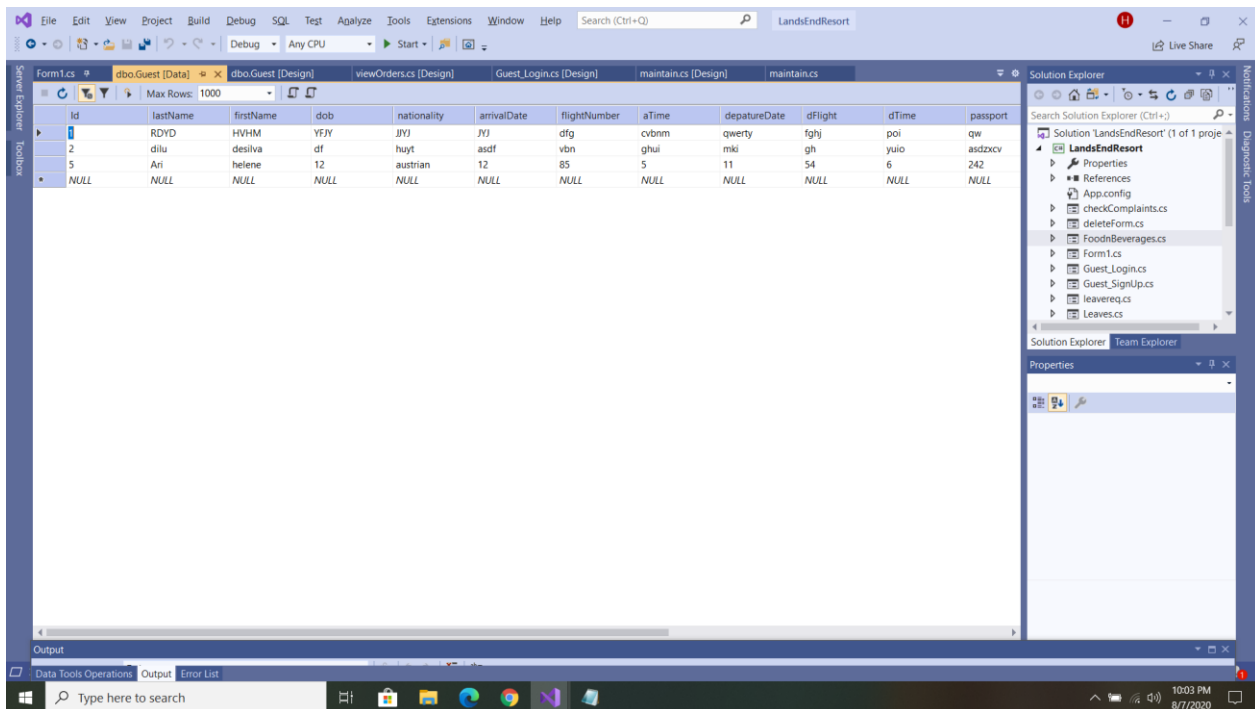
Last Name	<input type="text"/>	First Name	<input type="text"/>
Date Of Birth	<input type="text"/>	NATIONALITY	<input type="text"/>
ARRIVAL DATE	<input type="text"/>	FLIGHT NUMBER	<input type="text"/>
DEPARTURE DATE	<input type="text"/>	FLIGHT NUMBER	<input type="text"/>
		TIME	<input type="text"/>
		TIME	<input type="text"/>

**GUEST DETAILS**

PASSPORT ID	<input type="text"/>	DATE OF ISSUE	<input type="text"/>
NEW USER PASSWORD	<input type="text"/>	COUNTRY	<input type="text"/>
TELEPHONE	<input type="text"/>	E-MAIL	<input type="text"/>
		FAX	<input type="text"/>

At the bottom of the form, there are two buttons: "SIGN UP" and "LOGIN". The background of the form is a scenic image of a tropical resort with wooden walkways and thatched-roof buildings over water.

Guest table for guest registration, form ,login table, delete account and change password:



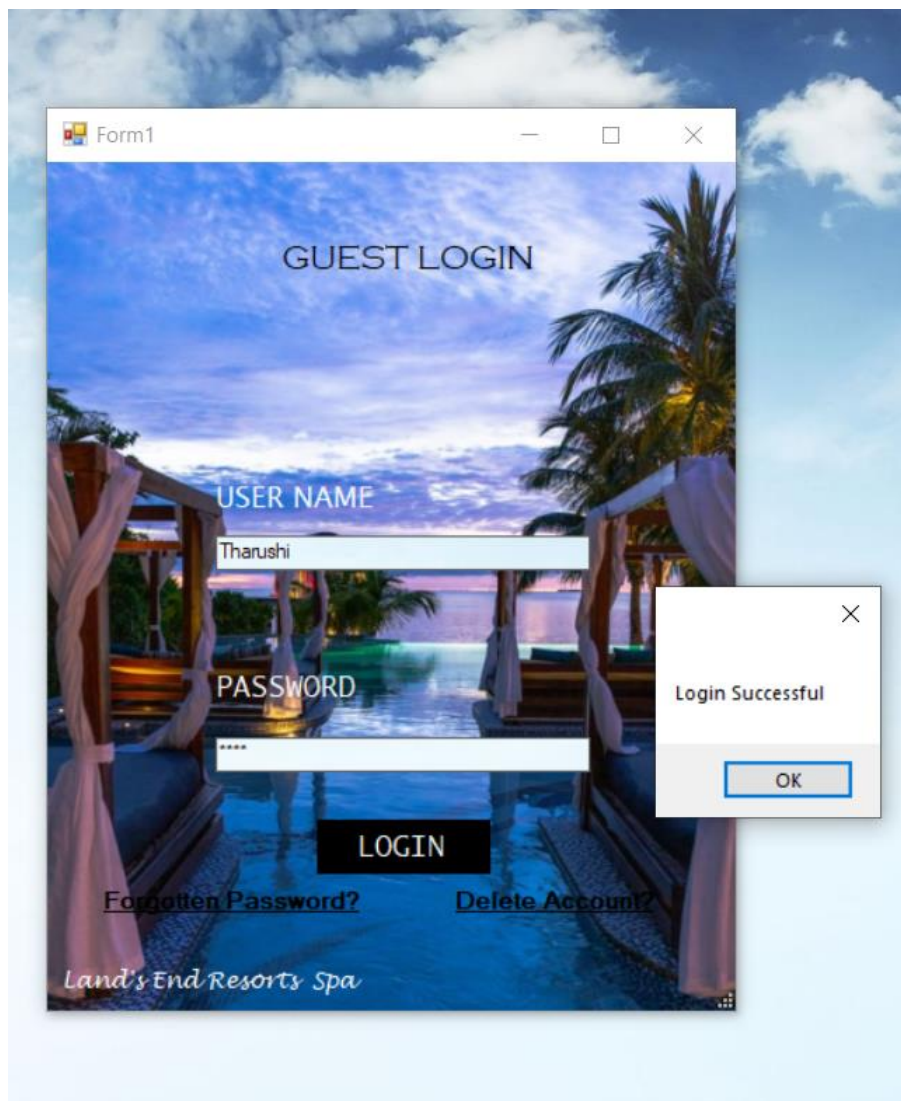
The screenshot shows a Visual Studio IDE with a SQL table named 'dbo.Guest' open in the 'Data' view. The table has 12 columns: Id, lastName, firstName, dob, nationality, arrivalDate, flightNumber, aTime, departureDate, dFlight, dTime, and passport. The table contains three rows of data.

