CS6308-JAVA PROGRAMMING PROJECT

APARTUS-APARTMENT MANAGEMENT SYSTEM

P.NIRUTHIYA SHRI - 2019103549

K.JEYASRI MEENAKSHI - 2019103530

ABSTRACT:

Nowadays in metropolitan cities gated communities with thousands of apartments are the most preferred choice for people when it comes to housing requirements thanks to their sophisticated features and security advancements. Such a community cannot be manually managed with conventional paper records as the requirements and functionalities are huge.

It was a huge task as they had to maintain a large database of customers who have bought the flats along with their dates, amount paid etc. They also had to manage the data related to the maintenance activities of all the flat owners. It required lot of time and resources. There was no way to find easily when the customer had to pay the installment for maintenance, etc. details.

To provide a more efficient and sophisticated tenant friendly approach to cater the needs of the members of a community this project is developed. This project helps with various departments like rent, notice, cost etc...

INTRODUCTION:

APART-US is a GUI-based responsive application that helps to manage a multiple apartment community. The overall goal of this system is to keep track of the tenants of the apartment and their day-to-day activities and computing their rents and bills for each month for better security and establishing communication among the members of the community for better sustainability.

In manual record system, the user has to approach individual persons to know about their rents and bills. Sometimes there might be some mistakes in their computations and every time user has to approach individual persons beside their schedule and correct the mistakes.

But if a common application is created for all controllers, it will be easy for the admin for checking and updating their monthly rents, bills, notice about moving in and out.

The main aim of this system is to provide utility to maintain day to day operations of apartments. This application helps them to store all information electronically in a system, which in turn saves lot of time, money and energy.

This will be a secure and cost-effective solution for a particular gated community providing full support to the tenants and the employees without having to reach out for all of the requirements individually.

There are 10 modules totally :

1) Home
2) Signup
3) House Information
4) Add Tenant details
5) Amount Collected
6) Notice
7) Rent
8) Rent details
9) View Tenant details
10) Operations

These include Adding Cost for a month including gas, water, electricity bills and updating notice by admin. So that admins can manage the notices.

We are going to use these 10 modules to efficiently operate an Apartment. We have proposed a model of the effective system via Graphical user Interface.

Software used: NetBeans

Binary format: JDK 8

Profile: Full JRE

Encoding: UTF-8

Technologies used:

- **Front end- XML**

  - Extensible Markup Language is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

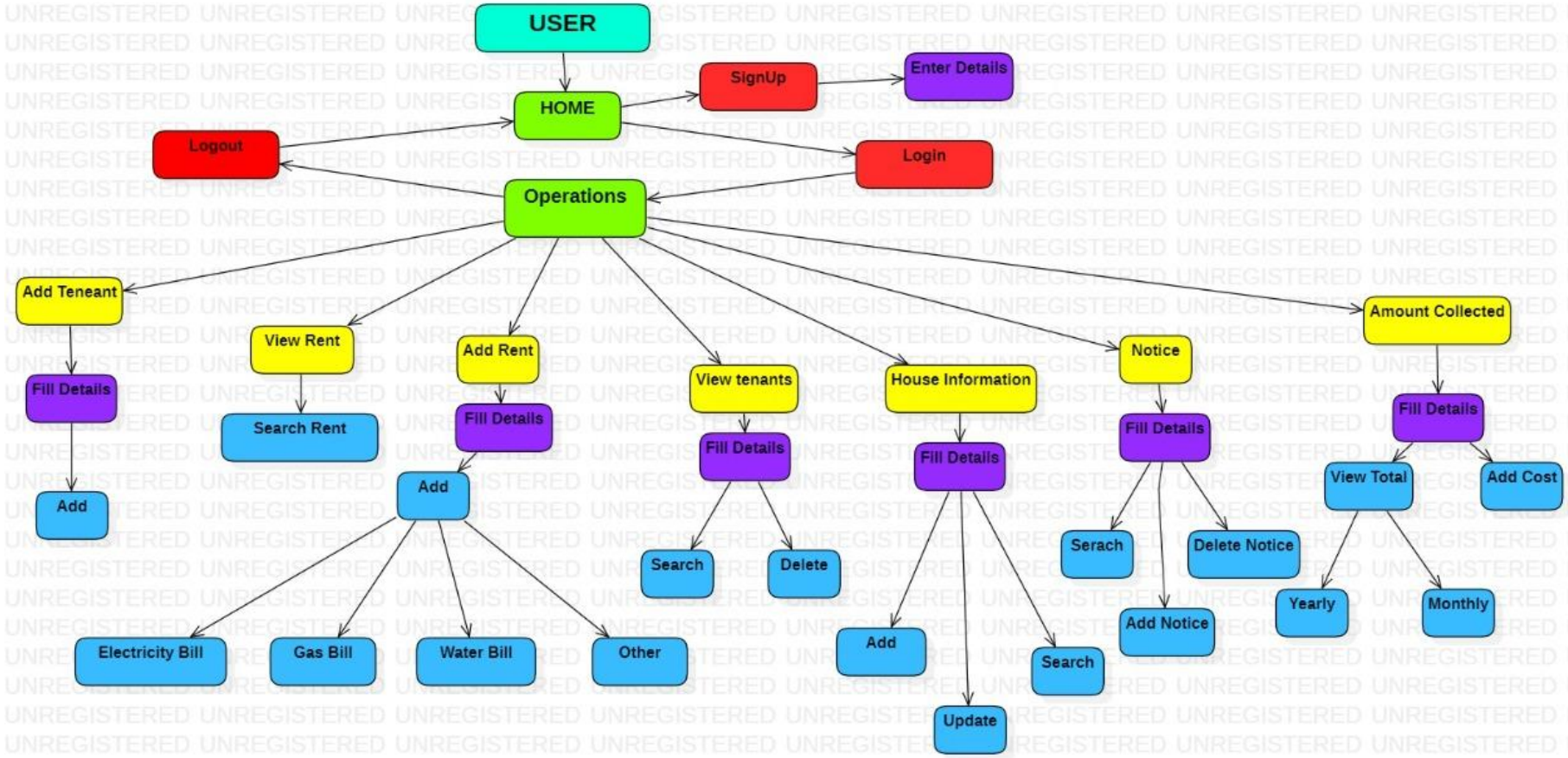
- **Back end- JAVA**

  - We have used AWT, Swing with event driving actions to build this

- **Database- MySQL**

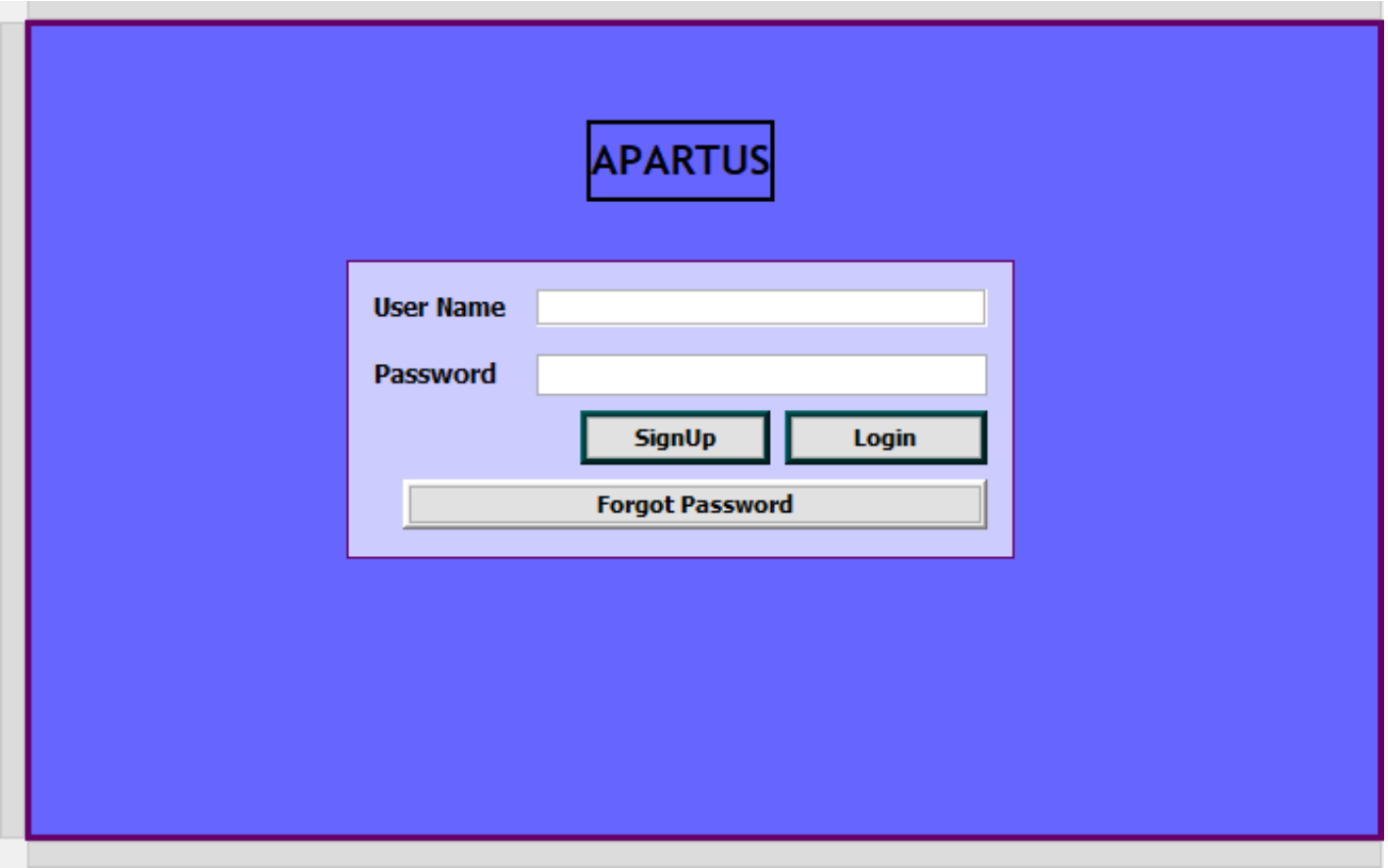
- We have used Apache and MySQL server via Xampp and constructed the database using phpMyAdmin

ARCHITECTURE DIAGRAM:



MODULES:

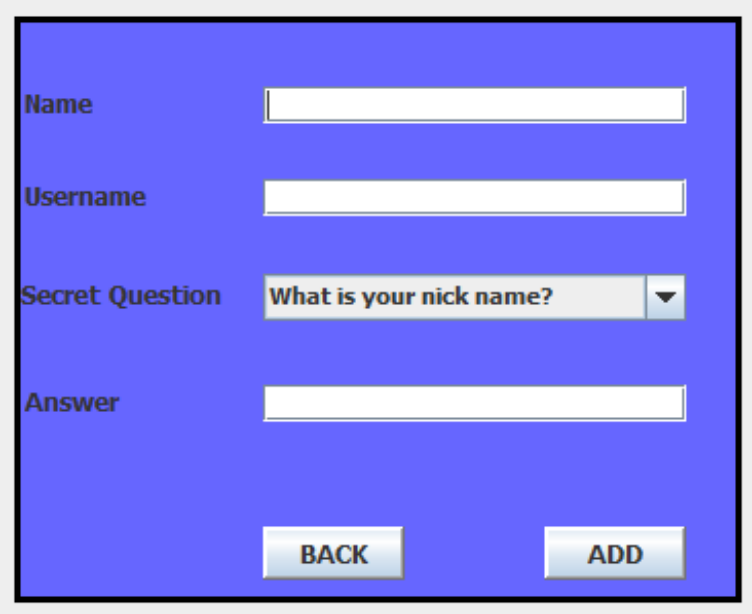
HOME:



This is the main home page that admins will be getting when they open the interface. If they have to add details about a new tenant, they can create a new account for him and

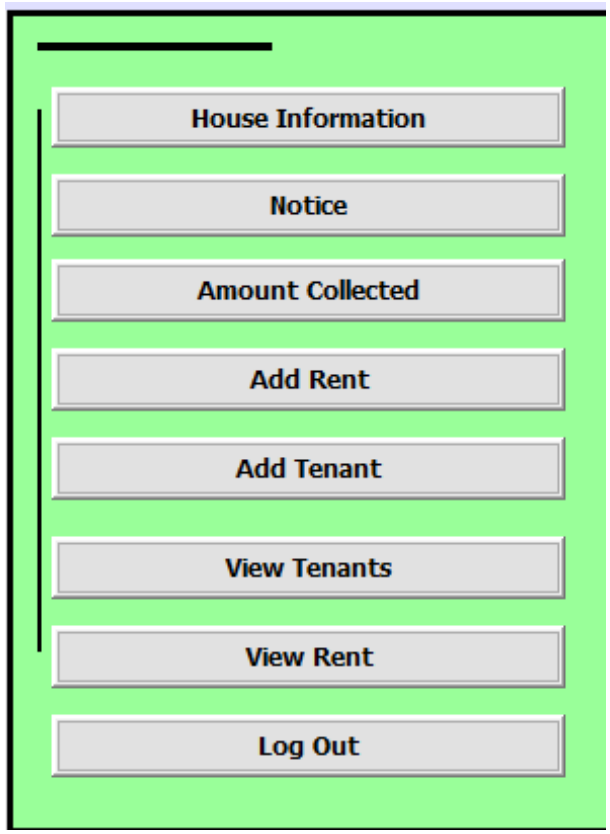
then add their details. If the tenant is already registered by the admin, they can directly login and experience the other facilities built up.

