A Comprehensive Study on Income Expense Application

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Submitted in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
SONARGAON UNIVERSITY (SU)

September 2022

APPROVAL

The Project titled "**A Comprehensive Study on Income Expense Application**" submitted by Md. Ektiar Hossen (CSE1803015040), Md. Mukter Hossain (CSE1901016021), Zohir Raihan (CSE1901016070) and HM Shofiqul Islam (CSE1901016071) to the Department of Computer Science and Engineering, Sonargaon University (SU), has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering and approved as to its style and contents.

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DECLARATION

We, hereby, declare that the work presented in this report is the outcome of the investigation performed by us under the supervision of **Nabila Anwar, Lecturer,** Department of Computer Science and Engineering, Sonargaon University, Dhaka, Bangladesh. We reaffirm that no part of this project has been or is being submitted elsewhere for the award of any degree or diploma.

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ABSTRACT

Income Expense Application is an everyday expense control application designed to track effortlessly and efficiently each day's costs. This helps us to get rid of the need of paper responsibilities that systematically maintain information. This device can be utilized by any individual to govern their income expenditure from each day to annual basis and to hold an eye on their spending, Including the person to whom the payments were made and the purpose for the payment. On a daily, weekly, monthly, and yearly basis, details of income expenses will be displayed in the form of a web software. It aids us in remembering and adding information about what money we receive from others and what costs or payments we must make on a given date or month. We have categories in the income expense application such as add income expense, daily income expense, monthly income expense, yearly income expense, add new income expense, and so on.

ACKNOWLEDGMENT

At the very beginning, we would like to express my deepest gratitude to the Almighty Allah for giving us the ability and the strength to finish the task successfully within the schedule time.

We are auspicious that we had the kind association as well as supervision of **Nabila Anwar, Lecturer,** Department of Computer Science and Engineering, Sonargaon University whose hearted and valuable support with best concern and direction acted as necessary recourse to carry out our project.

We would like to convey our special gratitude to **Prof. Dr Md Alamgir Hossain,** Dean, Faculty of Science and Engineering for his kind concern and precious suggestions.

We are also thankful to all our teachers during our whole education, for exposing us to the beauty of learning.

Finally, our deepest gratitude and love to my parents for their support, encouragement, and endless love.

LIST OF ABBREVIATIONS

JR	JoniorAccountant
OTP	One-Time Password
SR	Senior Accountent
UI	User Interface

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LIST OF FIGURES

CHAPTER 1
INTRODUCTION TO INCOME EXPENSE LOGIN PAGE

1.1 Introduction:

Income expense application is a web application used to track user expenses and generates periodical reports about the savings and expenditure. In this project, we propose an application known as "Income Expense Application," which is helpful to manage our income and expenses daily or periodically or whenever we want to remind ourselves. It also acts as an indicator or reminder example in the fastest world in which we cannot remember what the things we have to do for the end of the month are and the payments we have to pay for the particular month. Due to some conflict or other stress, we sometimes forget what the income is, where the money has to come from, or the payments we have to pay.

This application will assist you in keeping track of what you need to do at the end of the month. For instance, what are the monthly expenses, and how much do they cost? Food expenses, phone, power, taxation, and other personal charges are some of the expense features. If we are a businessman with a multi-business, we do not know from which part of the business income has come and how much income has come for us, but with the help of this application, we can divide and store all of the income and set a reminder for a specific date to remain so that we can manage and finalize the income for us.

After opening the application, the login page will open, in which case the developer is given a user ID and a temporary password, with that user and password we can enter the application.

1.2 Code structure using Layer Architecture:

1.Controller-Main control part
2.Manager-Manage all logical Part
3.Gateway-Manage all database and query
4.Model-Declar all Model Class
5.View-Manage Design part