Id	lastName	firstName	dob	nationality	arrivalDate	flightNumber	aTime	departureDate	dFlight	dTime	passport
1	RDYD	HVHM	YFJY	JYJ	JYJ	dfg	cvbnm	qwerty	fghj	poi	qw
2	dilu	desilva	df	huyt	asdf	vbn	ghui	mki	gh	yuio	asdzxcv
5	Ari	helene	12	austrian	12	85	5	11	54	6	242
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Guest Login Form :

After being registered, when you log in next time you will use this login interface.

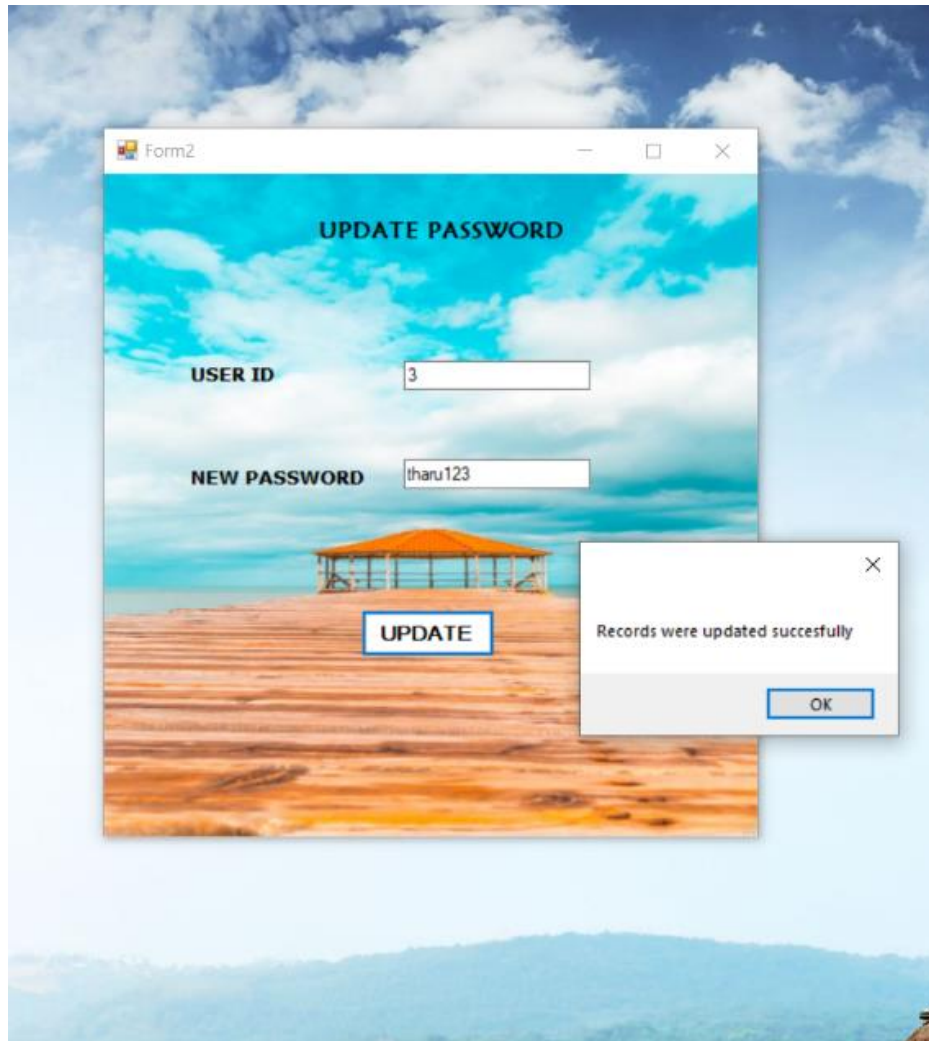
After providing user name and password you can access this guest login.