SIGN UP:



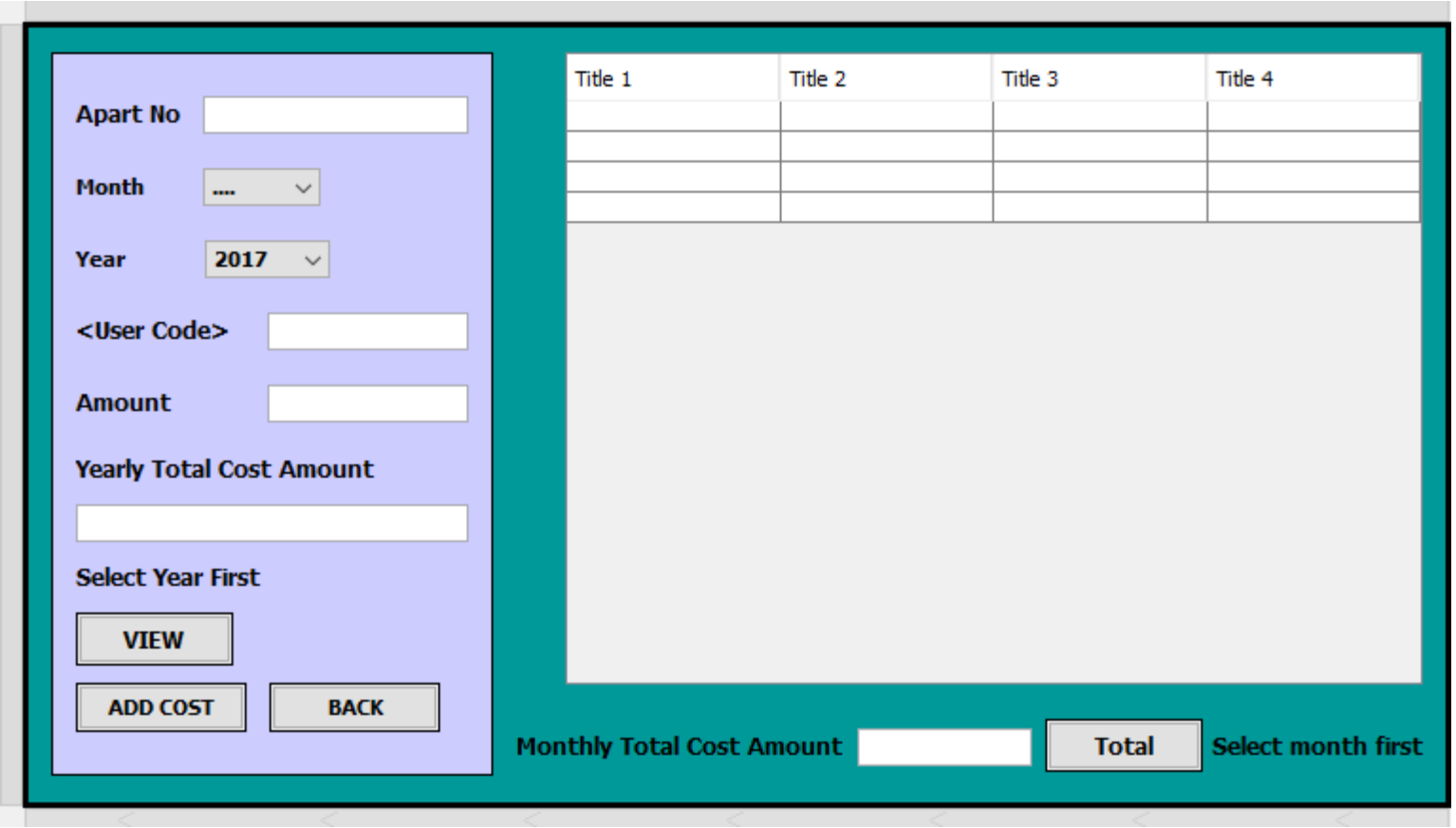
This is the sign up where the admin has to add the new user to register in the application by filling the details. Once the admin gives the user details and signs up. Their Information will be added in the database and then they can login.

OPERATION:



This page is second home page containing operations that directs to other pages like Notice, Rents and bills, House Information page, Tenant list, Rent details, logout etc....
[Main home page directs to signup]

AMOUNT COLLECTED:

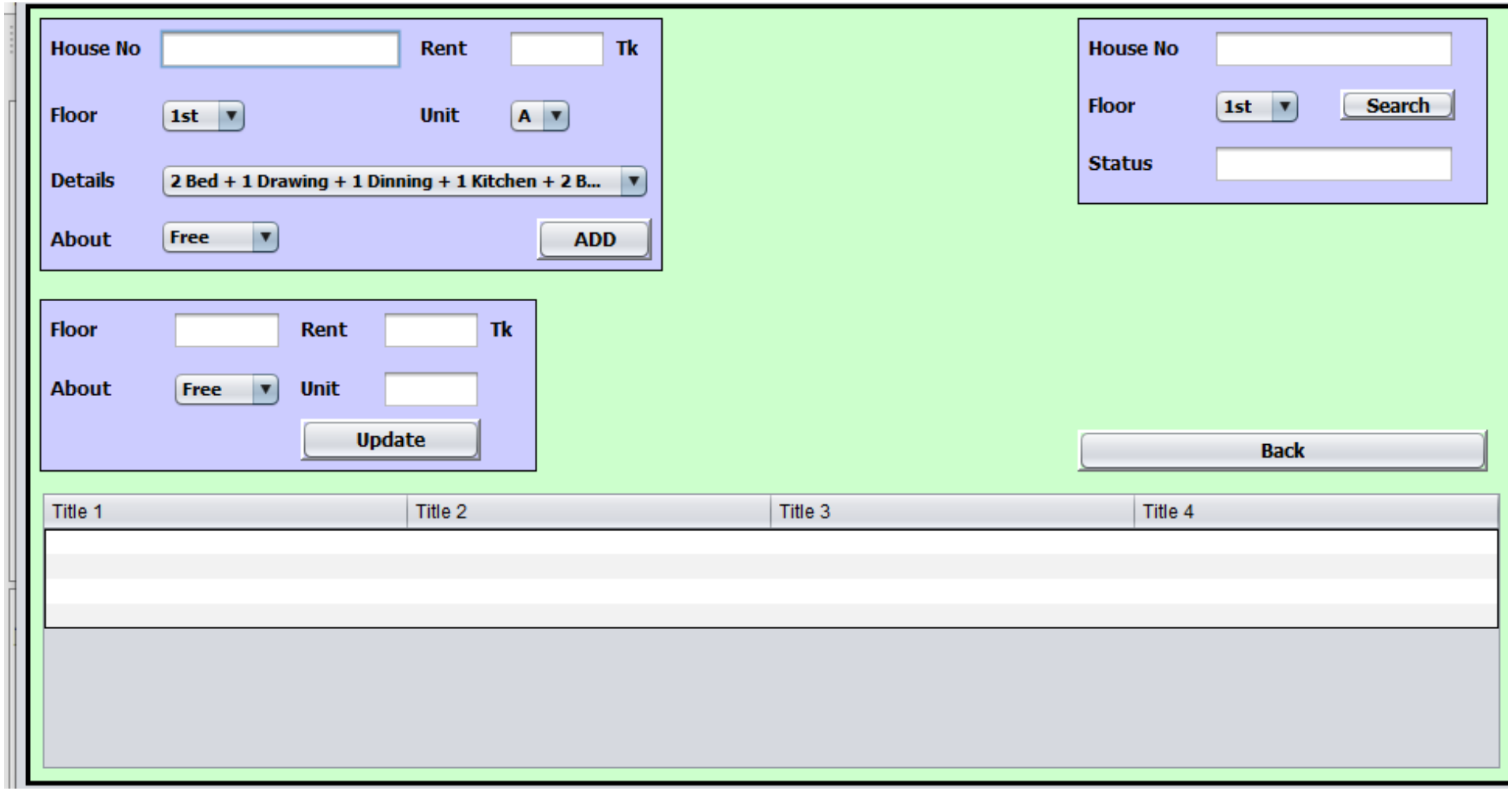


This is the page where an admin can view a user's yearly and monthly rent details by them.

They can view their expenditure history or add a new rent entry into their table.

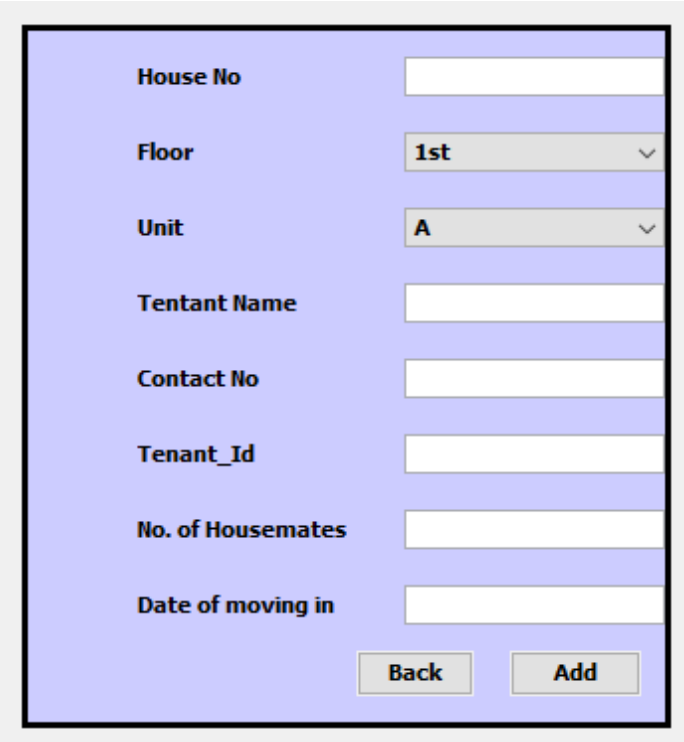
They should enter the valid entries for all questions so that they can view their expenditure history and all.

HOUSE INFORMATION:



House Information page is the one which provides information about each and every house, its unit, its structure, its residential status etc... An admin can enter the details of the flat and add it to the flats history or he can update any old detail of the flat. An admin can also search about a particular flat and can know about it.

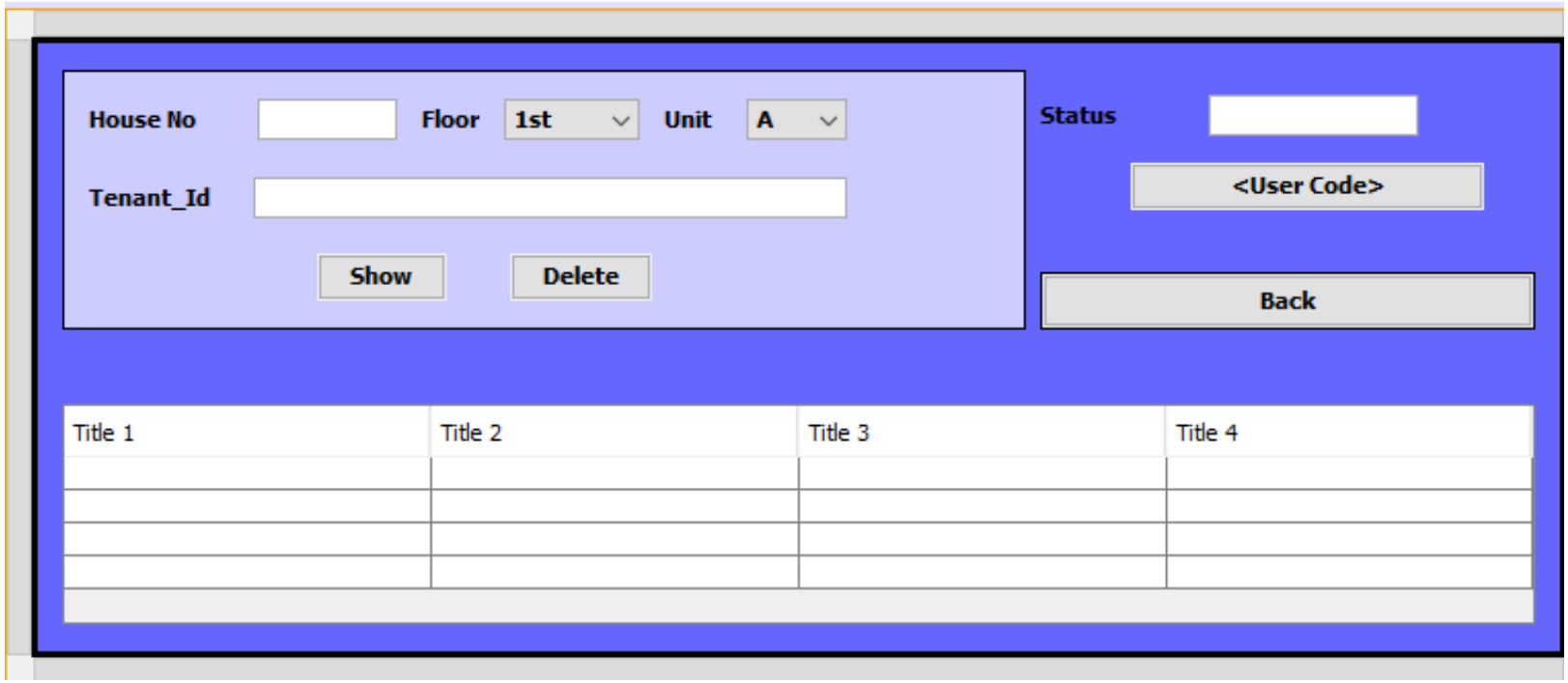
ADD TENANT:



Add tenant page is for the use of adding the tenant who is going to be residing in the residential flat. We should enter the flat details such as House no, floor, unit, tenant

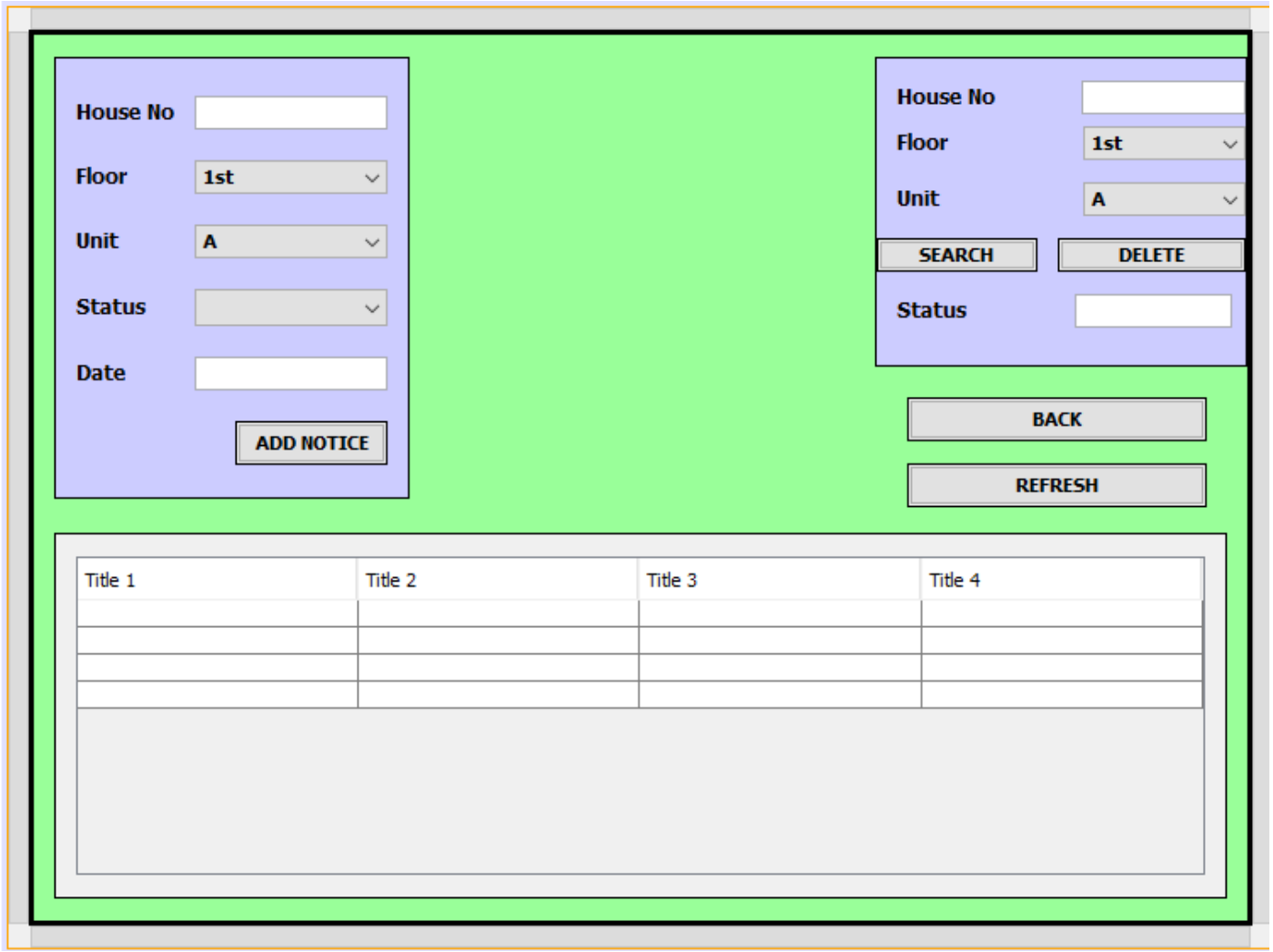
name, contact number, Tenant_id provided in person, Number of housemates moving in with the tenant and date of moving in. And then add it Include it in the flat history.