1.3 Full System Income Expenses Flowchart:

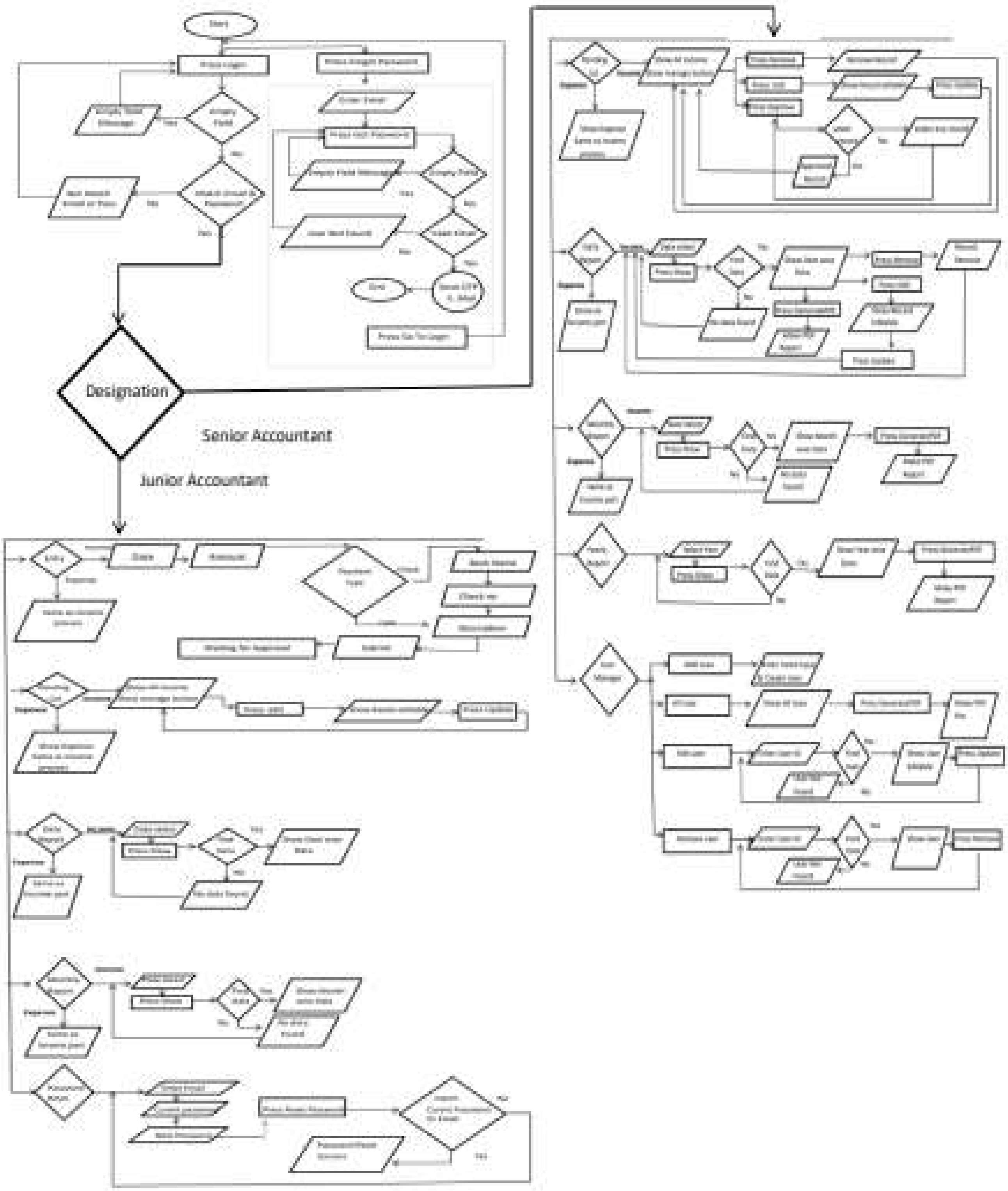


Figure: 1.3 Flowchart

1.4 Login Page:

Login page has two input boxes named email and password, email input box email validation is provided and password input box has a button for login. If the user wants to login it will show input validation and if not give email in the correct format it will give an error message. If the Email address and password is not correct, it will show an error message that you cannot login