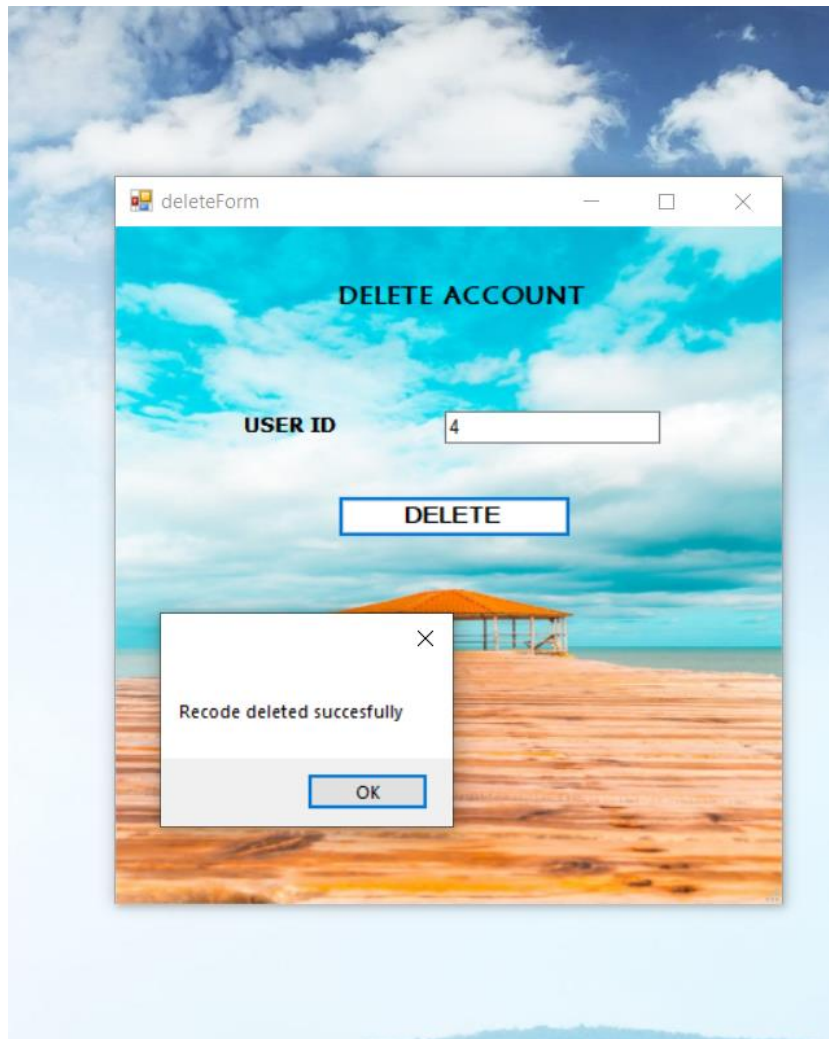
## Change Password :

If any guest need to change their password this window helps it. By providing user Id and Password they can change it.

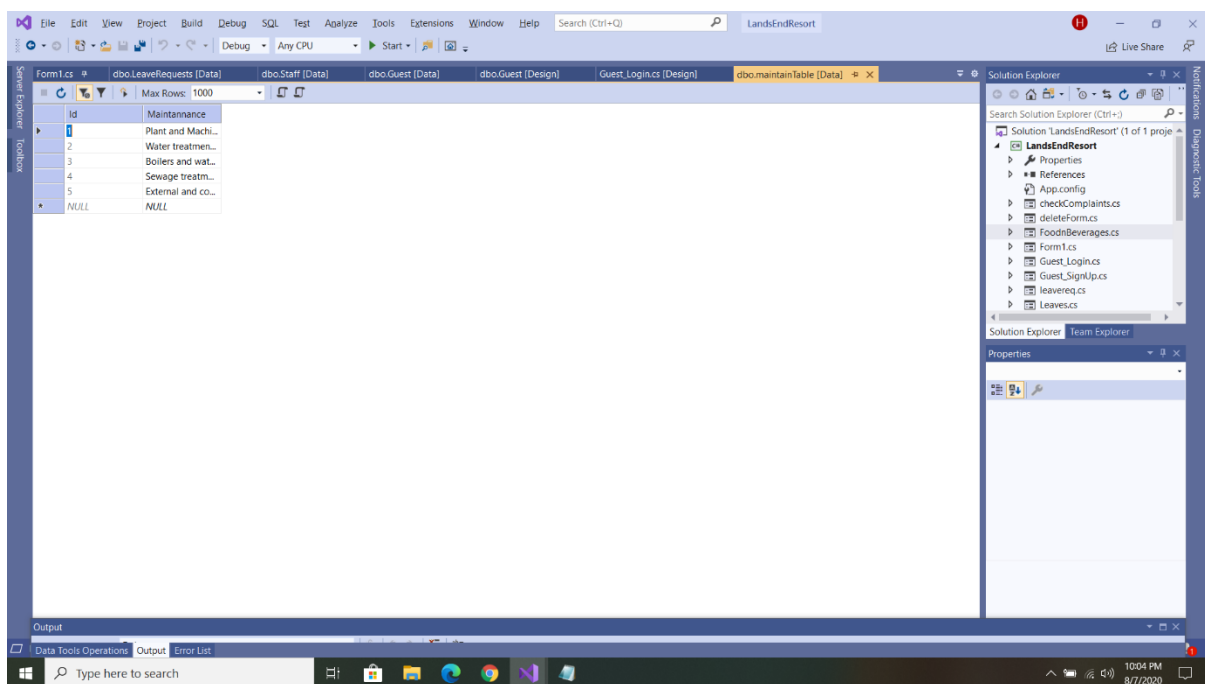
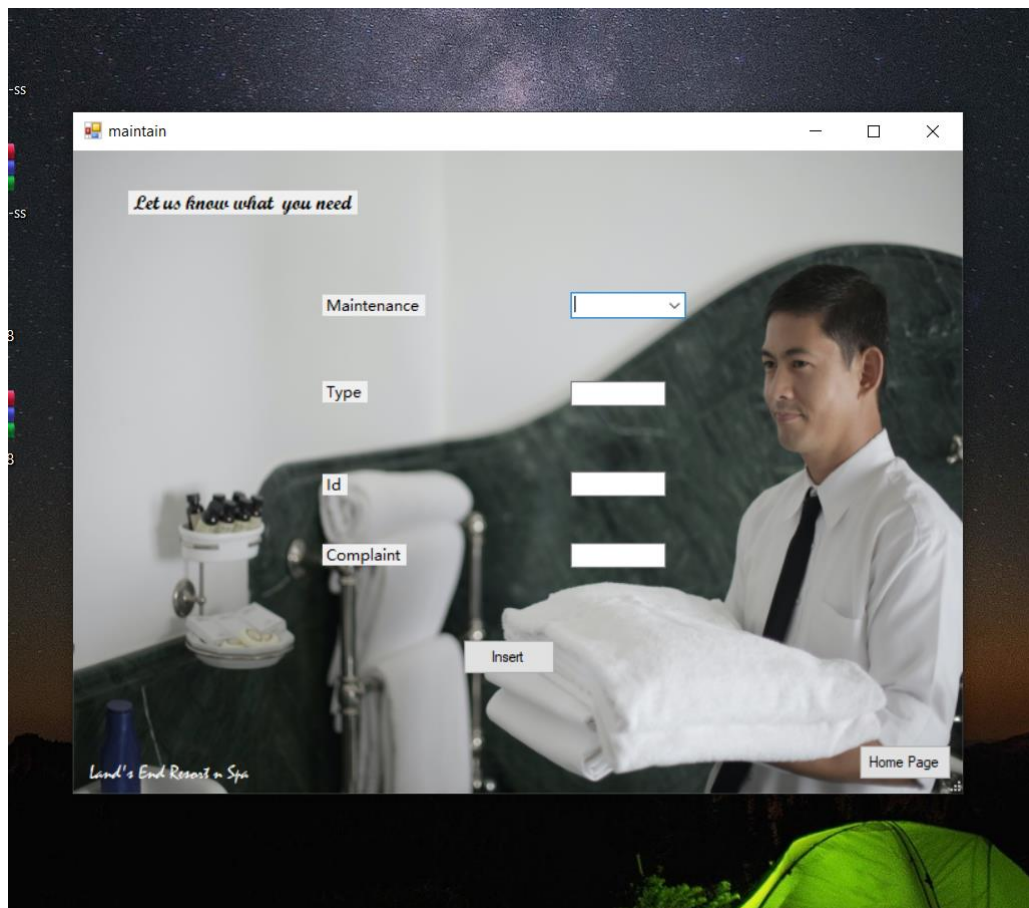