VIEW TENANT DETAILS:



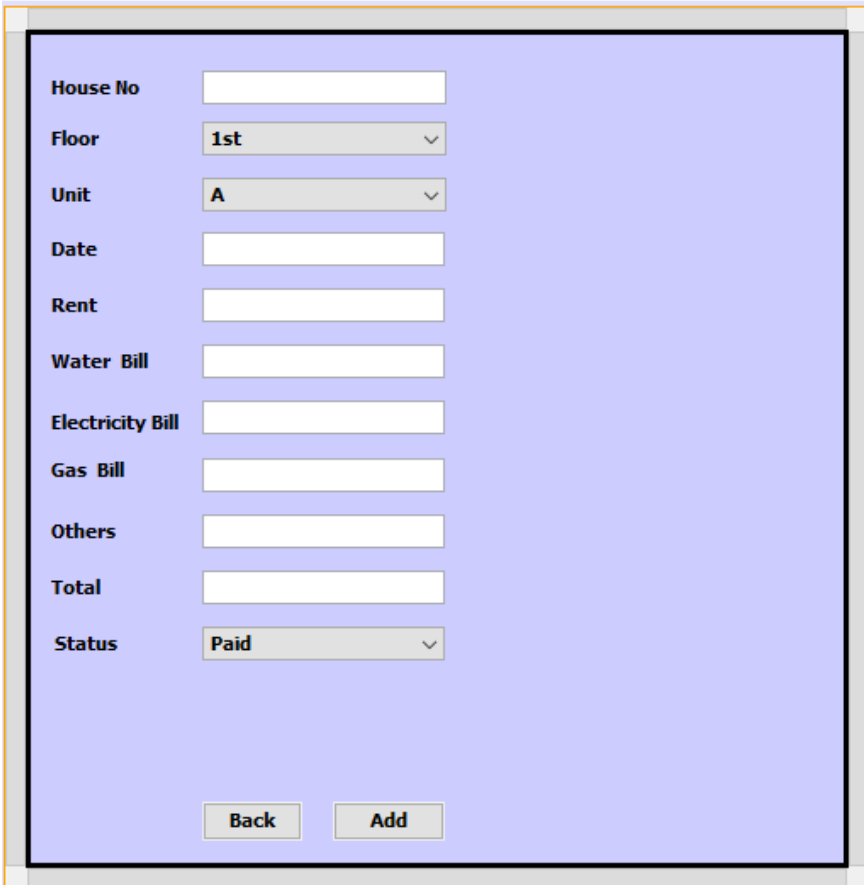
Here we can search about the Tenant details in the house if it is rented for anyone. It shows the tenant's name, the house where they are rented, contact number, tenant id etc...

NOTICE:


House No
Floor
1st
Unit
A
Status
Date
ADD NOTICE
House No
Floor
1st
Unit
A
SEARCH
DELETE
Status
BACK
REFRESH
Title 1
Title 2
Title 3
Title 4

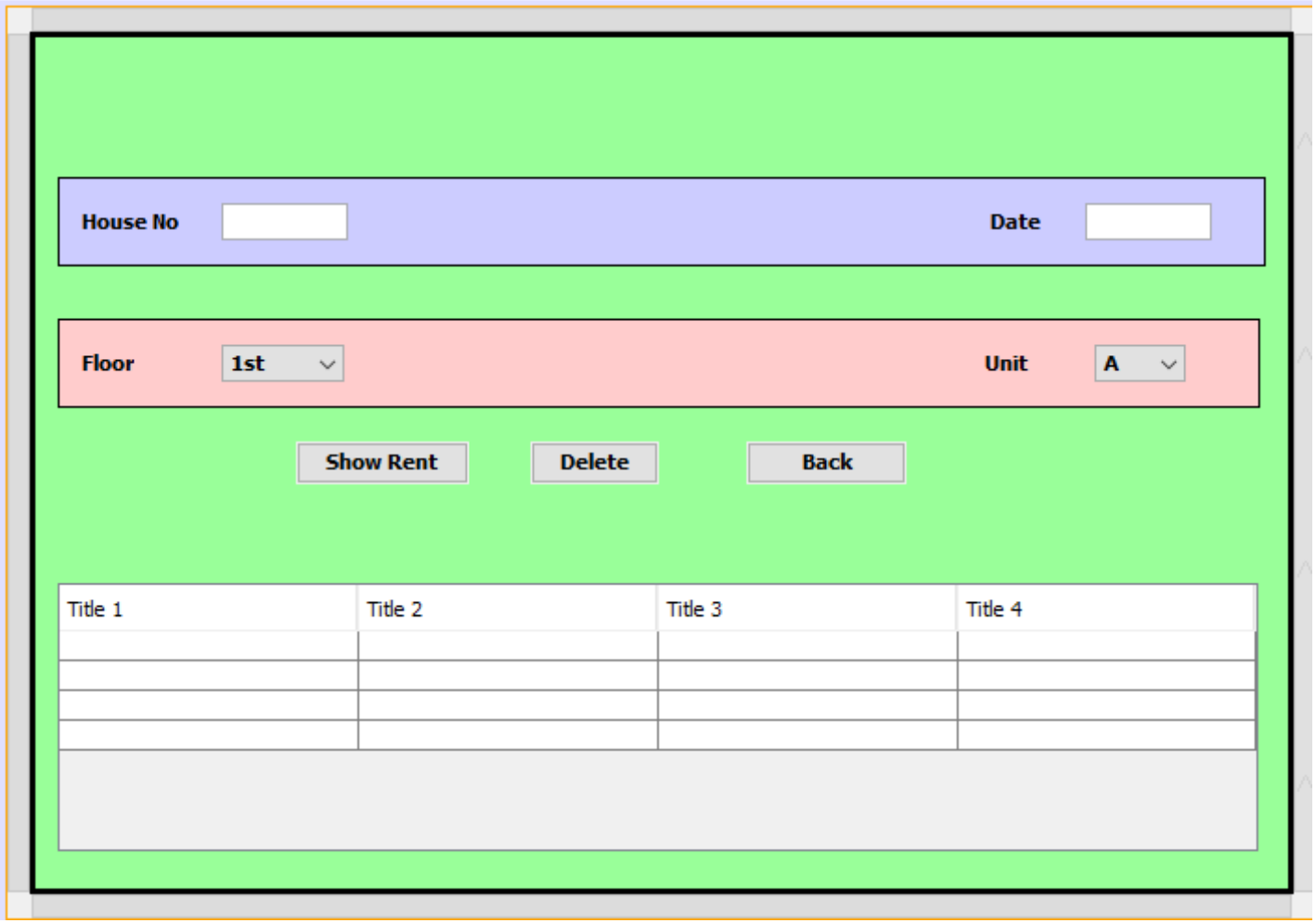
The notice page is for the use of admin. They can add a notice if someone is moving in or out. The admin will receive the notice by entering their house number and search and once they have done moving in or out, the admin can delete the notice.

RENT:



House rent page is for Total house rent bill to be paid. This Rent Page contains the information about electricity, water and gas bills of the tenant living in the house for every month. The paid status can be changed according to the payment of bills.

VIEW RENT DETAILS:



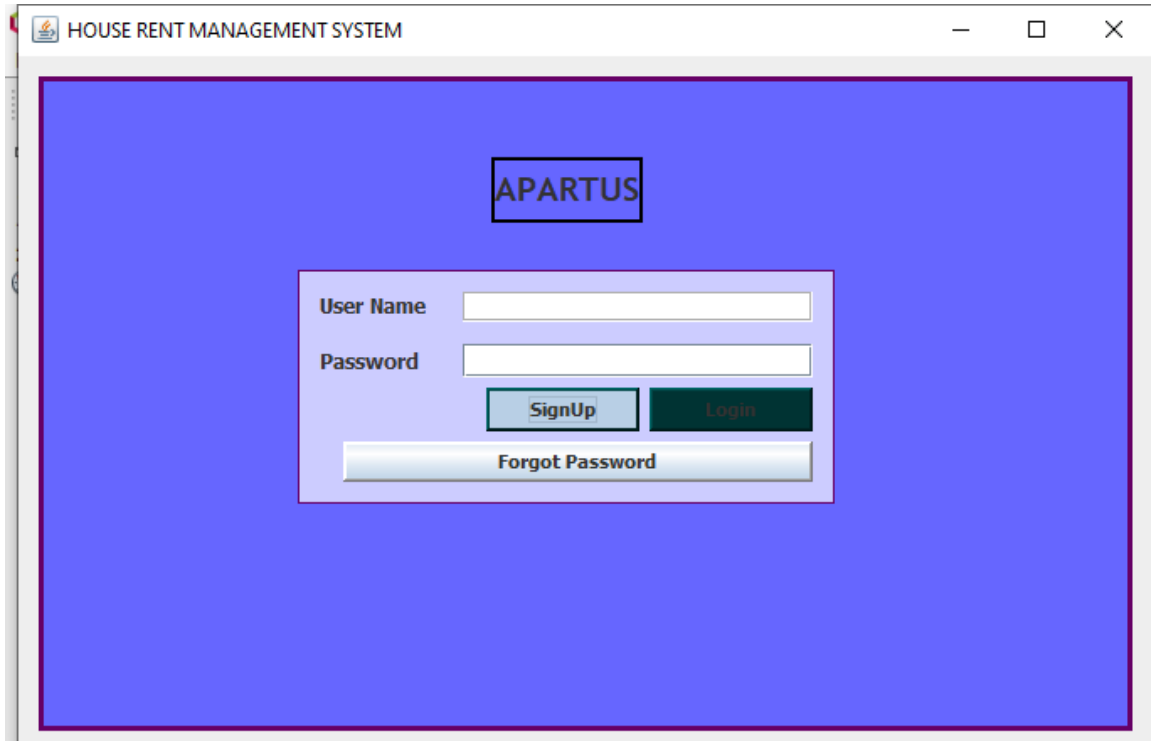
This page shows the exclusive information about the tenant's bills and the bill amount etc... users can search their rents and bills by entering their house number and date.

We can delete the bill details if we want to.

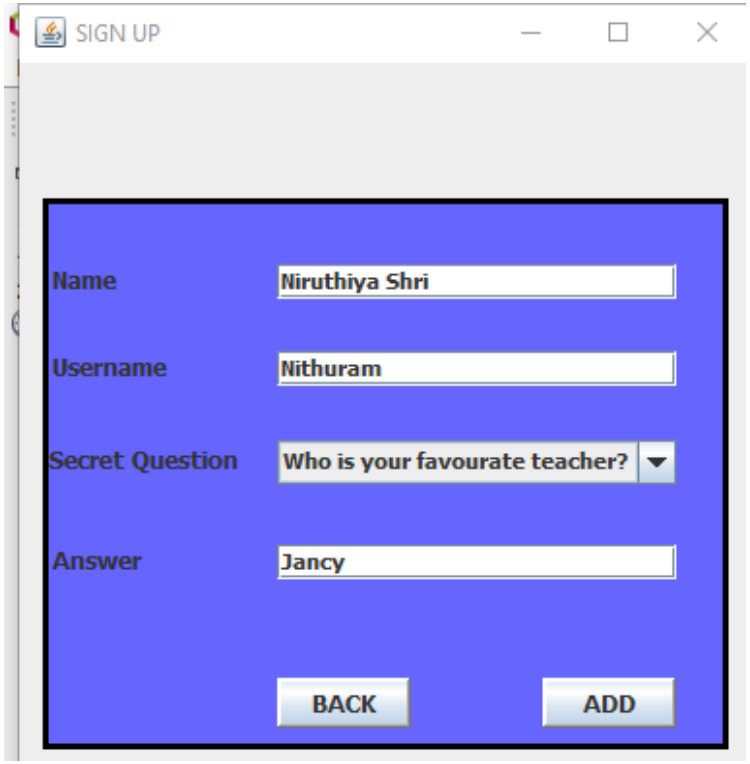
RESULT:

A user(admin) is newly entering the application. He has to sign up into the this.