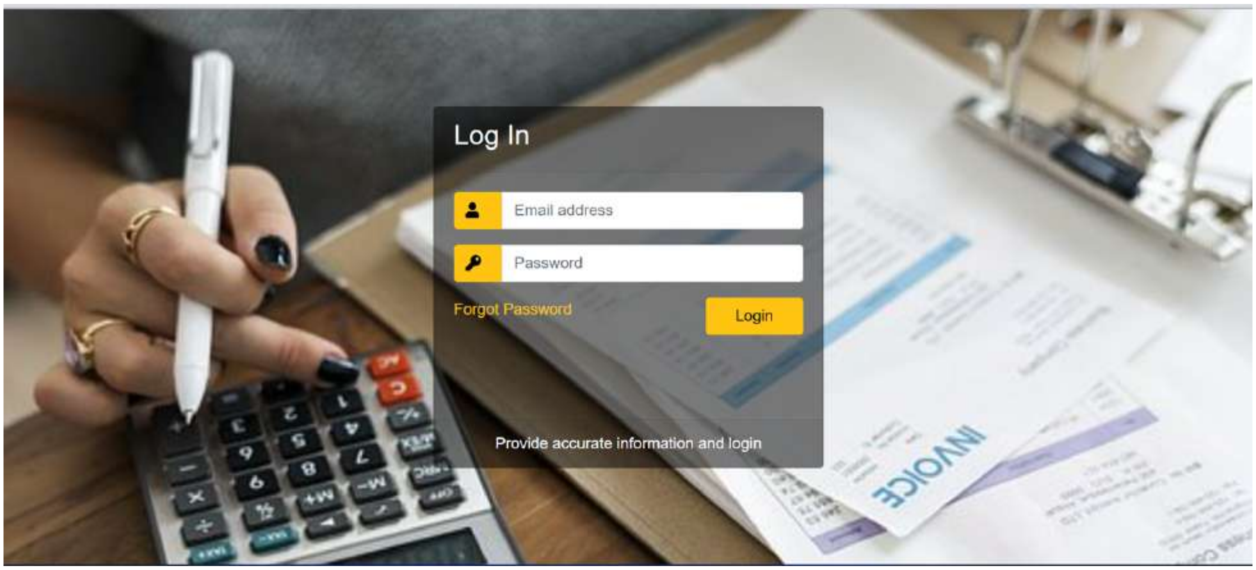


Figure: 1.4 Login Page

1.5 Login Flowchart:

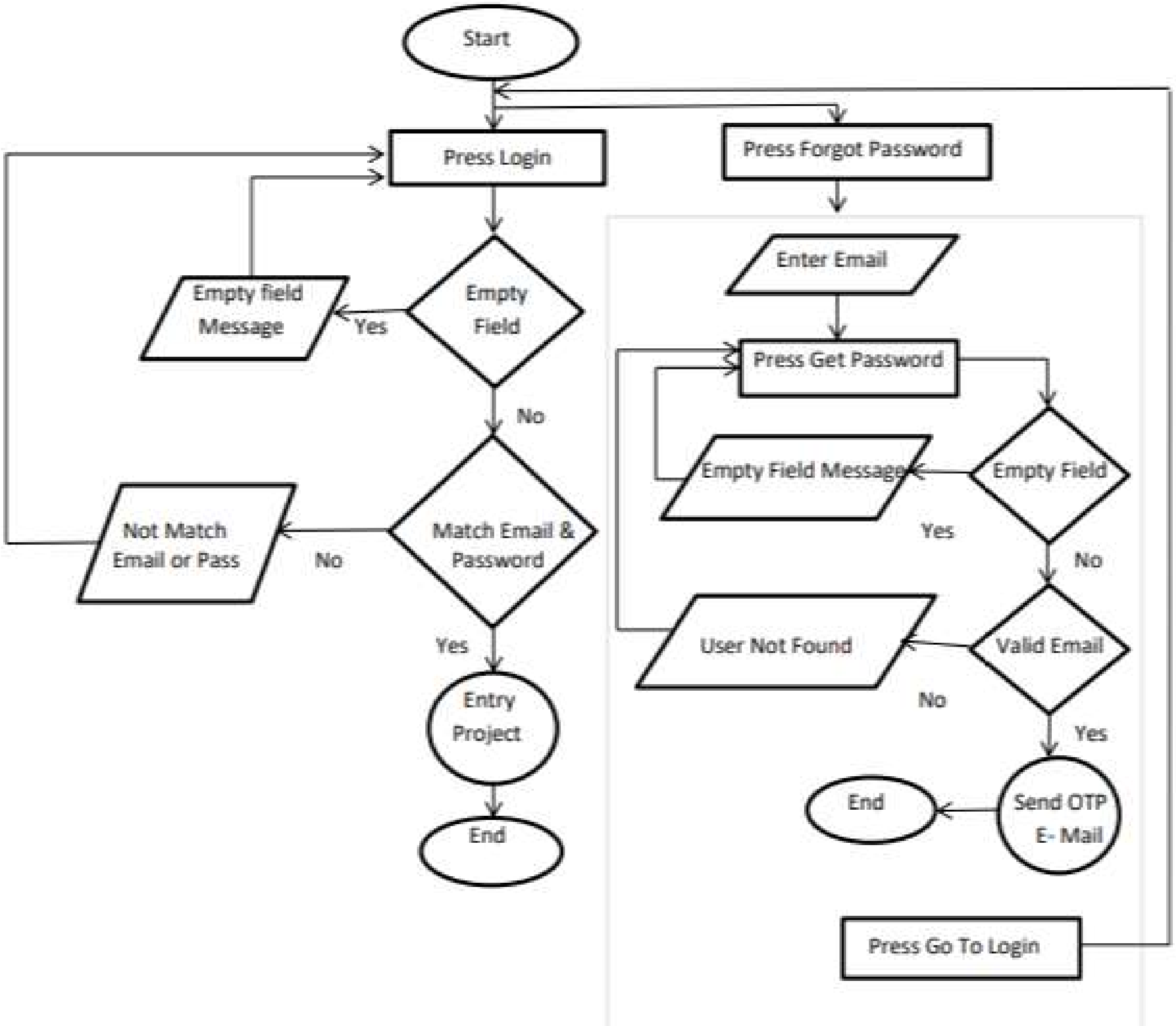


Figure: 1.5 Login Flowchart

1.6 First time Login by default user Provide Developer and created User:

User email: developer@gmail.com
Password: 12345

1.7 Add User:

Clicking the sub menu Collider from the user manager brings up the user page. User page has an input box for User ID, Username, User Email, User Designation and in each box blank validation no input box can be left blank, users can be added and there is a dropdown box for User Designation. Junior Accountant and Senior Accountant There are two options to create a user, complete the information in each box and click on the add button, a new user will be created. After creating the user, you can logout and go to the login page.

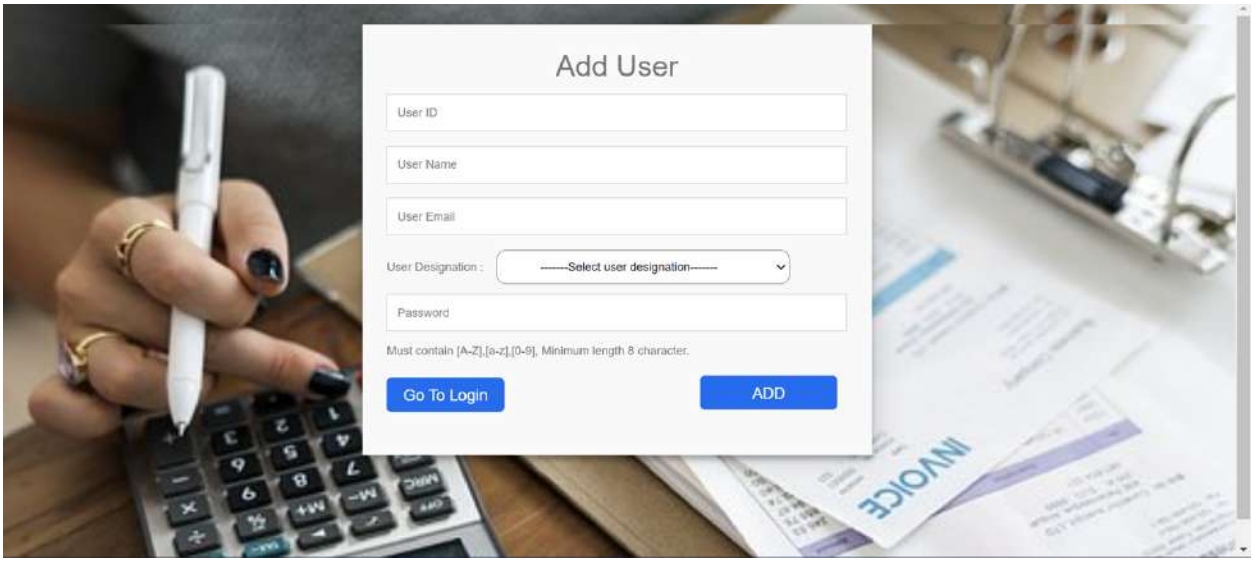


Figure: 1.7 Add User

1.8 After User Created:

If user forget password ,user click forget password this page open

1.9 Forgot Password Options:

If the user forgets the password, a new page called Forgot Password will open by clicking on Forgot Password. Input email and click “Get Your Password”