Delete Account :

If any guest need to change their password this window helps it. By providing user Id and Password they can change it.



Guest making complaints about Maintenance :

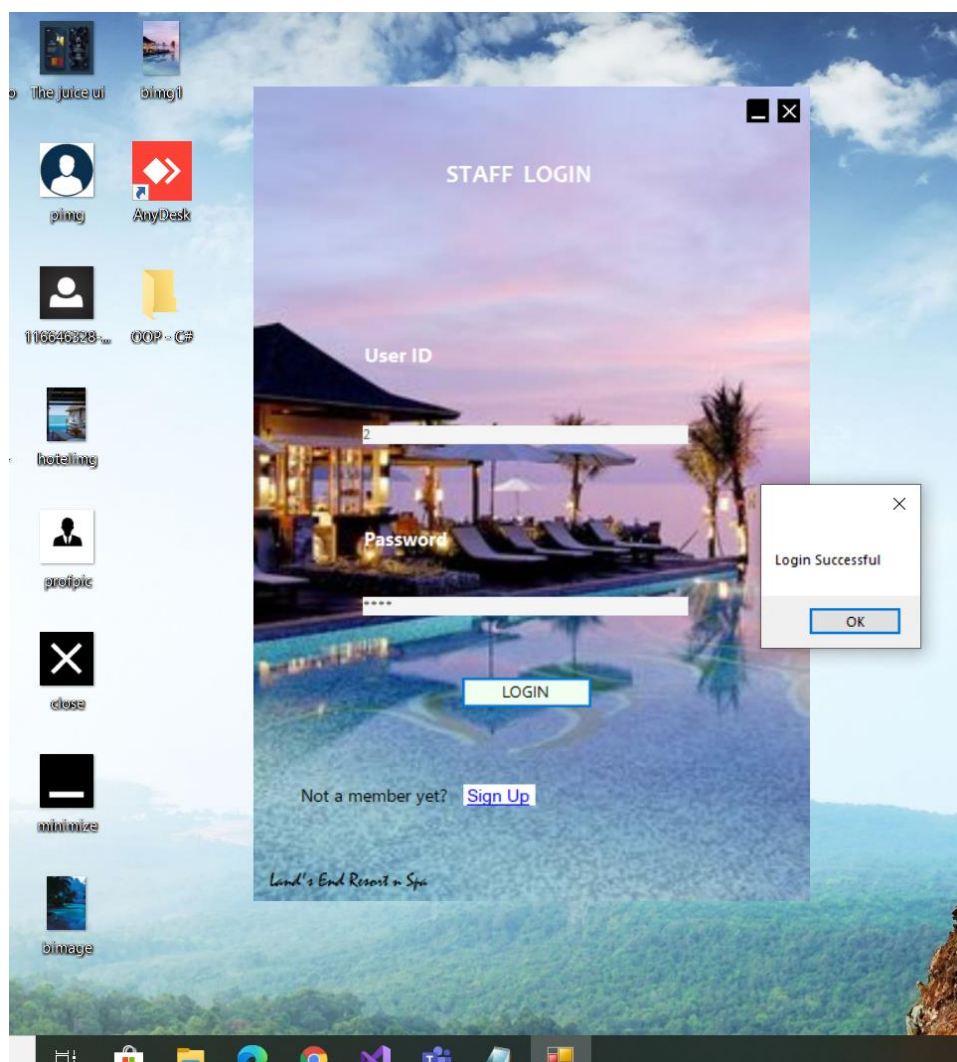


## Staff

### Staff Login:

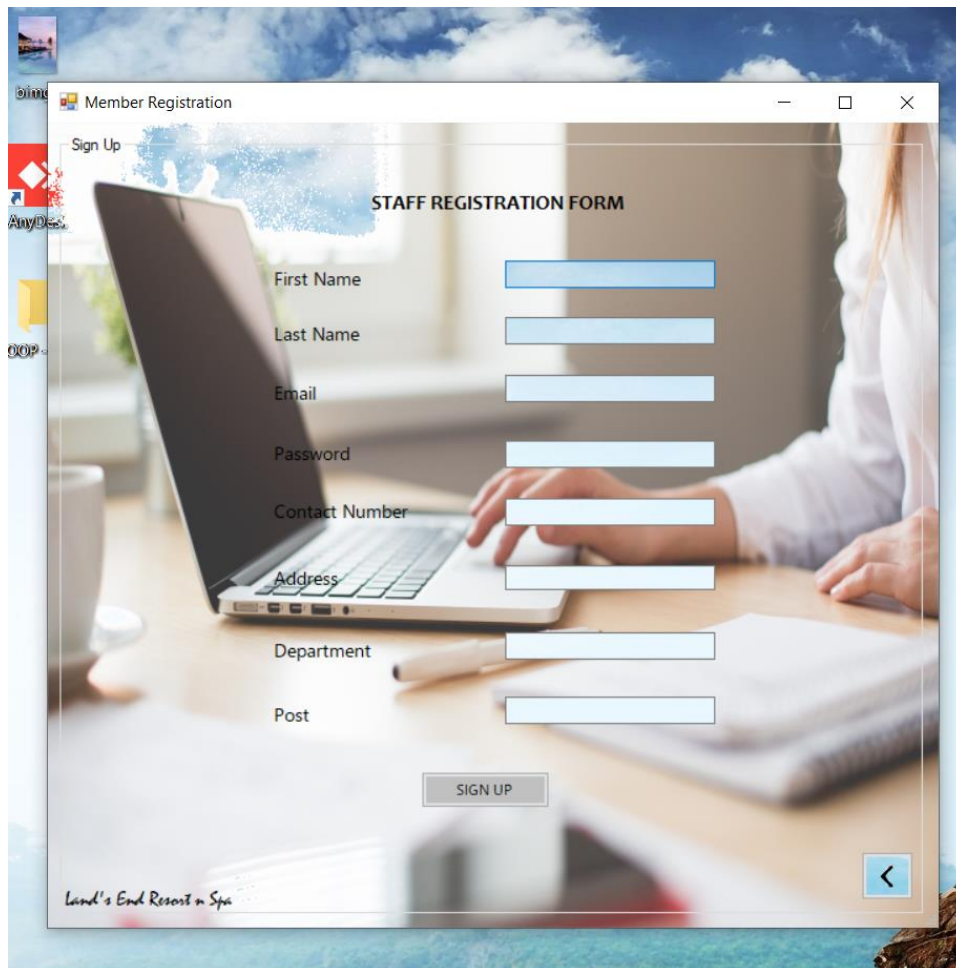
If you choose the staff option from the welcome UI. This will be the first Interface of the staff.

You can Login by entering User ID and the Password. If you are still not a member, then You can go to next UI of Staff Registration Interface.



### Staff Registration Interface:

This is the sign-up window for the staff. By Entering details of the staff member (First Name, Last Name, E-Mail, Password... etc.), they can create their user account.

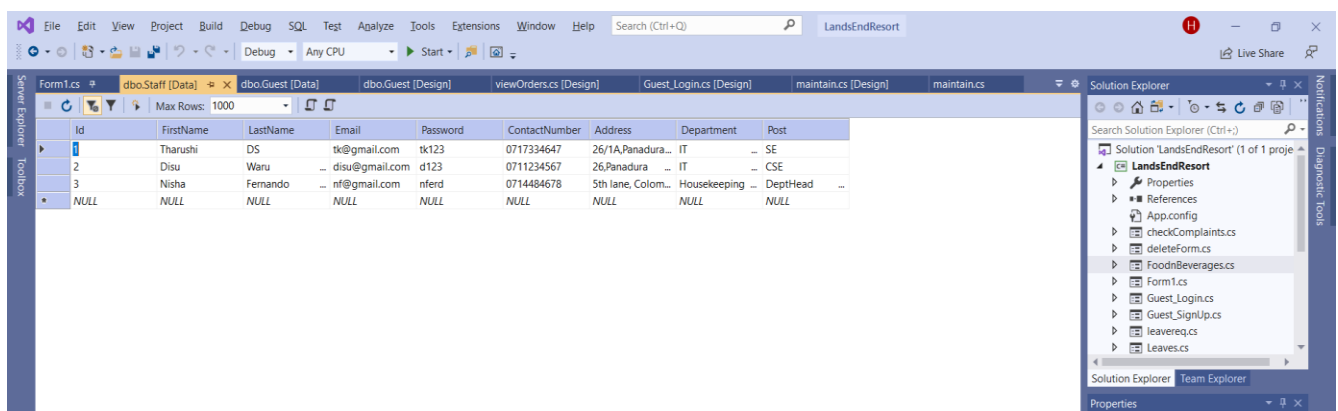
The image shows a screenshot of a web browser window displaying a 'Member Registration' form. The form is titled 'STAFF REGISTRATION FORM' and is set against a background image of a person working on a laptop. The form includes input fields for 'First Name', 'Last Name', 'Email', 'Password', 'Contact Number', 'Address', 'Department', and 'Post'. A 'SIGN UP' button is located at the bottom of the form. The browser's address bar shows 'Land's End Resorts n Spa'. The window title is 'Member Registration'.

Staff details table for staff Registration:

### Staff Management System:



After being a member, you can access this Staff Management System. It provides an interface to staff members to meet their requirements. Such as calculating salary, request a leave and look available transportation information.