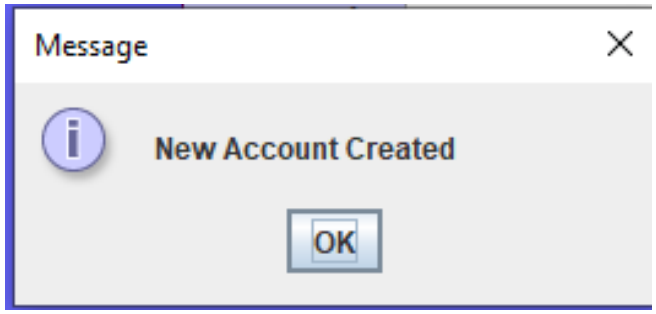
Signing – Up:



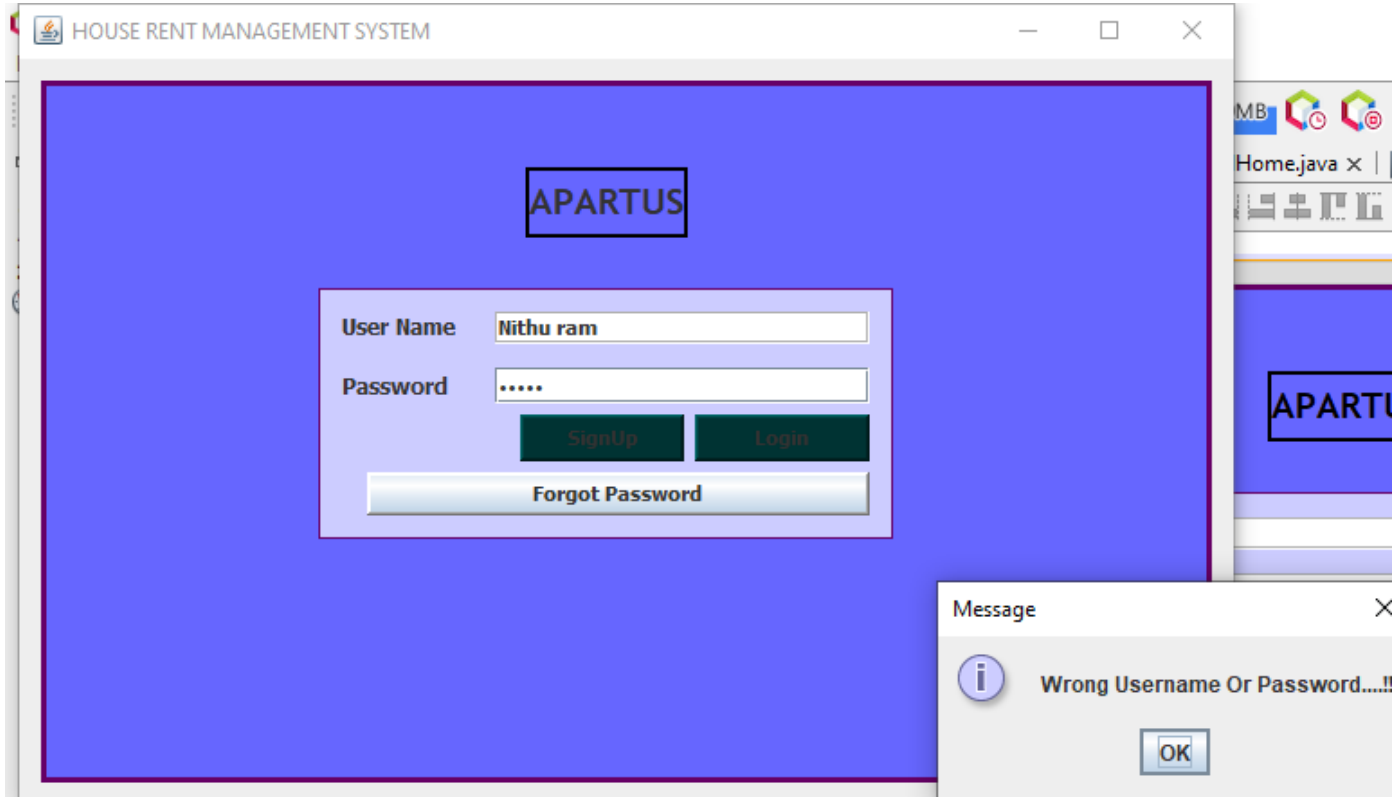
The admin has to enter the user details to add them into the database



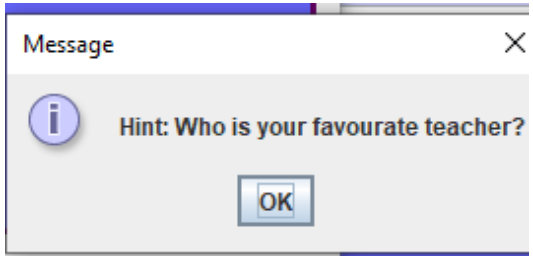
When the user’s details have been added to the database, it shows a popup message.



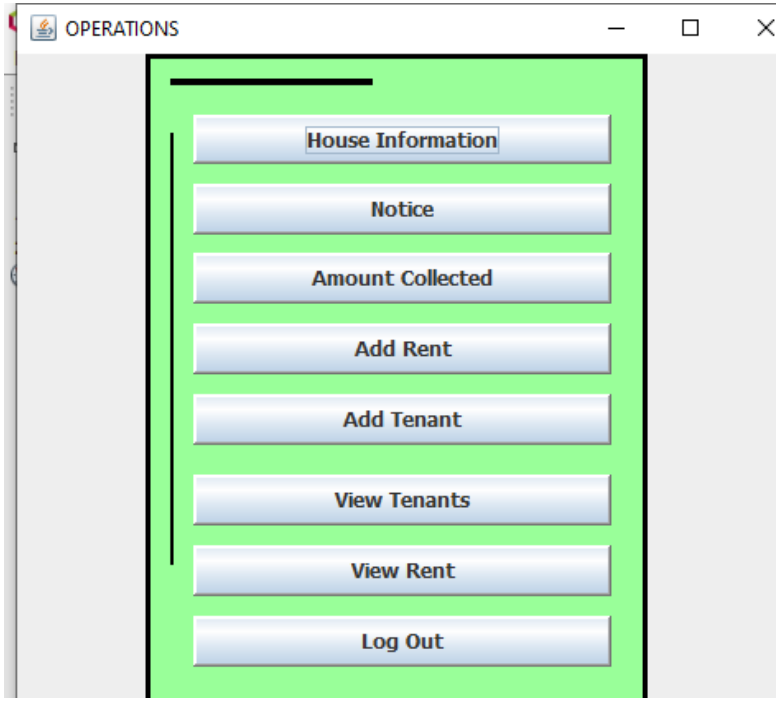
Now the admin can login with the user credentials to change or add details about them. If Any given detail is wrong, it shows a pop up message.



Also when you forgot password, it gives you the hint.

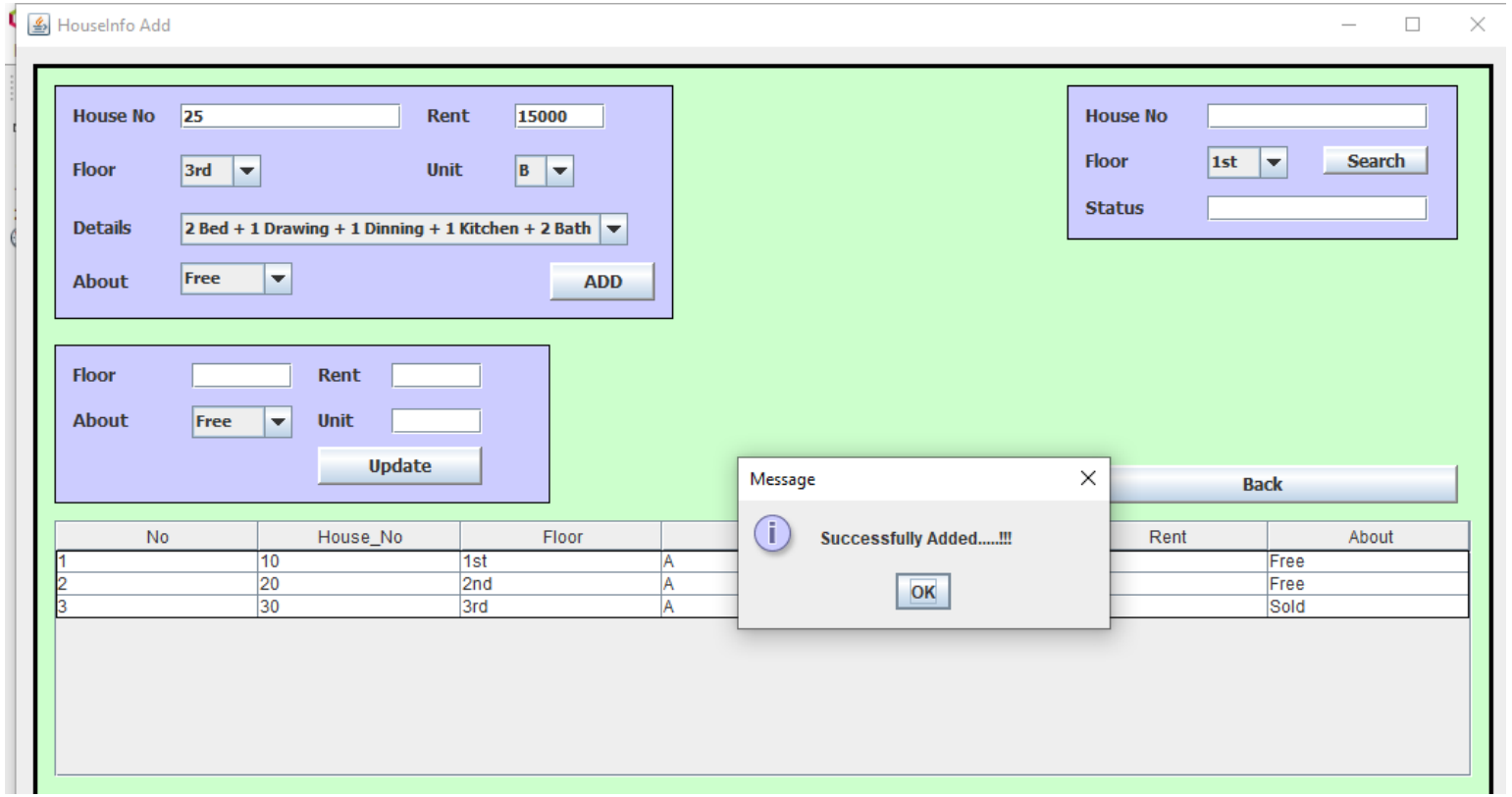


Once you have logged in, you will be directed to second home from where you can access all other pages.

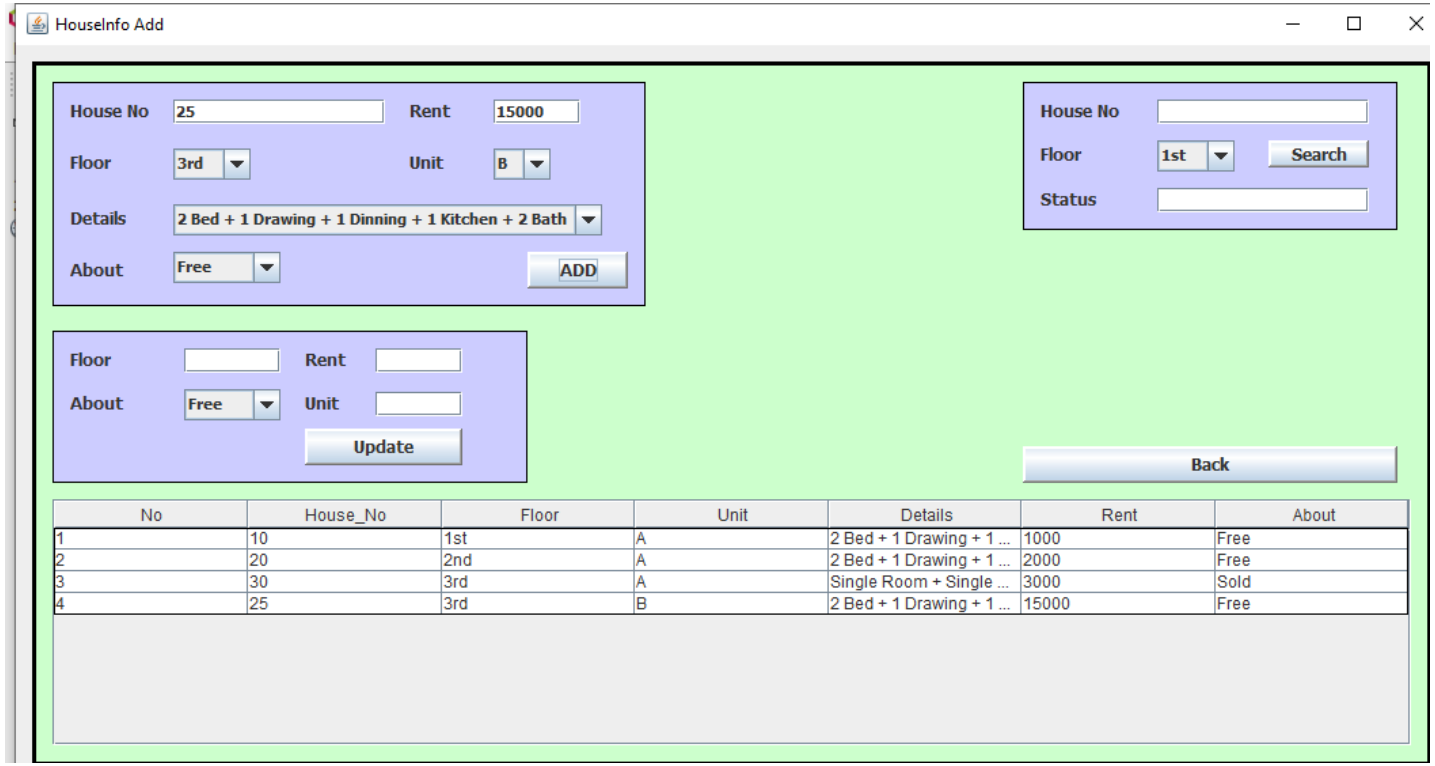


HOUSEINFORMATION PAGE:

Once you enter the details like house number, Rent amount, floor and unit, Infrastructure, and residential status of the house and add it, it gets successfully added to the database. And the list of other houses added will be shown below.