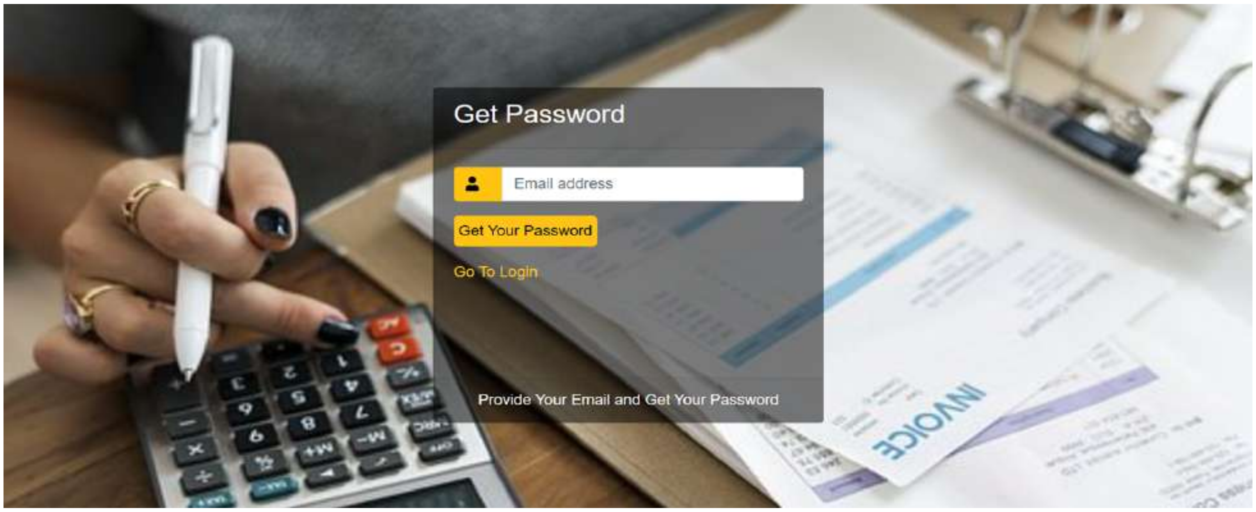


Figure: 1.9 Forgot Password Options

There is an input box for inputting the email address and there are two buttons named Get Your Password and logging Email Box, Email Validation Form and Blank field Validation If you enter the email address here and click the Get Your Password button, if there is a user account in this email address, then this email password will be sent to the address if this email is not there then the message will appear “User not found in this mail Please enter valid email” and it will take you to the login page.