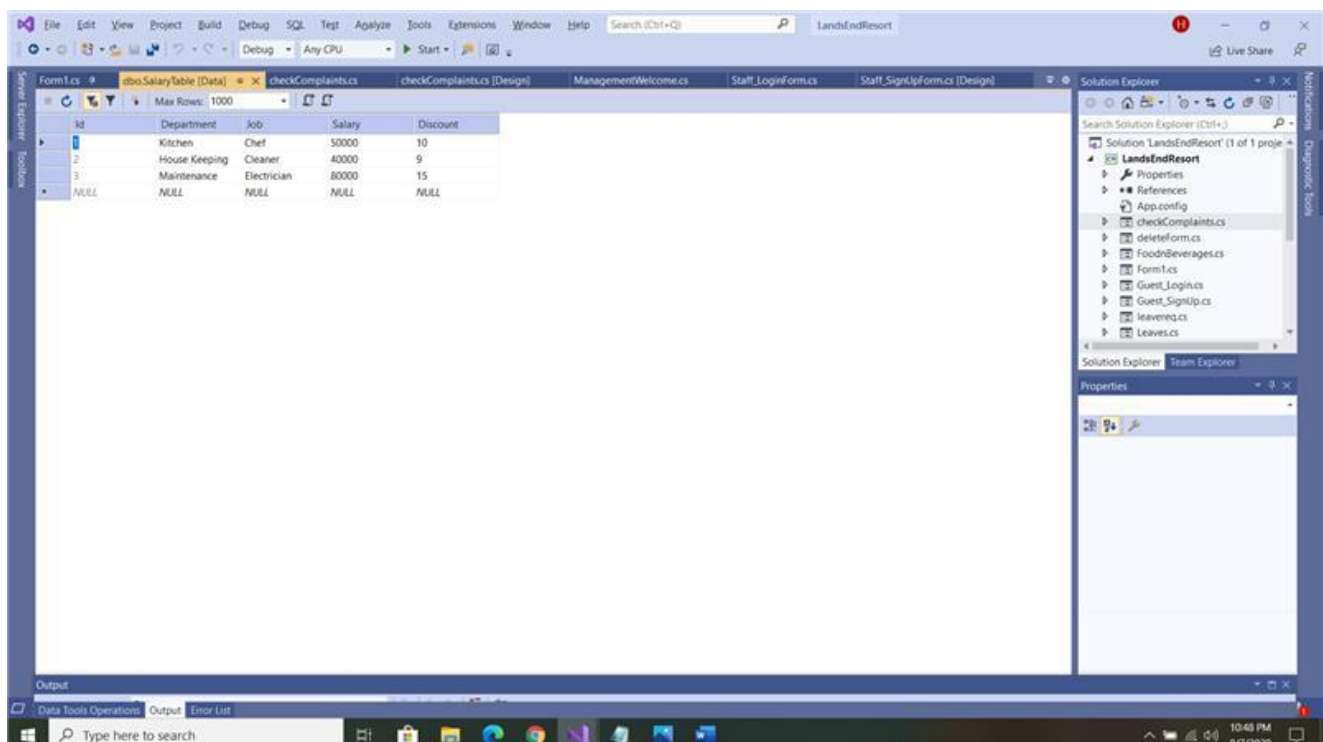
## Calculating Salary:

This is the salary calculating interface coming under the staff Management System.

When a staff member enters their details, it will calculate the salary.

The screenshot shows a Windows application window titled 'Form1'. It contains several input fields and a table. The 'Department' dropdown is set to 'House Keeping'. The 'Job' text box contains 'Cleaner'. The 'Id' text box contains '2'. The 'Salary' text box contains '40000'. The 'Discount %' text box contains '9'. The 'Total Salary' text box displays '43600'. The 'Profit' text box displays '3600'. There are 'Insert' and 'Calculate' buttons at the bottom. A small table on the right shows the calculation details.

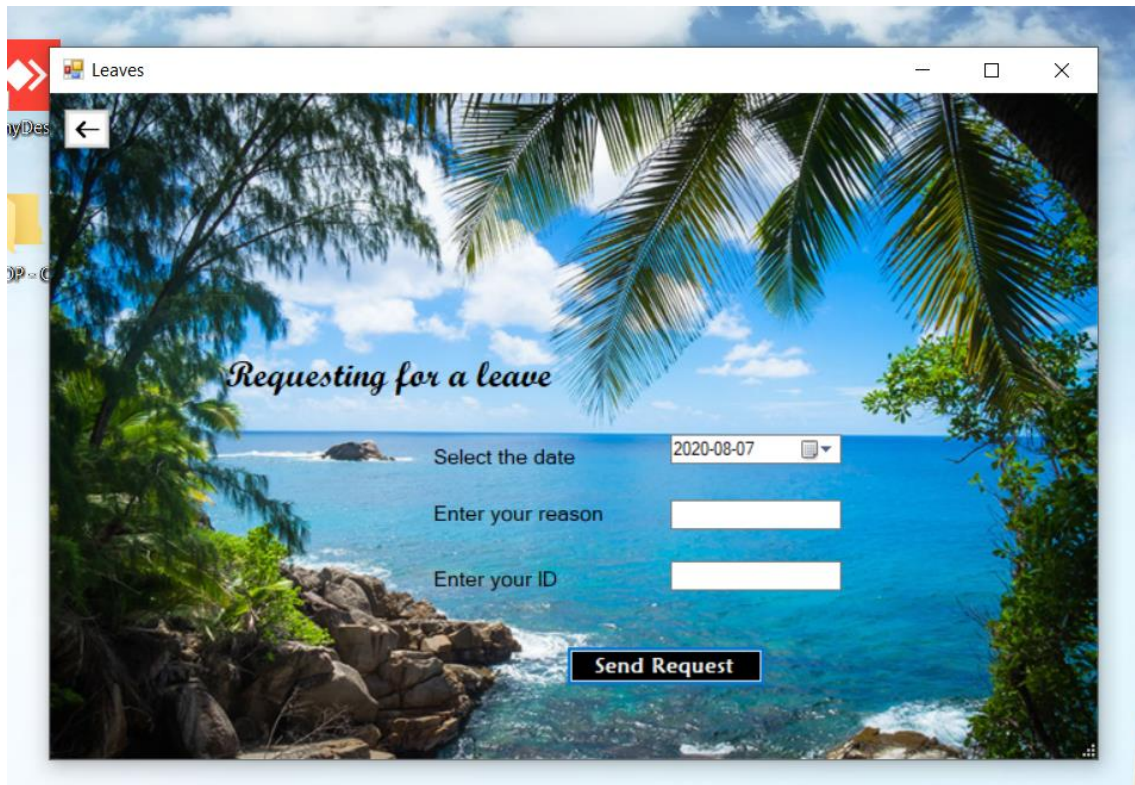
Department	Job	Total
House Keeping	Cleaner	43600



## Requesting for a leave :

This interface provides you the facility to request a leave.