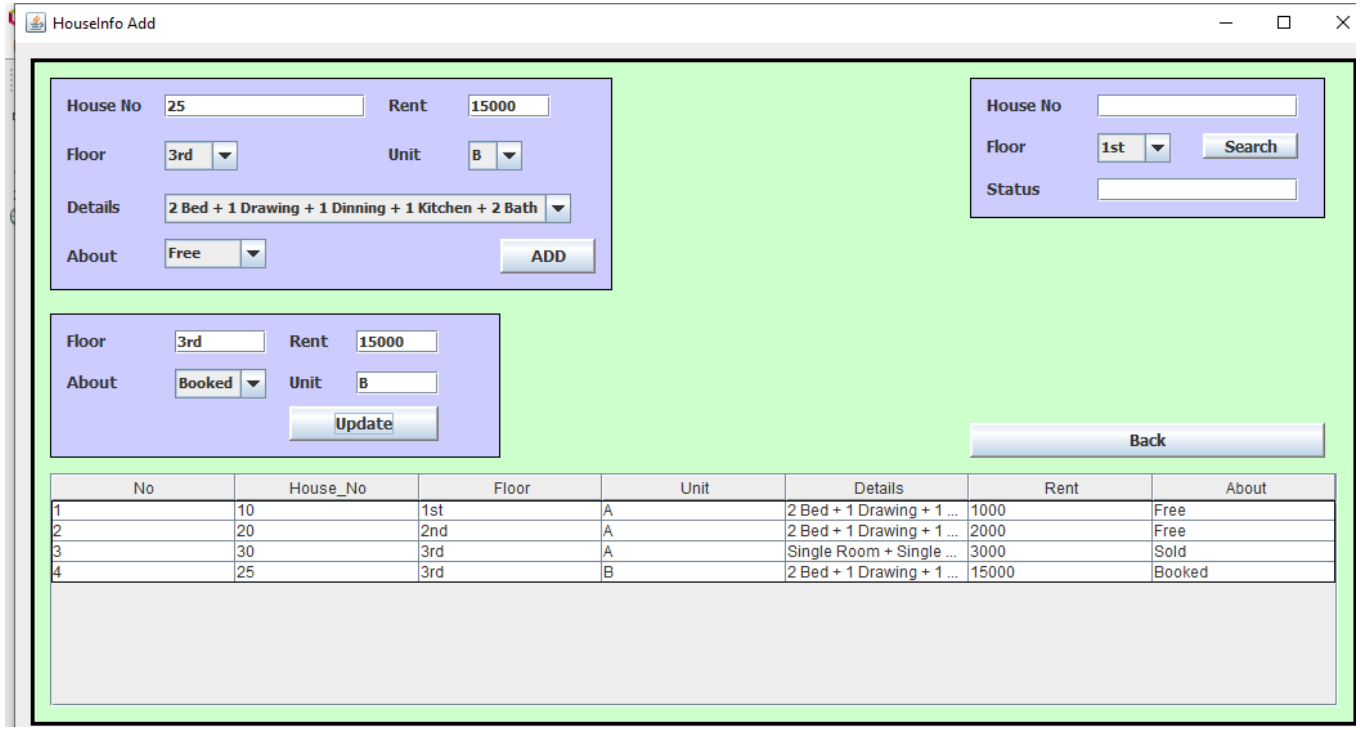


The newly entered house 25 has been added to the list.

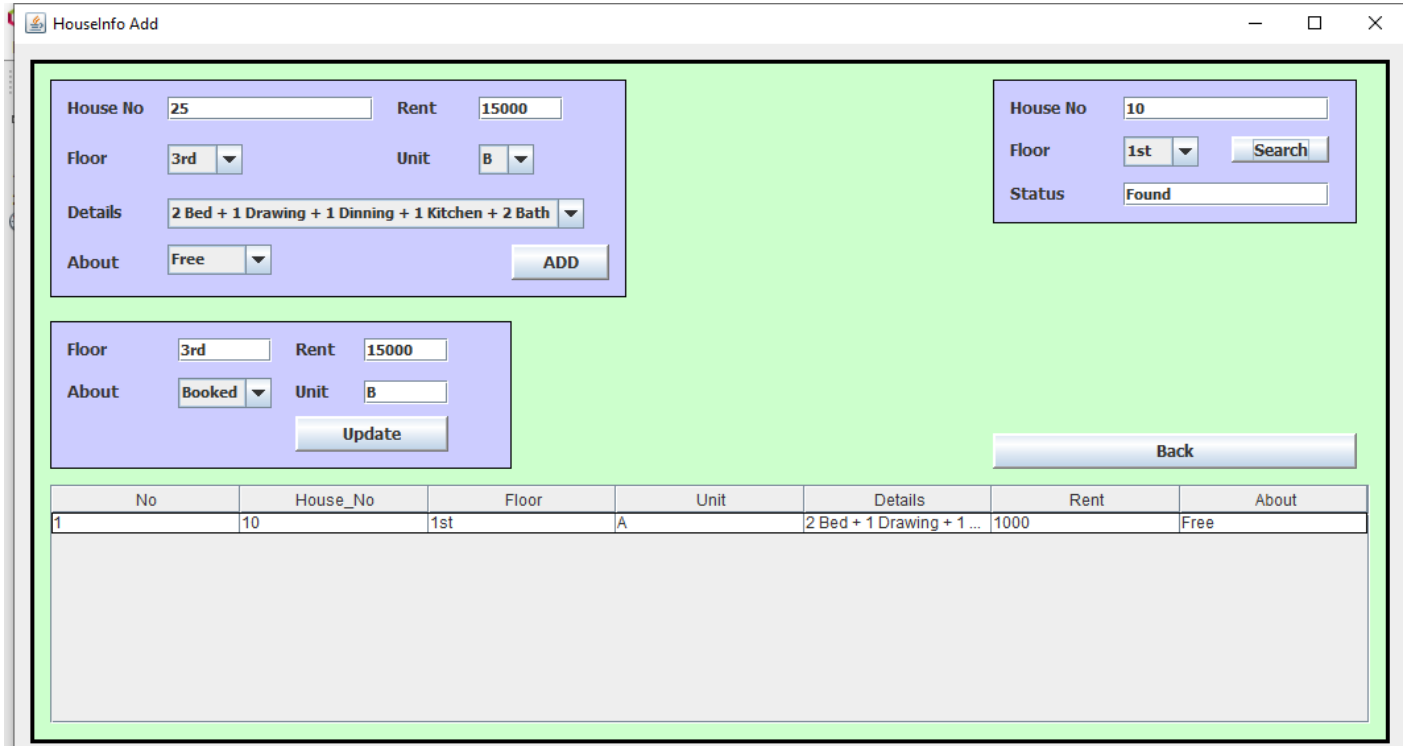


If you want to update any detail of already added house like Floor, rent, residential status and unit etc... You can enter it and update it.

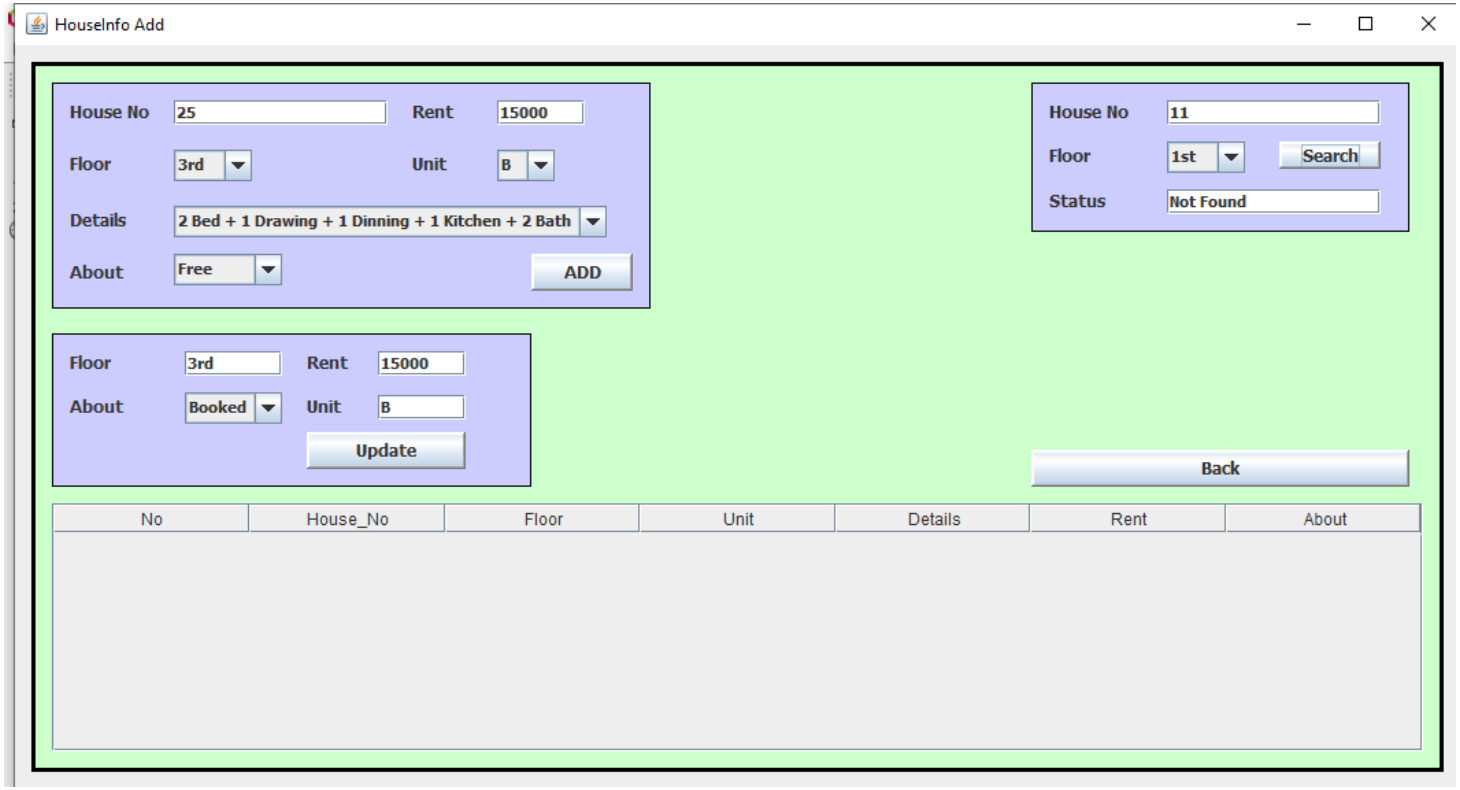
Now the residential status of house number 25 has been updated from free to booked.



You can also search any House in the search box. If it present it will show and the status will be “found”.

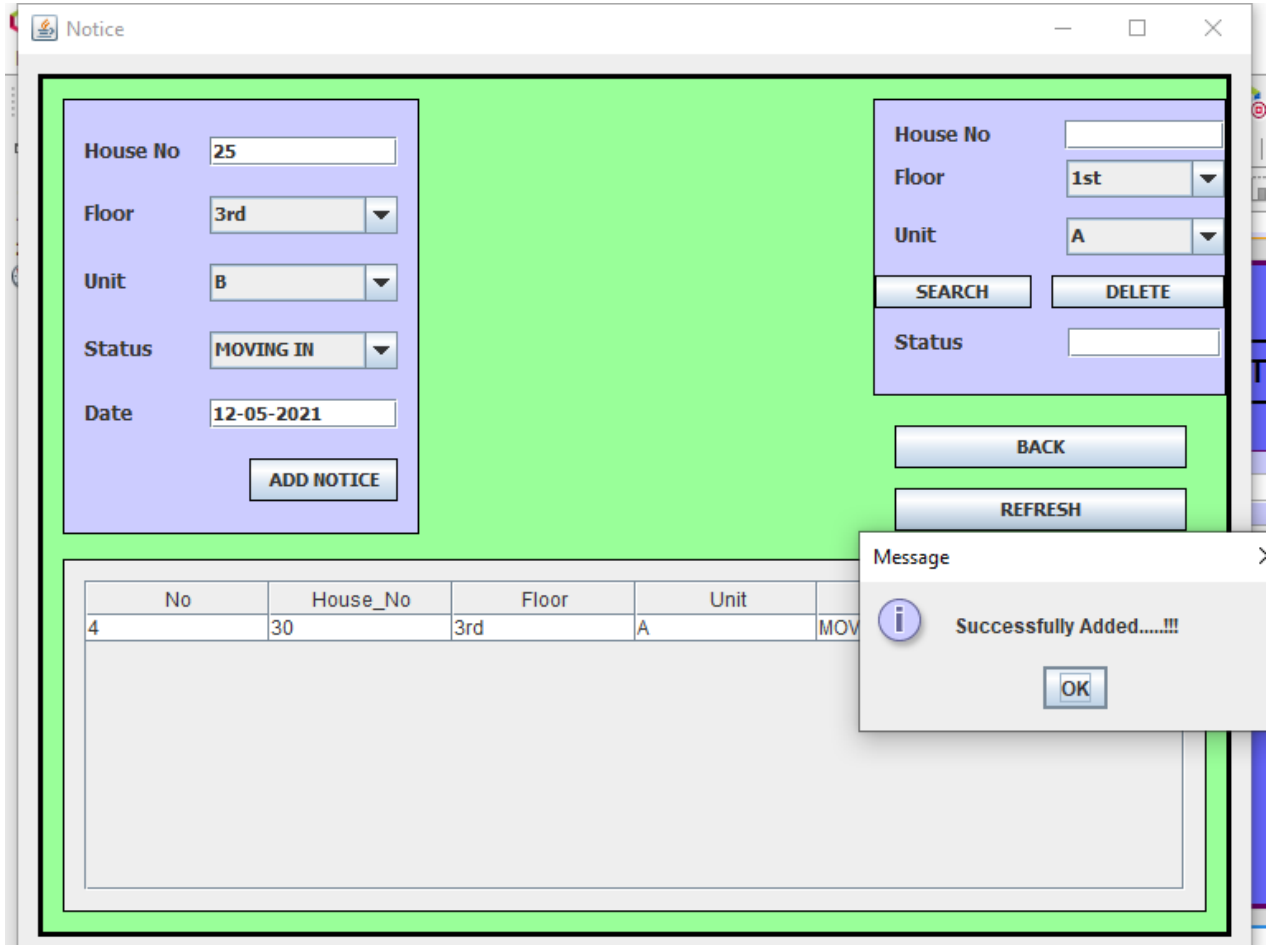


If not found, it shows empty row and status will be “not found”