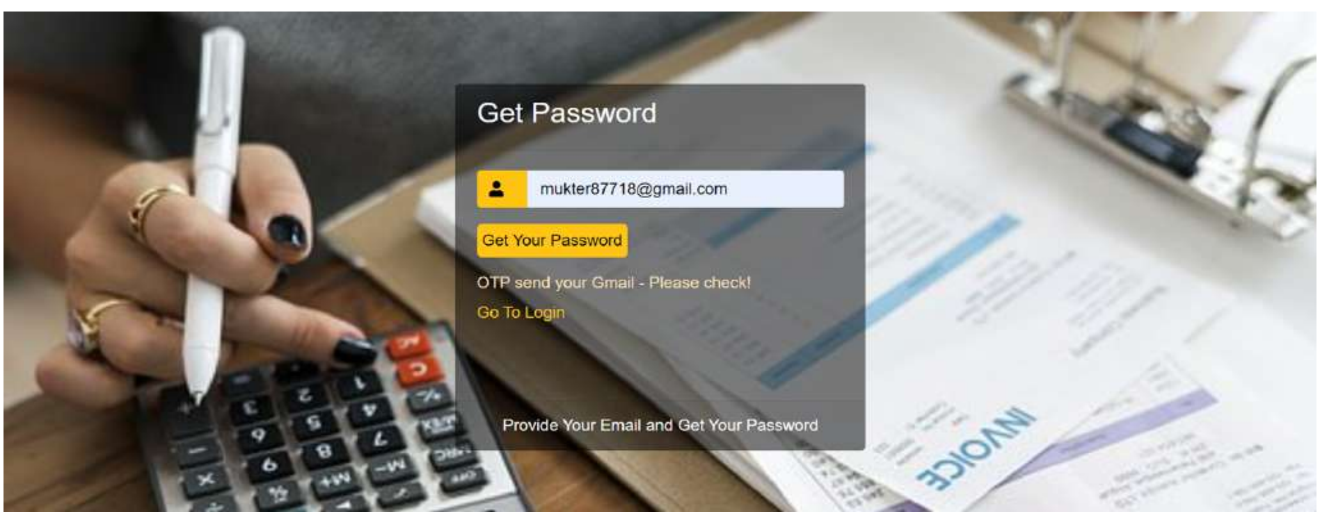


Figure: 1.9.1 Forgot Password Options

1.10 User Get OTP Her gmail:

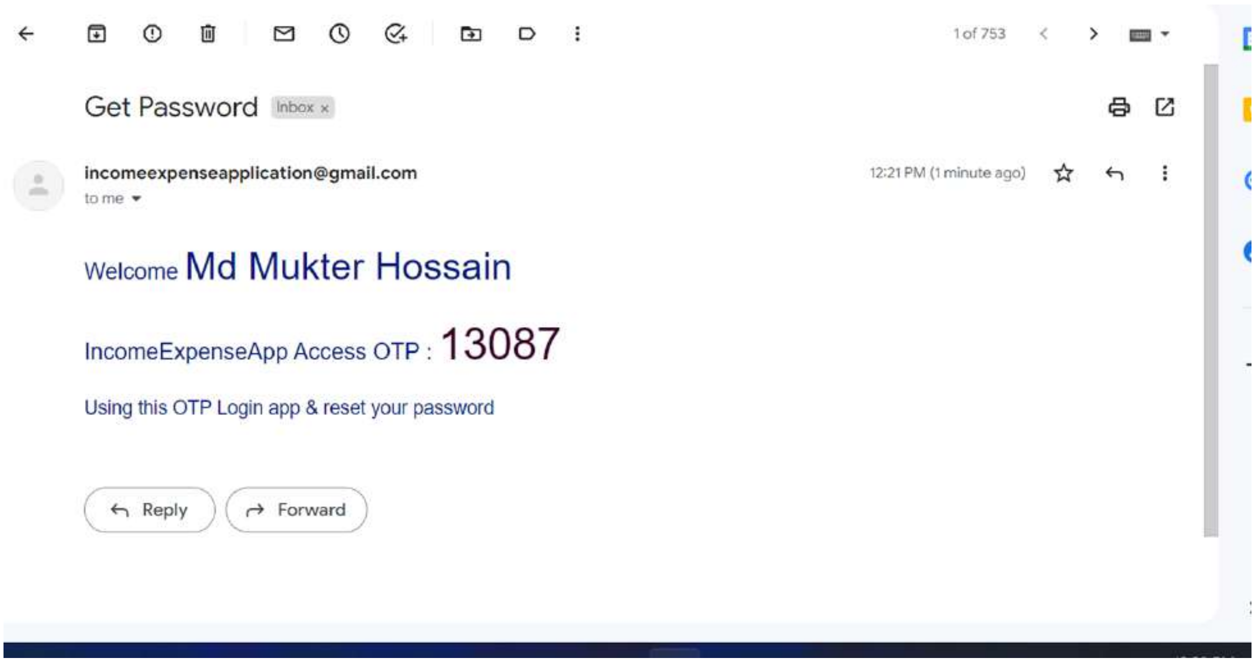


Figure: 1.10 OTP Gmail

1.11 Conclusion

To conclude this, the login page is designed to prevent outsiders from entering this system. A user is authenticated with username and password. One cannot access the system without having a user. If a user forgets his password in any way, he can recover his password by clicking the forgot password button.

CHAPTER 2

INTRODUCTION TO JUNIOR USER ANALYSIS

2.1 Introduction:

First, we enter the application with the user id of the junior accountant, if any user enters the app with the junior id, his menu bar will open according to the performance of the junior, the menu bars that will appear are:

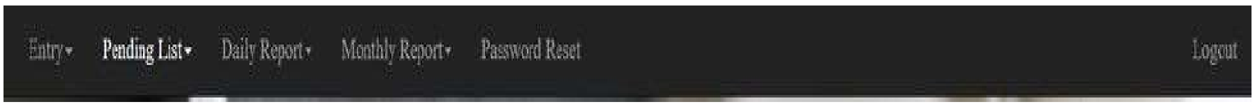


Figure: 2.1 Menu Bar

Submenu is mentioned in each menu bar, if someone is joined as a junior, Income Expenses will open by default because the maximum work of the person who enters as a junior will be with Income Expenses. To open this page, click on Entry from the menu bar and click on submenu Income.

2.2 When a Junior Accountant Login:

Income Entry:

In the case of income entry, there will be a date input box in the first state, where the current date will be populated automatically, you can change the date as required, then as payment mode, there will be 2 ratio buttons called cash and check. The default cash button will be in the selected state. There is an area box for giving his particulars and on clicking additional two input boxes for bank name and check number will be hidden in the selected state and each input box is given validation and there is a save button to save income and all income entries with necessary information. No income entry can be done by keeping the inbox empty.