By providing the reason,user ID and the date that you want a leave , you can request for a leave.



*Requesting for a leave*

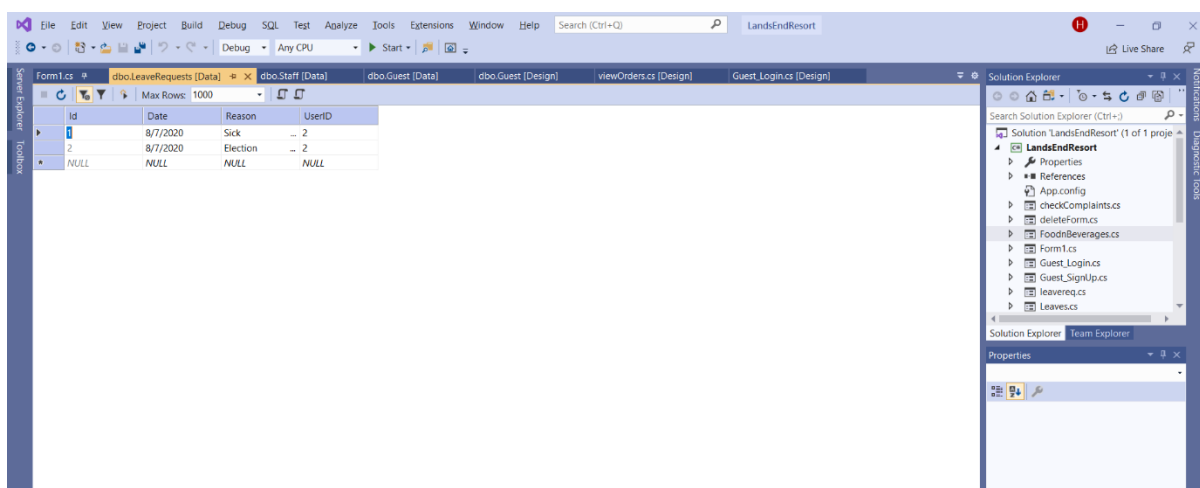
Select the date: 2020-08-07

Enter your reason:

Enter your ID:

**Send Request**

## Leave Request table for request leave

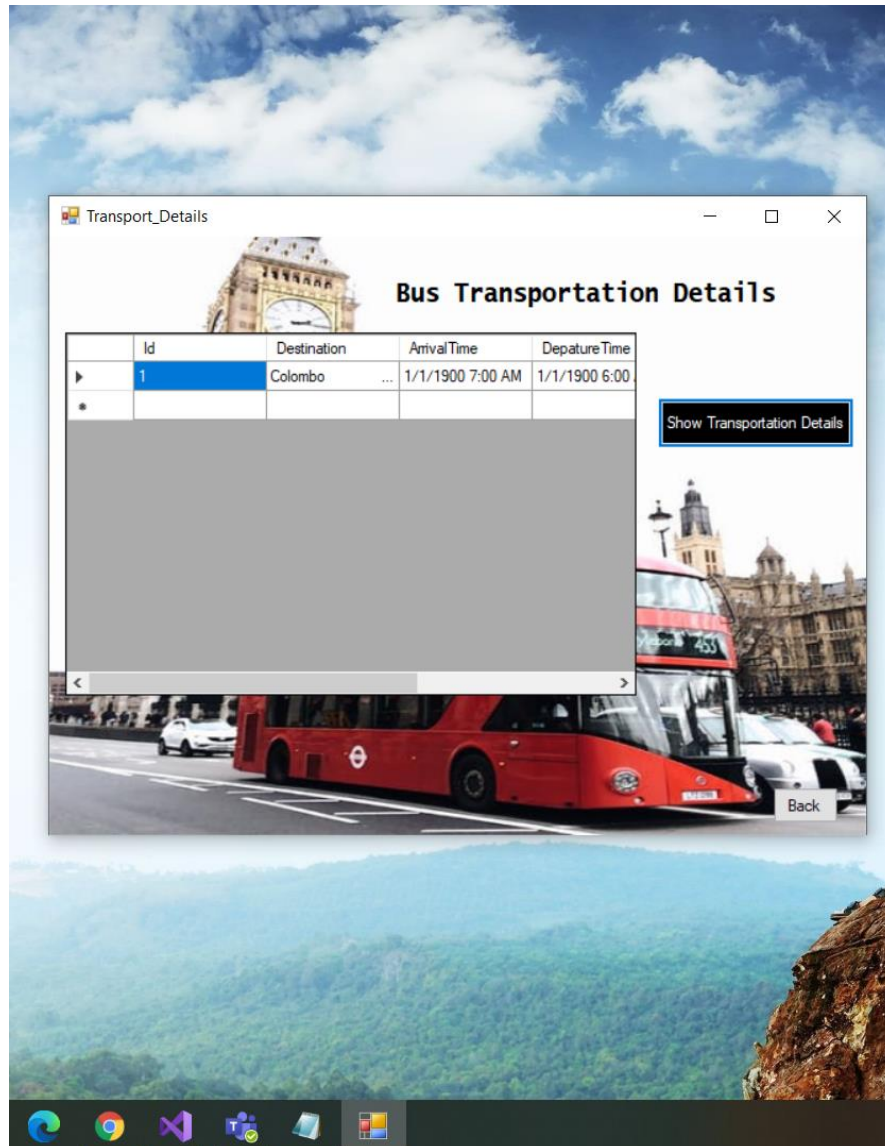


Id	Date	Reason	UserID
1	8/7/2020	Sick	2
2	8/7/2020	Election	2
NULL	NULL	NULL	NULL