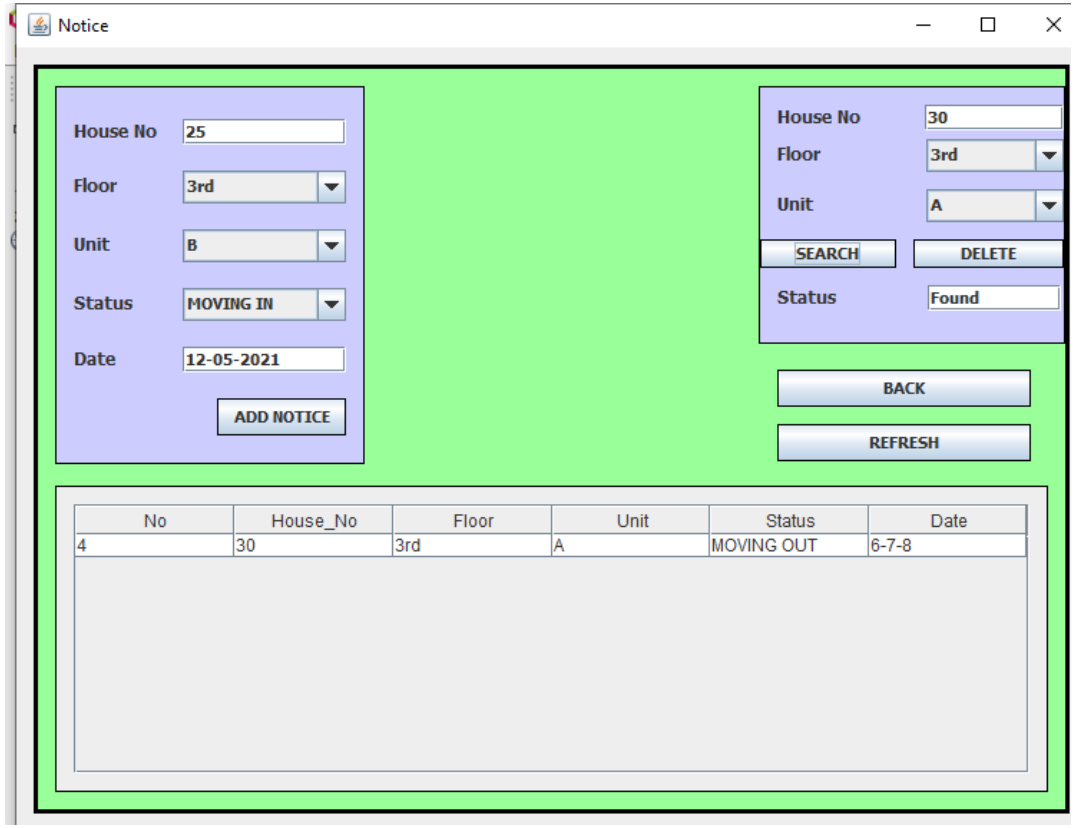


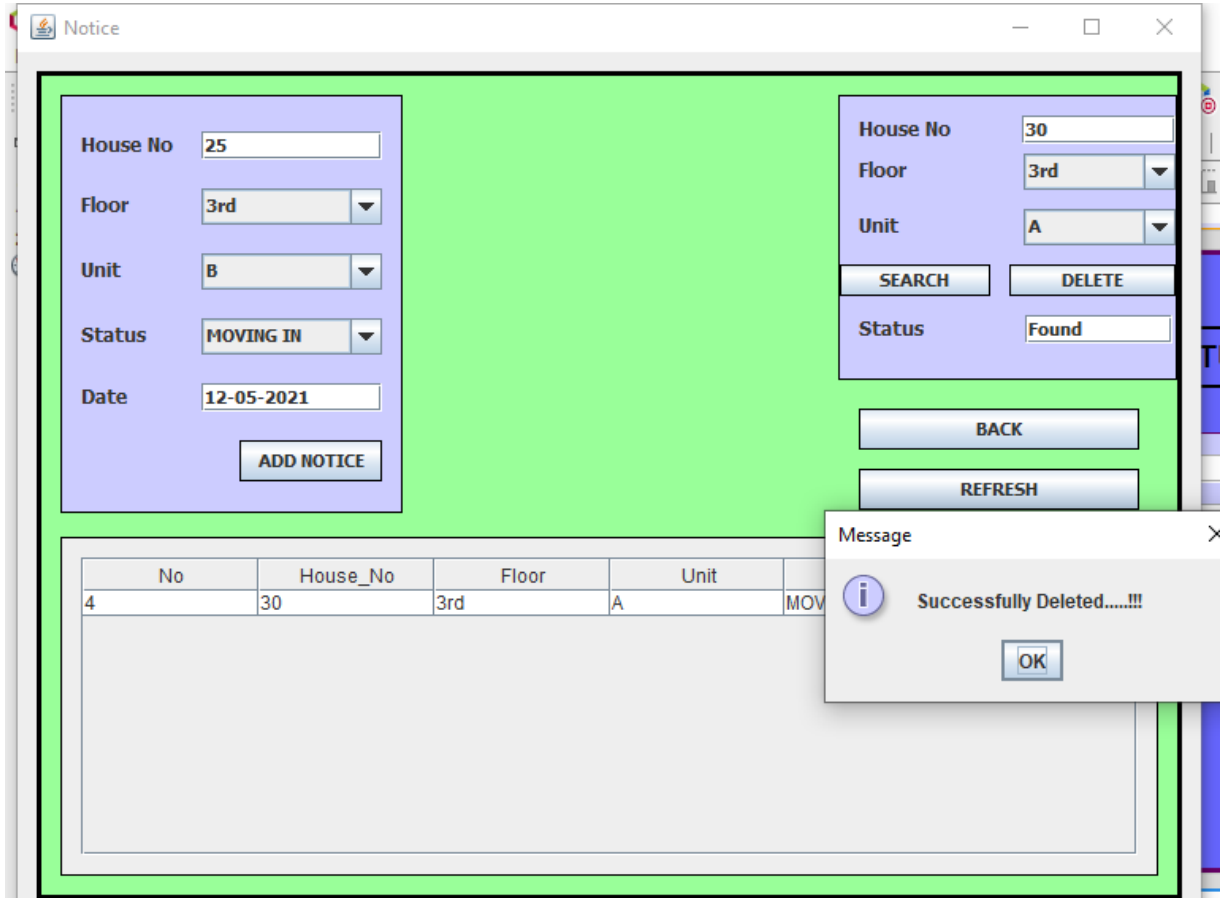
NOTICE PAGE:

Here the admin can update the notice of moving out or in. And the notice will be added in the list below.

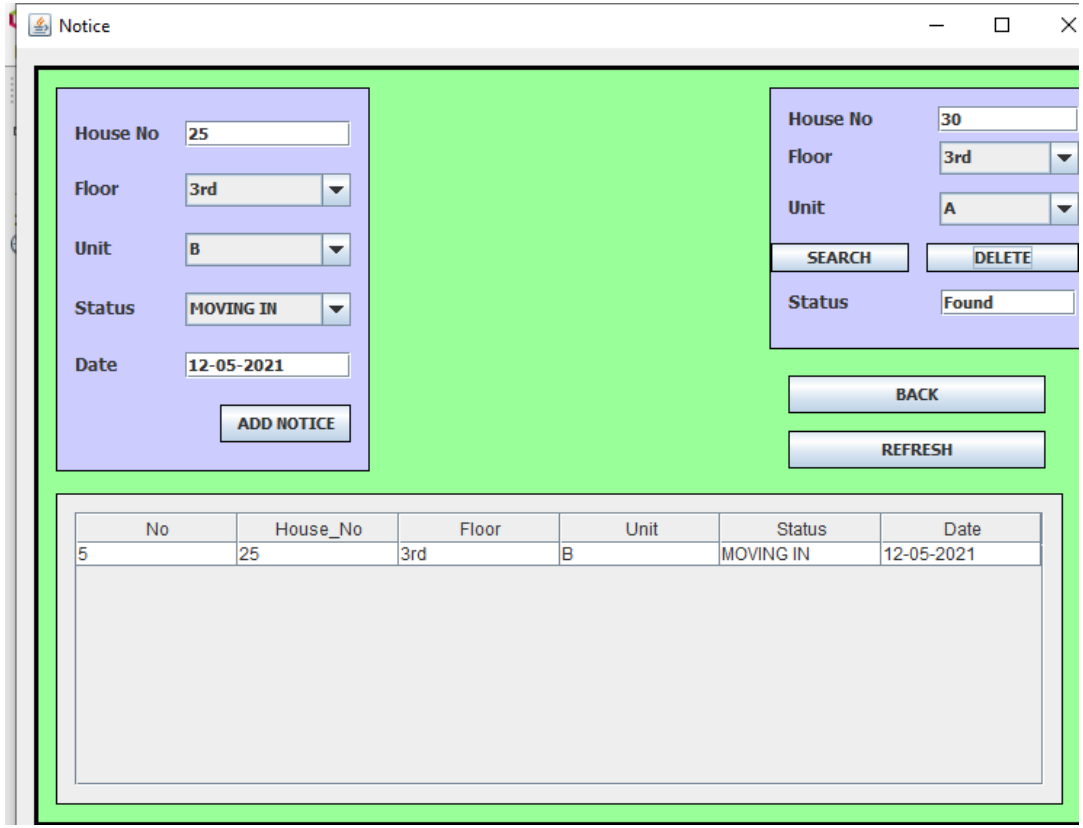


You can also search if the particular house has any notice and can delete if you notice is not needed.


Notice
House No
25
Floor
3rd
Unit
B
Status
MOVING IN
Date
12-05-2021
ADD NOTICE
House No
30
Floor
3rd
Unit
A
SEARCH
DELETE
Status
Found
BACK
REFRESH
No
House_No
Floor
Unit
Status
Date
4
30
3rd
A
MOVING OUT
6-7-8



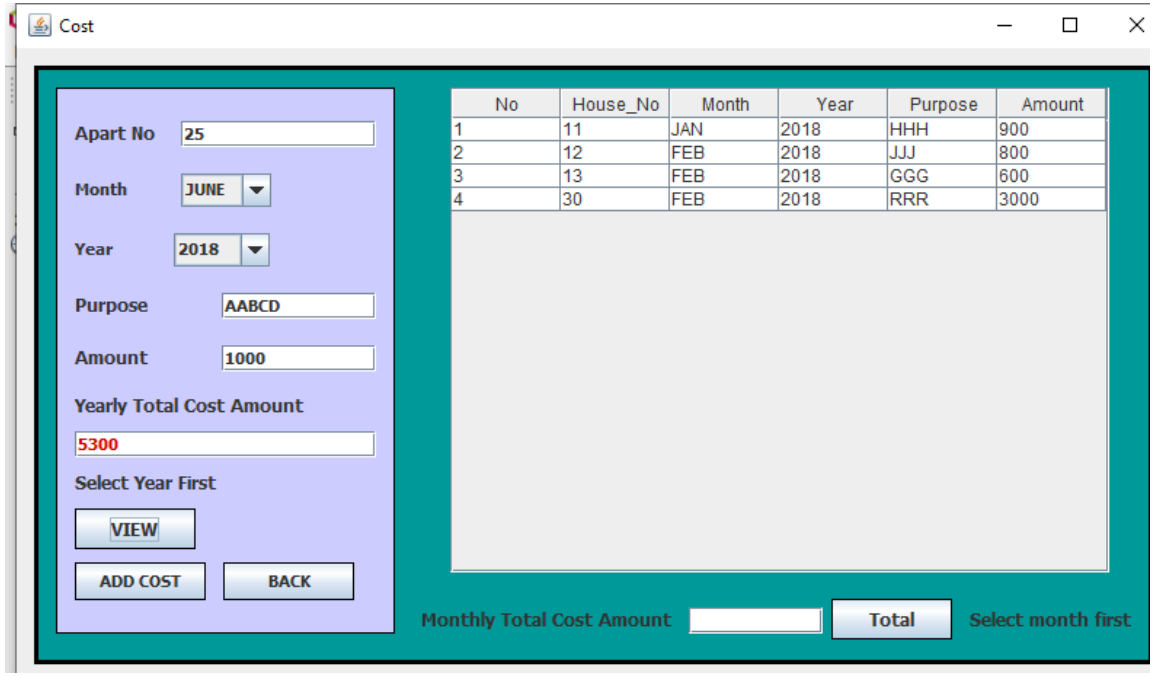
After deleting,



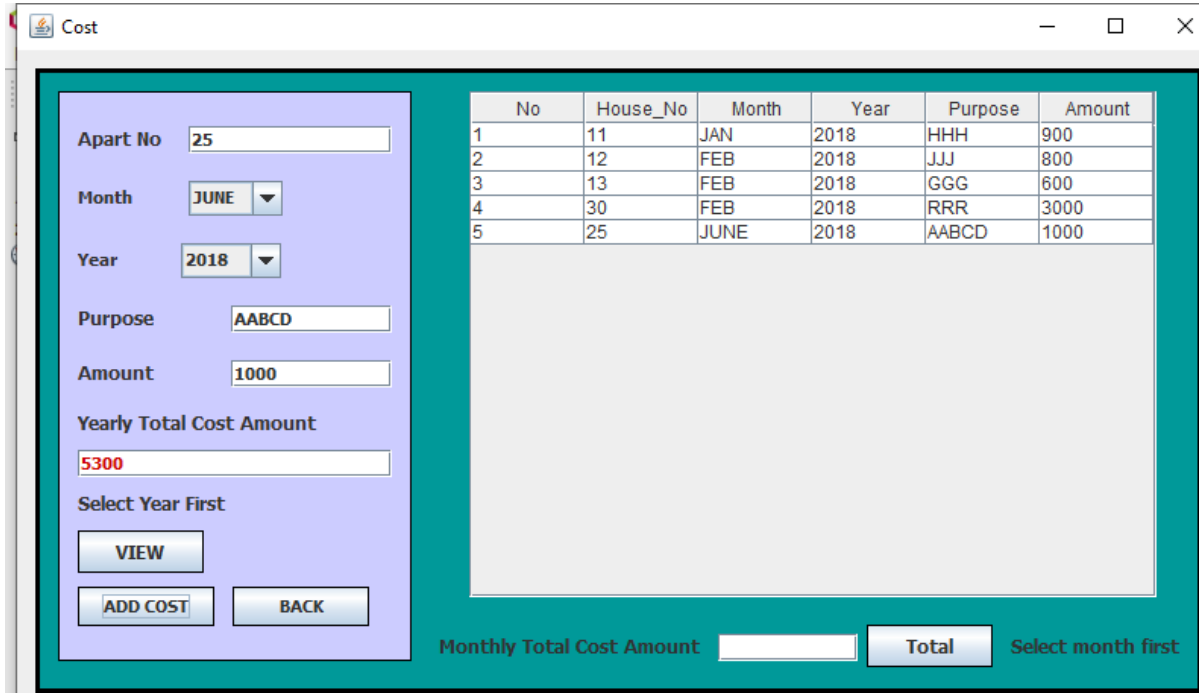
AMOUNT COLLECTED PAGE:

Here the admin can enter the purpose and rent for any month and can either view the total yearly rent and also can add the rent to the list.