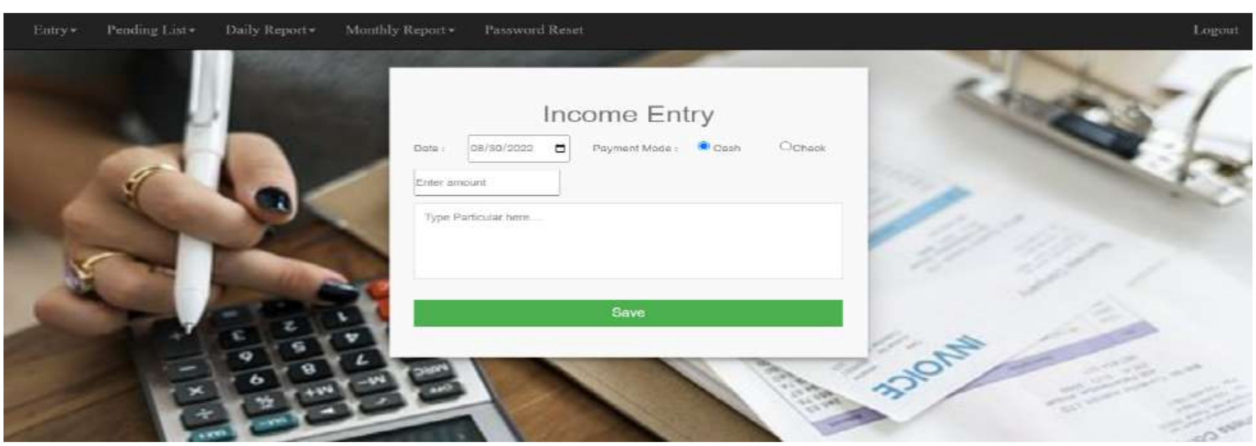


Figure: 2.2 Income Entry

When payment type check click

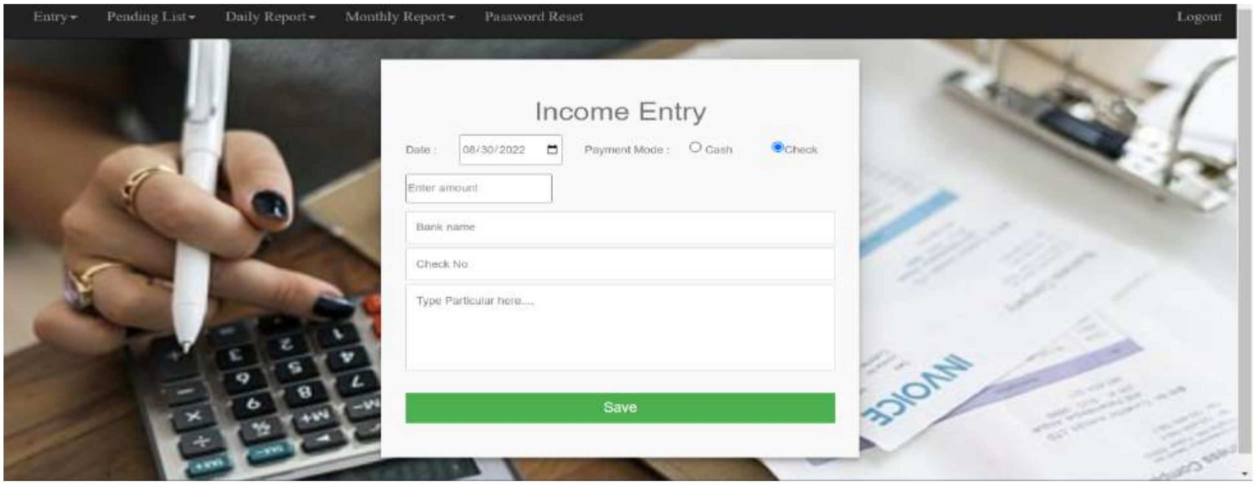


Figure: 2.2.1 Payment System

2.3 Junior Flowchart:

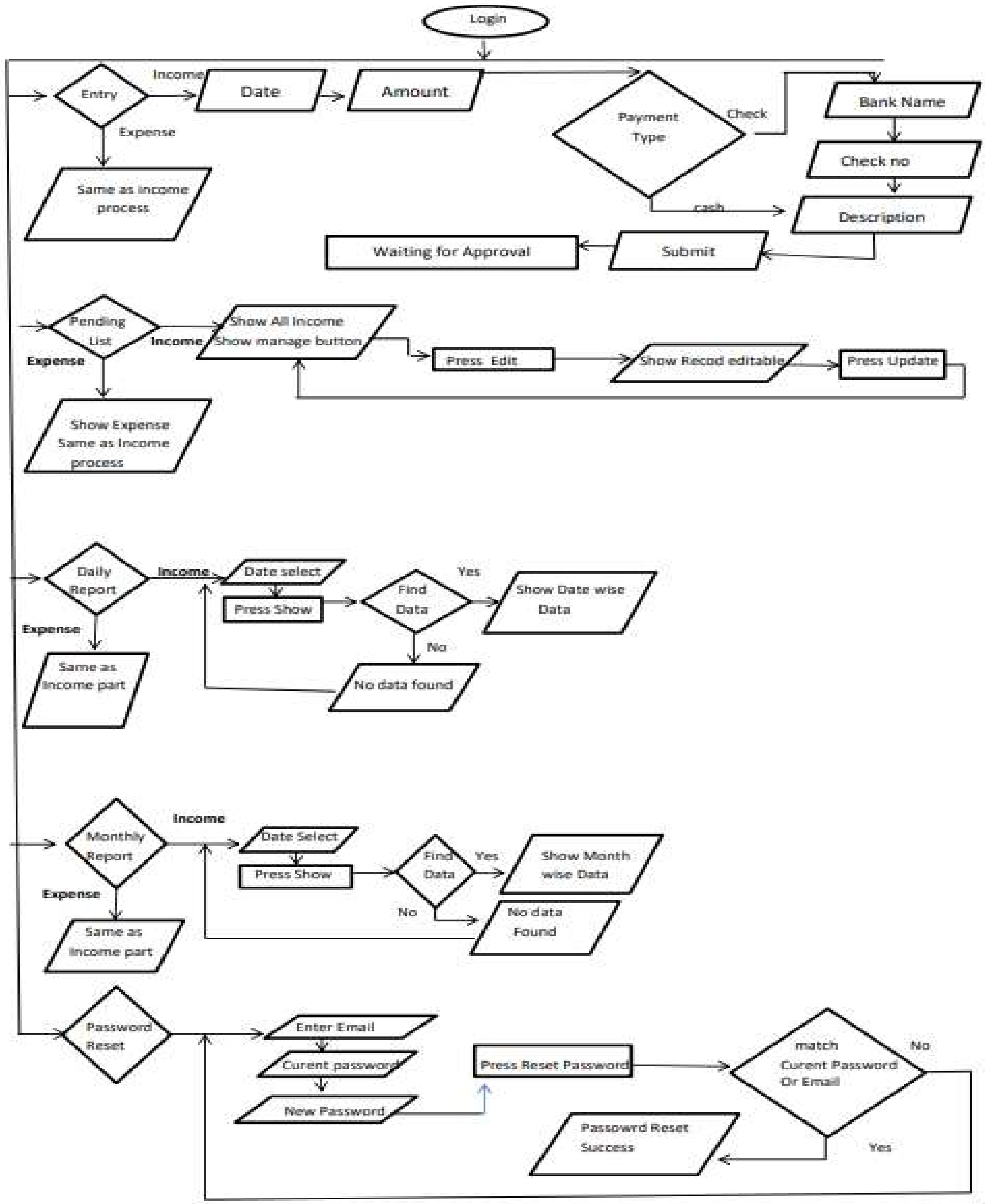
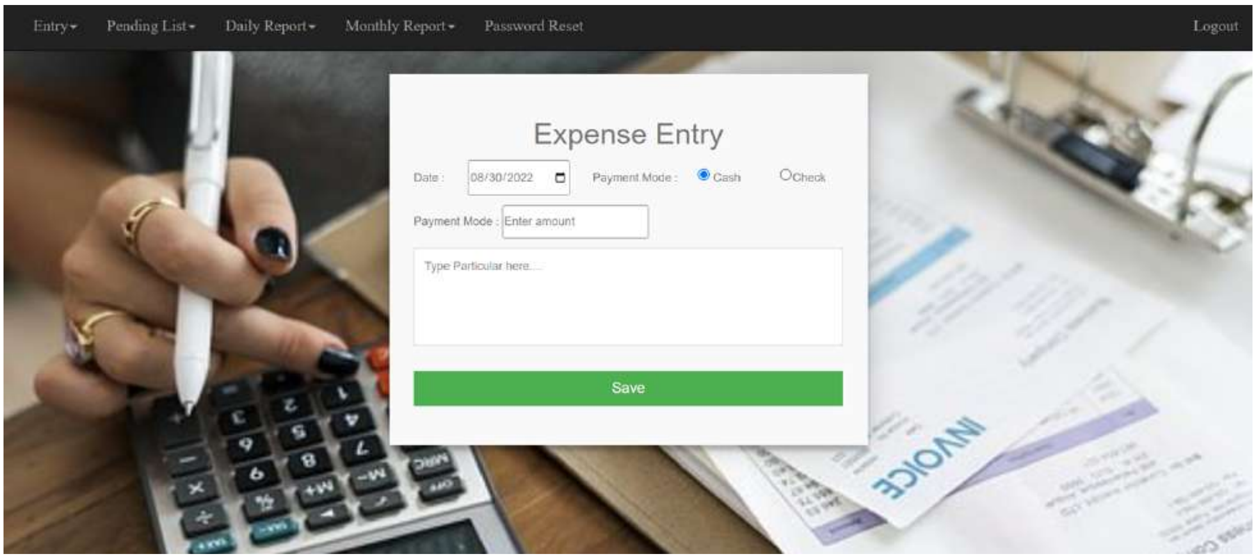