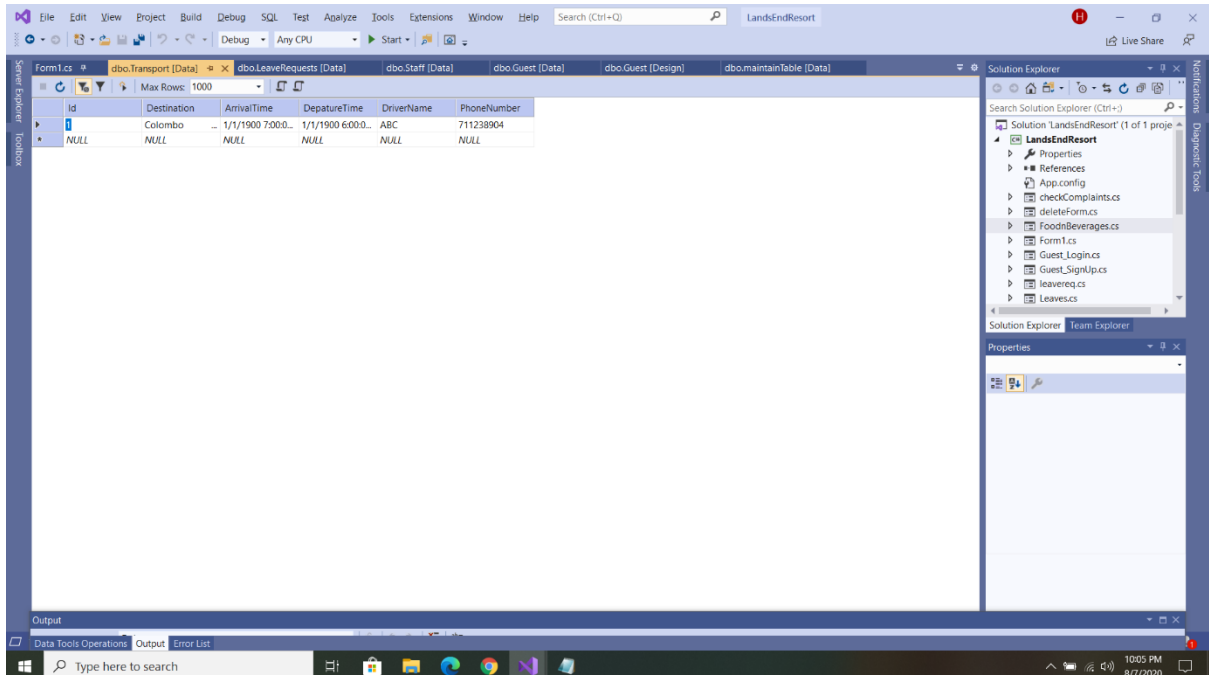


## Bus Transportation Details:

This interface provides the facility to check the available transportation details.



Transport table for Bus Transportation Details :



Id	Destination	ArrivalTime	DepartureTime	DriverName	PhoneNumber
1	Colombo	1/1/1900 7:00:00	1/1/1900 6:00:00	ABC	711238904

## **CONCLUSION**

This system gives solutions for most of the difficulties which have been handled manually in a hotel. For an example an employee can easily check their salary using this application and also can easily check the available transportation details. If an employee need to get a leave he/she have to follow such a long procedure in a hotel. But by using this he/she can apply for a leave easily and it will reduce his/her time. Not only that the managers can easily see who have applied for leaves in which dates and the reason. So this application will be an easy for the managers. Likewise, a guest can easily make complains using this application instead of calling and meeting several people. This will reduce time; a guest can easily order their needs simply by being in their room. As above this solution can make guests and managers day to day life easy, can reduce time, and by saving an information this will reduce data lose and increase effectiveness. By doing this project we came up with several problems and we managed to overcome them by referring the lecture notes and the internet.

By doing this project we got more familiar with C# and learnt many new things. For an example how to connect database and tables correctly. The use of crud operations, advantages of OOP concepts and how to apply them etc. This project was a great advantage for all of us to get more familiar with C#.

## Workload Matrix

Index Number	Name	Task completed by each member
21005028	H.T.K.D SILVA	<ul style="list-style-type: none"> <li>• Main welcome page (UI &amp; back end)</li> <li>• Staff Login (UI &amp; back end)</li> <li>• Staff Registrations (UI &amp; back end)</li> <li>• Salary Calculator(UI &amp; back end)</li> </ul>
21006888	A.A.D.D SILVA	<ul style="list-style-type: none"> <li>• Guest Registration (UI &amp; back end)</li> <li>• Guest Login(UI &amp; back end)</li> <li>• Guest Information update(UI &amp; back end)</li> <li>• Guest information delete( UI &amp; back end)</li> </ul>
21011056	G.S.G ARIYASINGHE	<ul style="list-style-type: none"> <li>• Staff welcome (UI &amp; back end)</li> <li>• Guest Complaints (UI &amp; back end)</li> <li>• Progress report making</li> <li>• ER diagram</li> </ul>
21003268	C.P WIJESINGHE	<ul style="list-style-type: none"> <li>• Send leave request (UI &amp; backend)</li> <li>• Check leave request(UI &amp; back end)</li> <li>• Make maintenance complain (UI &amp; backend)</li> <li>• Class diagrams</li> </ul>
21004399	P.S KURUKULASOORIYA	<ul style="list-style-type: none"> <li>• Transport information (UI &amp; backend)</li> <li>• Admin welcome (UI &amp; back end)</li> <li>• Use case diagram</li> <li>• Progress report making</li> </ul>

THE END.