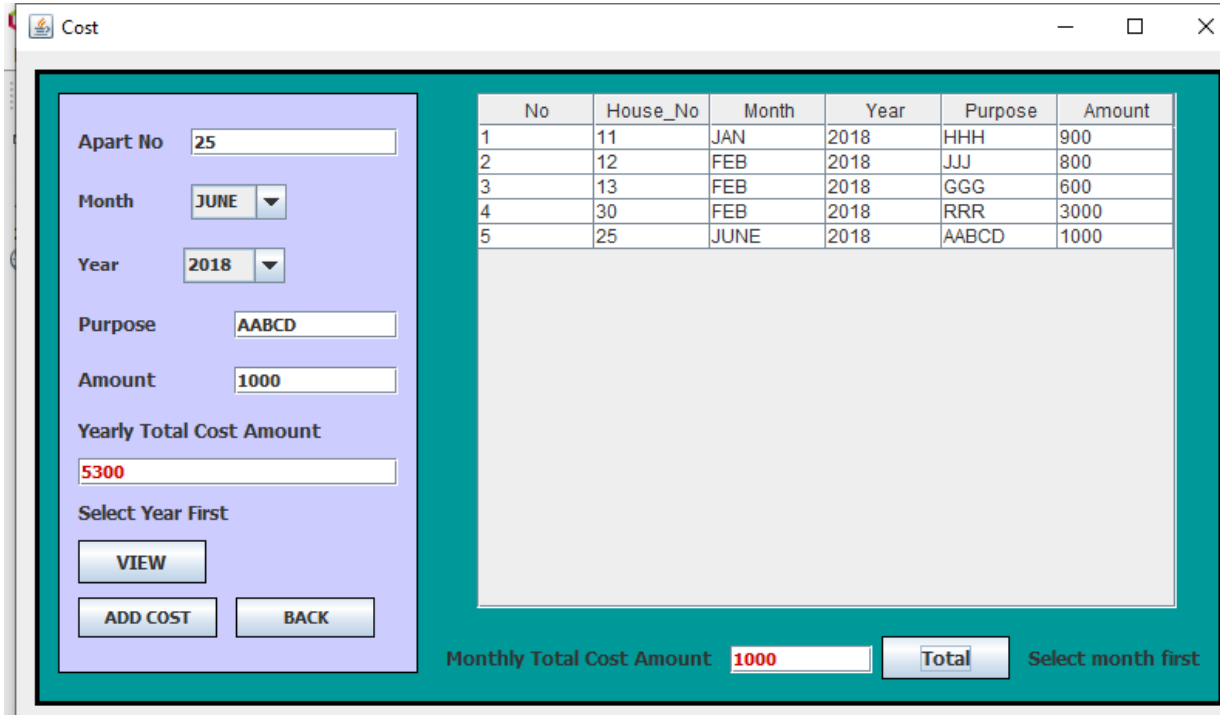
Viewing yearly expenditure,


Cost
Apart No
25
Month
JUNE
Year
2018
Purpose
AABCD
Amount
1000
Yearly Total Cost Amount
5300
Select Year First
VIEW
ADD COST
BACK
No
House_No
Month
Year
Purpose
Amount
1
11
JAN
2018
HHH
900
2
12
FEB
2018
JJJ
800
3
13
FEB
2018
GGG
600
4
30
FEB
2018
RRR
3000
Monthly Total Cost Amount
Total
Select month first

Adding rent,

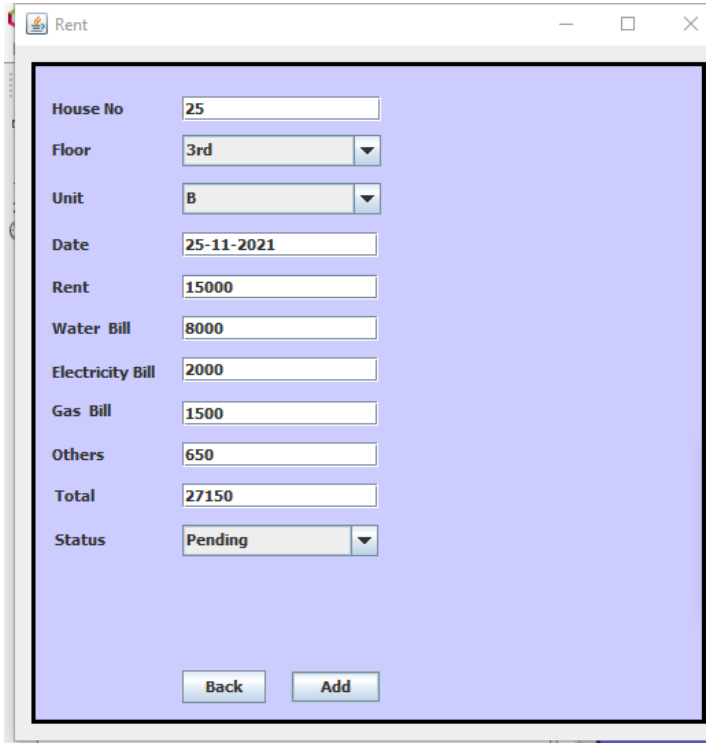


You can also view the monthly total rent amount,

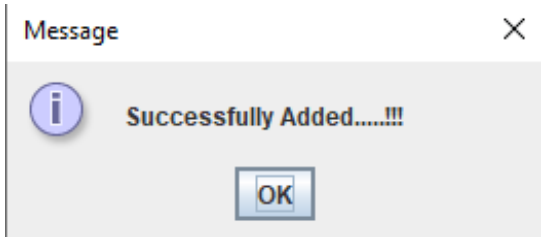


RENT PAGE:

The admin can add the rent details that tenant have to pay along with other bills like electricity, gas and water and can update the status of the payment status.

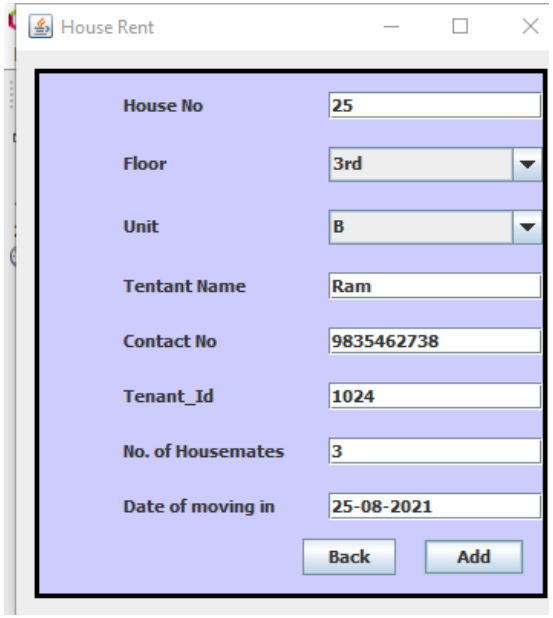


Once the details are added to the database, a pop up message shows up.



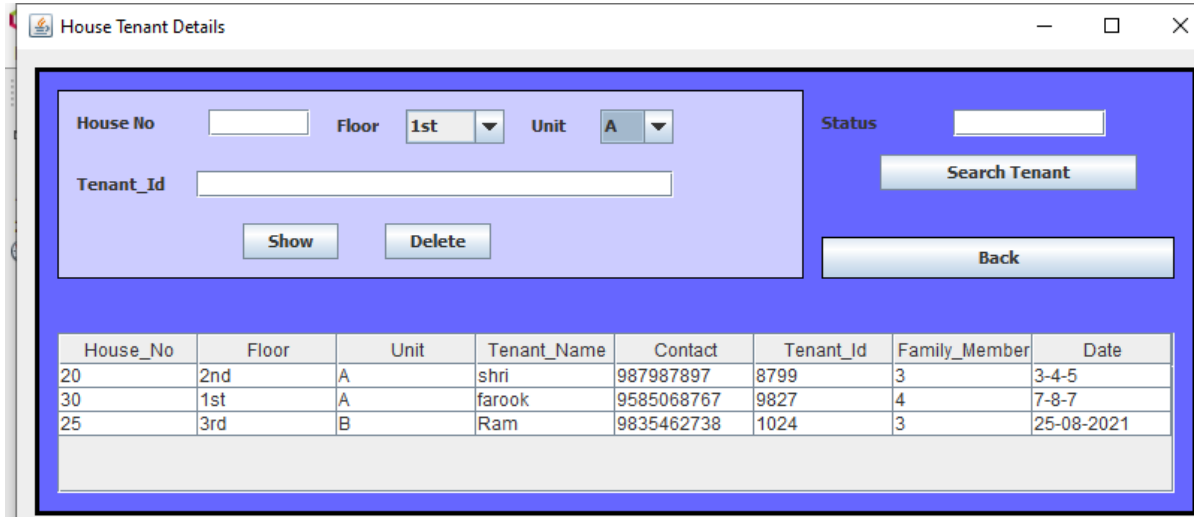
ADD TENANT DETAILS PAGE:

This page is for adding the moving in tenant details.[by admin]

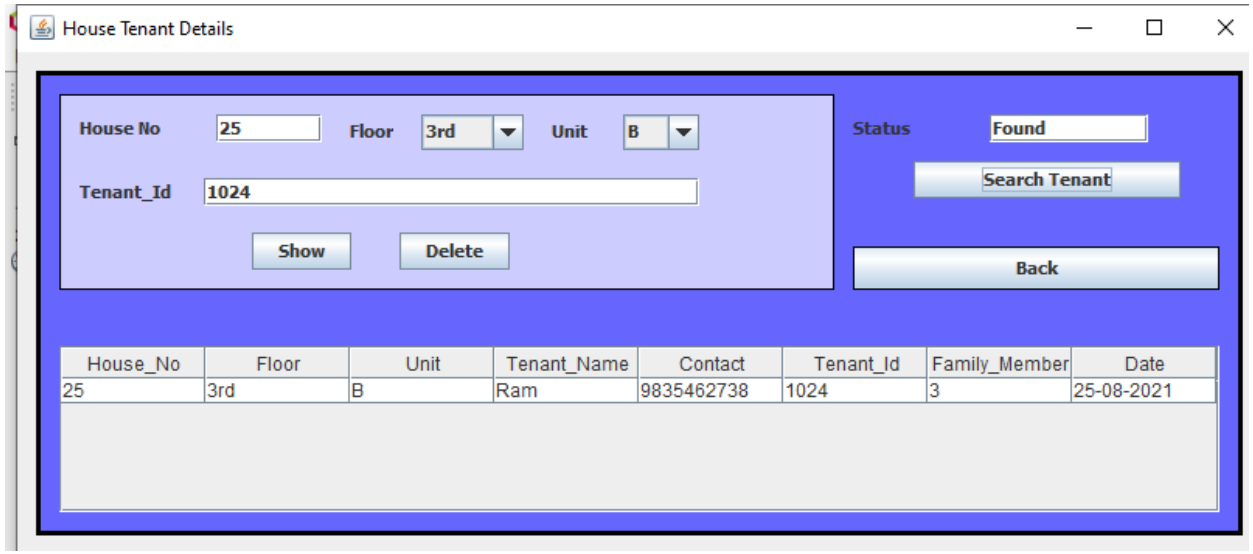


VIEWING TENANT DETAILS PAGE:

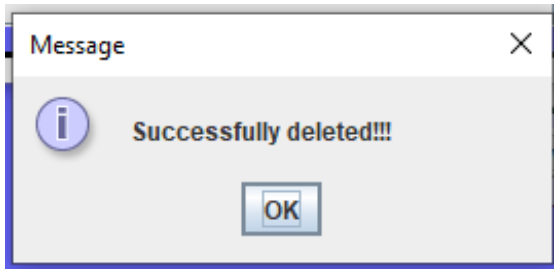
Here the admin can view the user status and search particular tenant’s status.

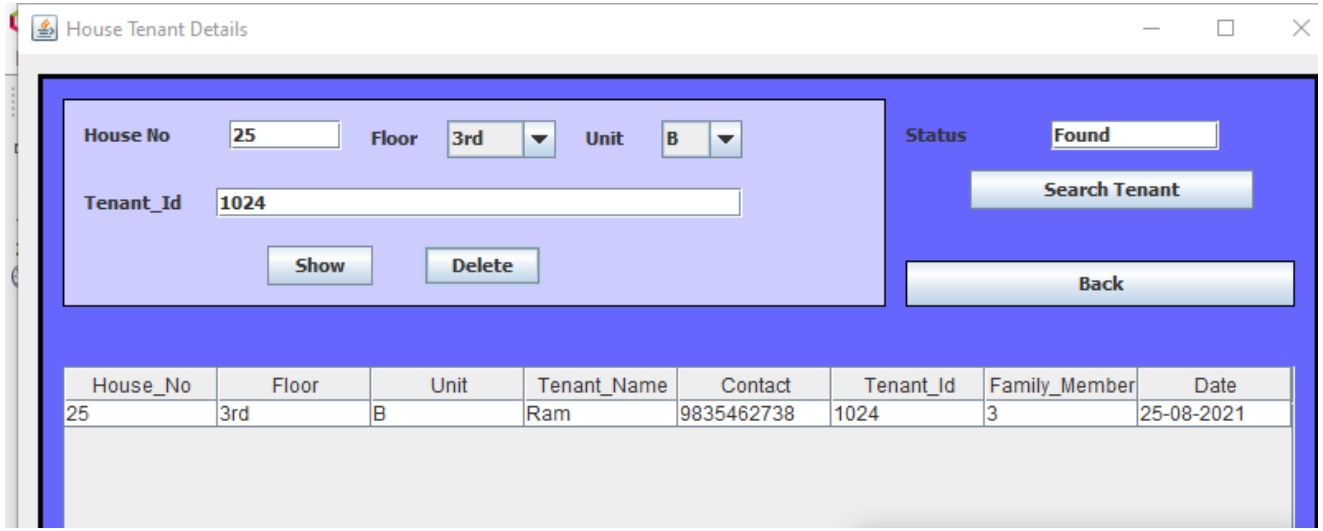


If the particular tenant being searched is found, it shows it .If not, it shows a blank row and status will be changed to not found.

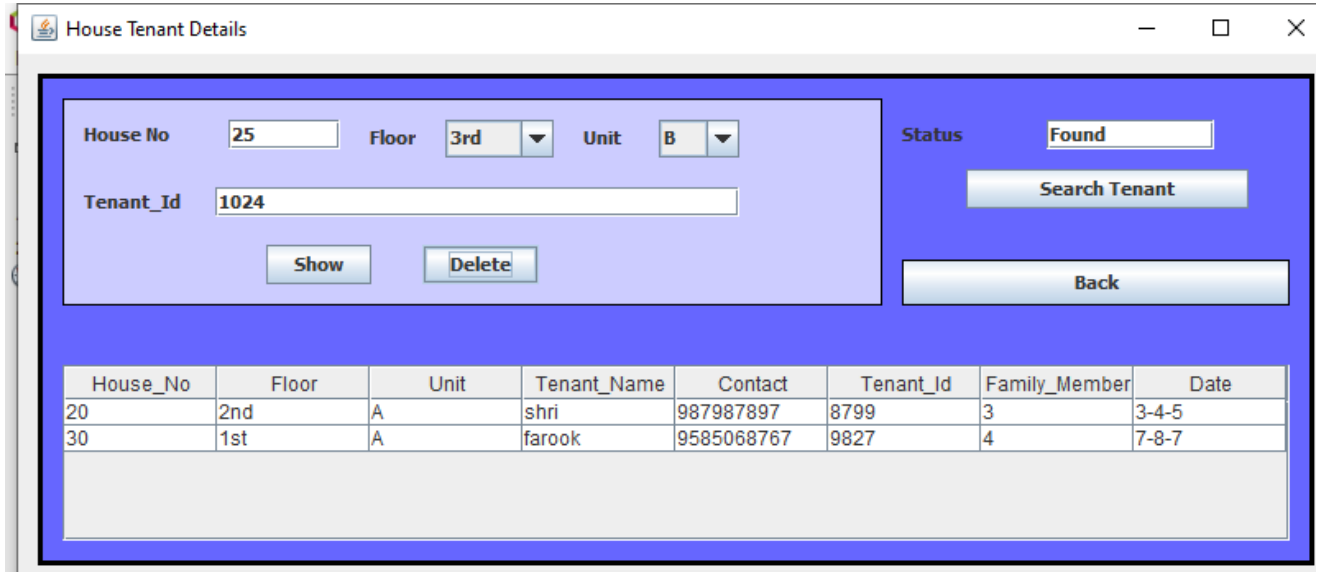


Admin can also delete the tenant details.