Figure: 2.3 Junior Flowchart

2.4 Expense entry:

In the case of expense entry, there will be a date input box in the first state, where the current date will be populated automatically, you can change the date as required, then as payment mode, there will be 2 ratio buttons called cash and check. The default cash button will be in the selected state. There is an area box for giving his particulars and on clicking additional two input boxes for bank name and check number will be hidden in the selected state and each input box is given validation and there is a save button to save expense and all the expense entries with necessary information. No expense entry can be done by keeping the inbox empty.



Fige: 2.04 Expense entry

2.5 Click payment mode check

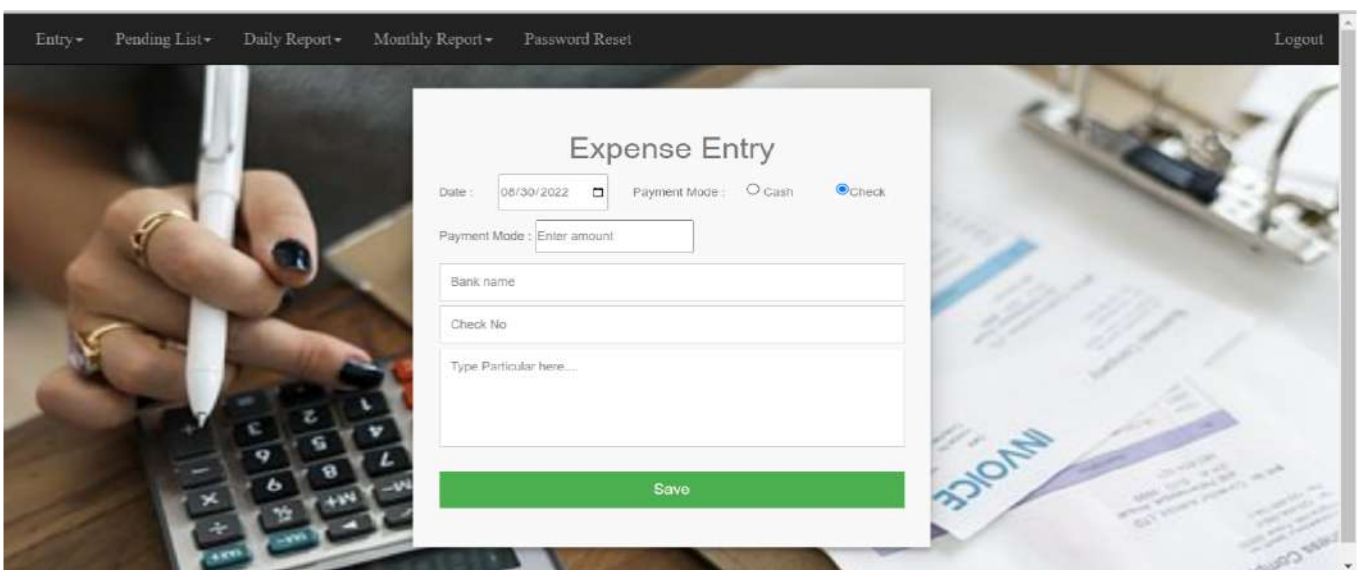


Figure: 2.5 Expense payment

2.6 View Income Pending List:

Users can make any type of correction from here but cannot delete or approve. After the income pending list is started there is an option called Manage. Clicking on the edit option will open a new page where there are 6 input boxes named Date, Cash, Amount, Bank Name, Check Number, Description. And a button named Update.