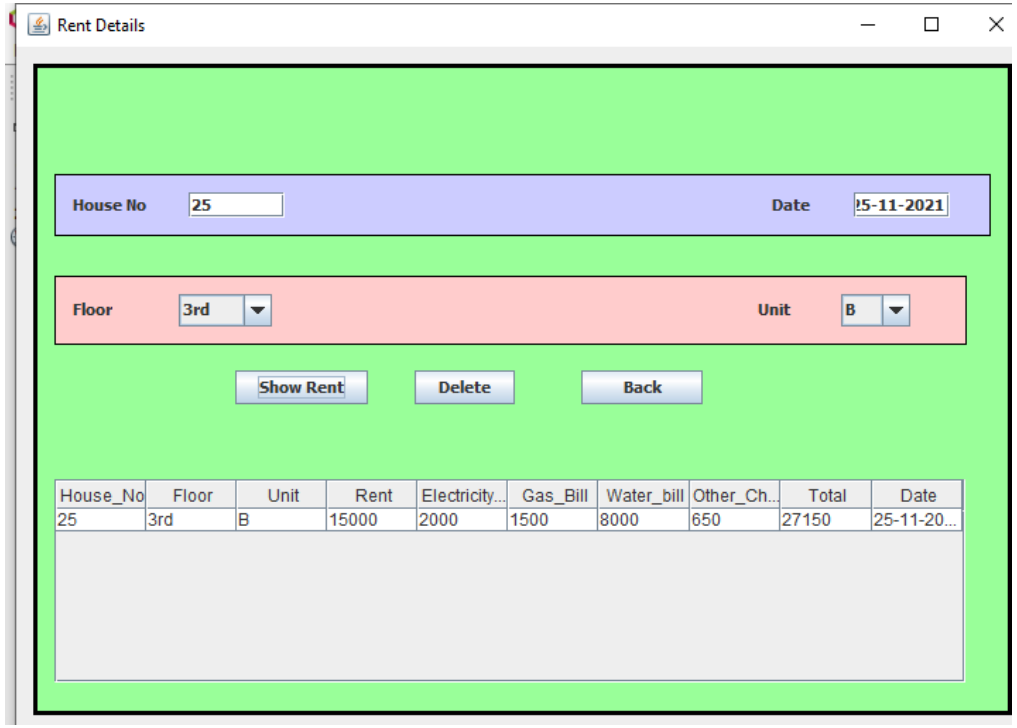


After deleting, remaining list of tenants will be shown.

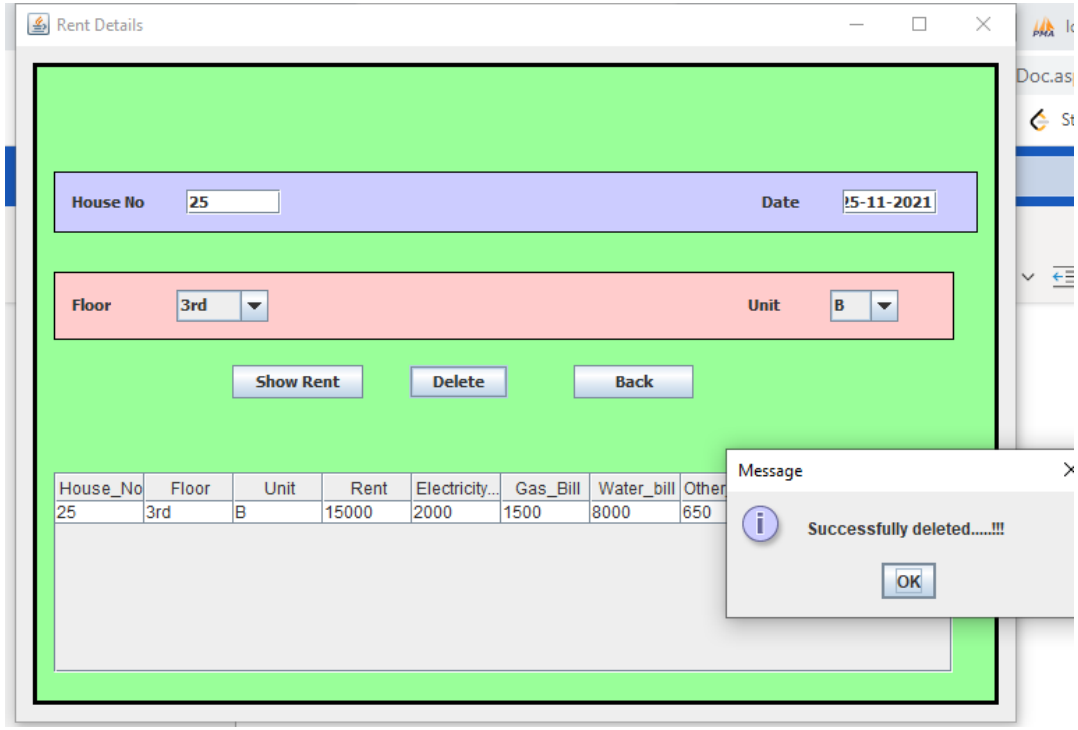


Viewing Rent page:

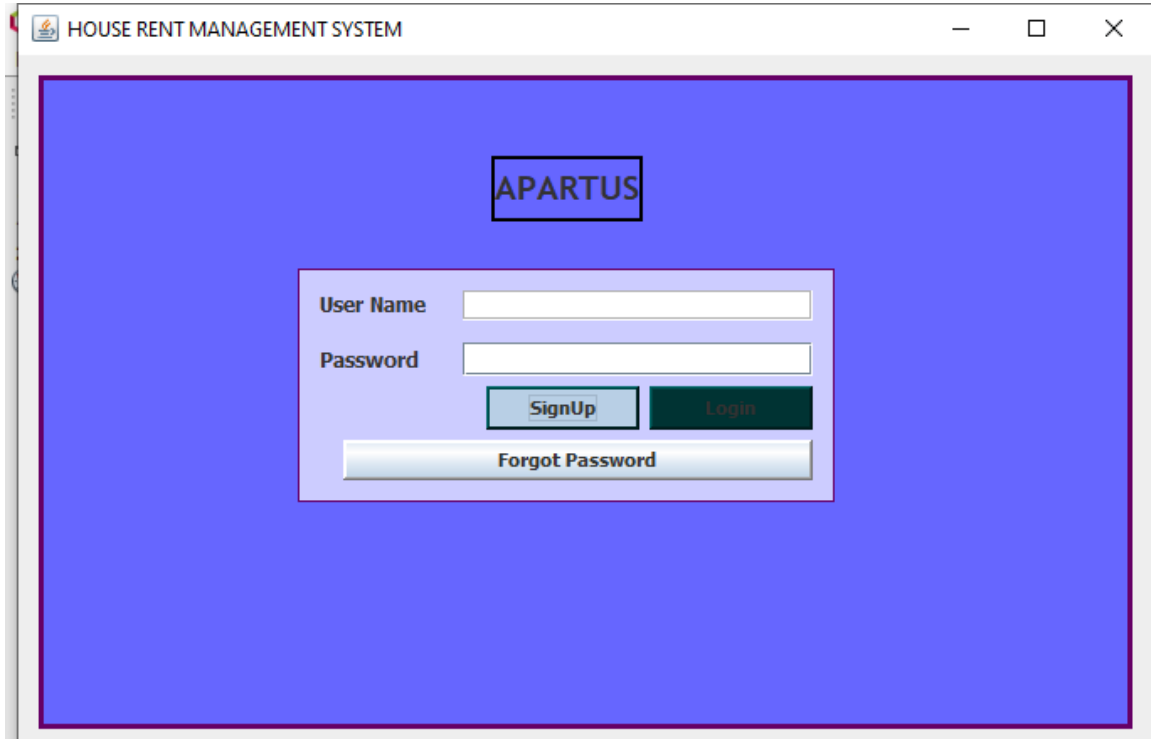
The admin can search particular user's rent and bills updates in this page.



If they want to delete it, they can.



These are the total features in this Apartment management system, Now the admin wants to log out they will be directed to the Home page.



DATABASE:

We have created 6 tables each for User Login, Rent information, House information, Tenant details, Notice details, and cost details.

LOGIN :

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	No	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	Name	text	utf8mb4_general_ci		No	None			Change Drop More
3	Username	text	utf8mb4_general_ci		No	None			Change Drop More
4	Sec_Q	text	utf8mb4_general_ci		No	None			Change Drop More
5	Answer	text	utf8mb4_general_ci		No	None			Change Drop More

	No	Name	Username	Sec_Q	Answer
Edit Copy Delete	1	jey	jey	What is your mother name?	mom
Edit Copy Delete	2	shri	nithu	Where do you live in?	cdm
Edit Copy Delete	4	farook	far	Who is your favourite Person?	terror
Edit Copy Delete	5	Niruthiya Shri	Nithuram	Who is your favourate teacher?	Jancy

HOUSE INFORMATION:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	No	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	House_No	text	utf8mb4_general_ci		No	None			Change Drop More
3	Floor	text	utf8mb4_general_ci		No	None			Change Drop More
4	Unit	text	utf8mb4_general_ci		No	None			Change Drop More
5	Details	text	utf8mb4_general_ci		No	None			Change Drop More
6	Rent	text	utf8mb4_general_ci		No	None			Change Drop More
7	About	text	utf8mb4_general_ci		No	None			Change Drop More

	No	House_No	Floor	Unit	Details	Rent	About
Edit Copy Delete	1	10	1st	A	2 Bed + 1 Drawing + 1 Dinning + 1 Kitchen + 2 Bath	1000	Free
Edit Copy Delete	2	20	2nd	A	2 Bed + 1 Drawing + 1 Dinning + 1 Kitchen + 2 Bath	2000	Free
Edit Copy Delete	3	30	3rd	A	Single Room + Single Bath + Single Kitchen	3000	Sold
Edit Copy Delete	4	25	3rd	B	2 Bed + 1 Drawing + 1 Dinning + 1 Kitchen + 2 Bath	15000	Booke

TENANT INFORMATION:

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	No	int(11)			No	None		AUTO_INCREMENT	Change Drop More
☐	2	House_No	text	utf8mb4_general_ci		No	None			Change Drop More
☐	3	Floor	text	utf8mb4_general_ci		No	None			Change Drop More
☐	4	Unit	text	utf8mb4_general_ci		No	None			Change Drop More
☐	5	Tenant_Name	text	utf8mb4_general_ci		No	None			Change Drop More
☐	6	Contact	text	utf8mb4_general_ci		No	None			Change Drop More
☐	7	Tenant_Id	text	utf8mb4_general_ci		No	None			Change Drop More
☐	8	Family_Member	text	utf8mb4_general_ci		No	None			Change Drop More
☐	9	Date	text	utf8mb4_general_ci		No	None			Change Drop More

←T→	No	House_No	Floor	Unit	Tenant_Name	Contact	Tenant_Id	Family_Member	Date
☐ Edit Copy Delete	2	20	2nd	A	shri	987987897	8799	3	3-4-5
☐ Edit Copy Delete	3	30	1st	A	farook	9585068767	9827	4	7-8-7
☐ Edit Copy Delete	5	28	1st	A	Latha	9835462738	2430	4	12-09-201
☐ Edit Copy Delete	6	21	3rd	A	Vetri	9832532738	22438	4	19-09-201

RENT:

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	No	int(11)			No	*None*		AUTO_INCREMENT	Change Drop More
☐	2	House_No	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	3	Floor	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	4	Unit	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	5	Rent	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More
☐	6	Electricity_Bill	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More
☐	7	Gas_Bill	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More
☐	8	Water_Bill	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More
☐	9	Other_Charges	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More
☐	10	Total	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	11	Status	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More
☐	12	Date	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More

←T→	No	House_No	Floor	Unit	Rent	Electricity_Bill	Gas_Bill	Water_Bill	Other_Charges	Total	Status	Date
☐ Edit Copy Delete	7	28	1st	A	20000	1000	1000	2000	500	24500	Paid	18-10-2020
☐ Edit Copy Delete	8	25	3rd	B	15000	2000	1500	8000	650	27150	Pending	18-11-2021
☐ Edit Copy Delete	9	30	3rd	C	15000	1000	1500	5000	500	23000	Pending	08-06-2018

NOTICE:

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	No	int(11)			No	*None*		AUTO_INCREMENT	Change Drop More
☐	2	House_No	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	3	Floor	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	4	Unit	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	5	Status	text	utf8mb4_general_ci		No	*None*			Change Drop More
☐	6	Date	text	utf8mb4_general_ci		No	*None*			Change Drop More

←T→		No	House_No	Floor	Unit	Status	Date
☐	Edit Copy Delete	5	25	3rd	B	MOVING IN	12-05-2021
☐	Edit Copy Delete	6	28	1st	A	MOVING IN	25-05-2019
☐	Edit Copy Delete	7	21	2nd	C	MOVING OUT	25-01-2022

AMOUNT COLLECTED:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	No	int(3)			No	*None*		AUTO_INCREMENT	Change Drop More
2	House_No	text	utf8mb4_general_ci		No	*None*			Change Drop More
3	Month	text	utf8mb4_general_ci		No	*None*			Change Drop More
4	Year	text	utf8mb4_general_ci		No	*None*			Change Drop More
5	Purpose	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More
6	Amount	text	utf8mb4_general_ci		Yes	*NULL*			Change Drop More

	No	House_No	Month	Year	Purpose	Amount
Edit Copy Delete	1	11	JAN	2018	HHH	900
Edit Copy Delete	2	12	FEB	2018	JJJ	800
Edit Copy Delete	3	13	FEB	2018	GGG	600
Edit Copy Delete	4	30	FEB	2018	RRR	3000
Edit Copy Delete	5	25	JUNE	2018	AABCD	1000

REFERENCES:

- **YOUTUBE - https://www.youtube.com/**
- **WIKIPEDIA - https://en.wikipedia.org/wiki/Main_Page**
- **JAVATPOINT - https://www.javatpoint.com/**