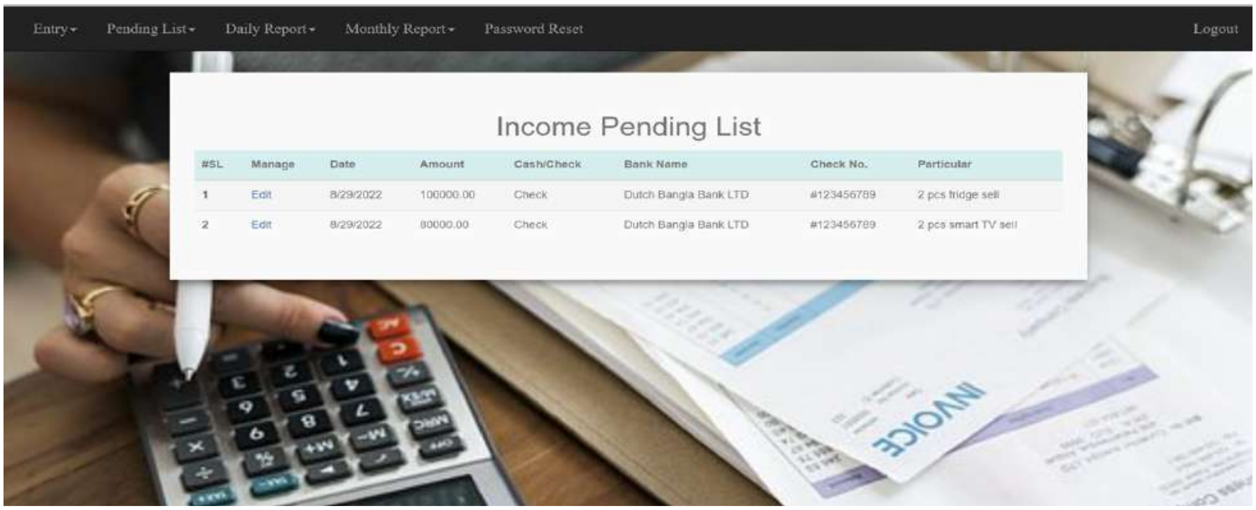


Figure: 2.6 Income Pending List

When click Edit:

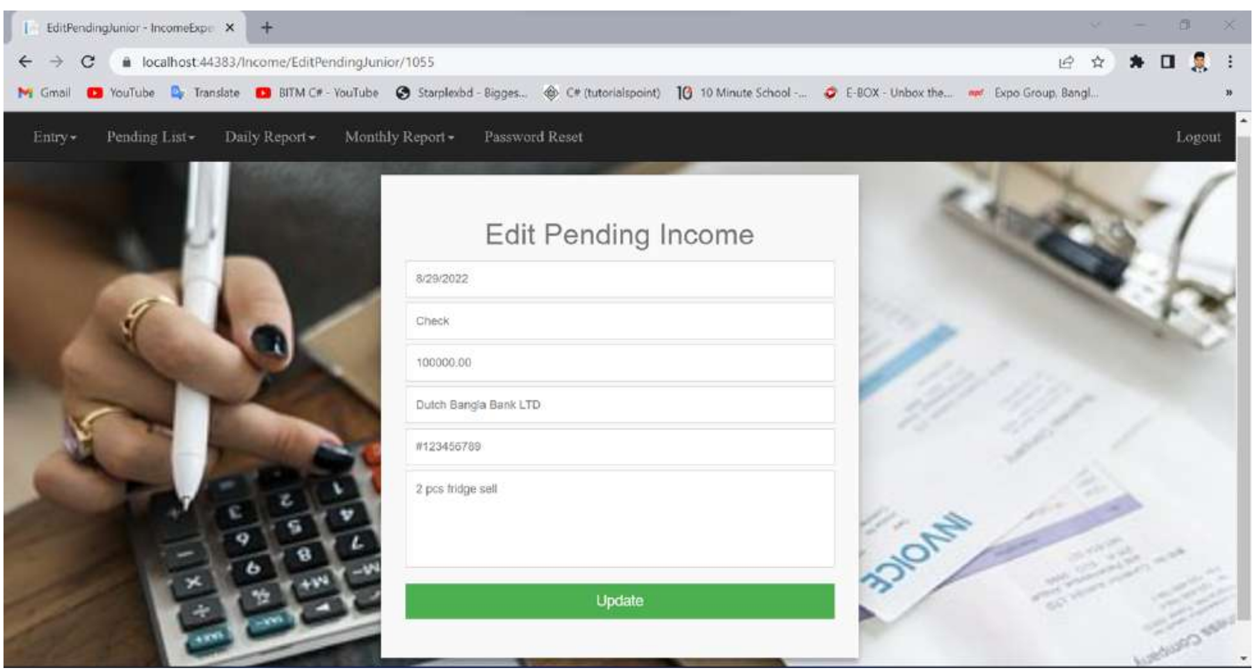


Figure: 2.6.1 Edit Income

2.7 View Expense Pending List:

Users can make any type of correction from here but cannot delete or approve. After the income pending list is started there is an option called Manage. Clicking on the edit option will open a new page where there are 6 input boxes named Date, Cash, Amount, Bank Name, Check Number, Description. And a button named Update.

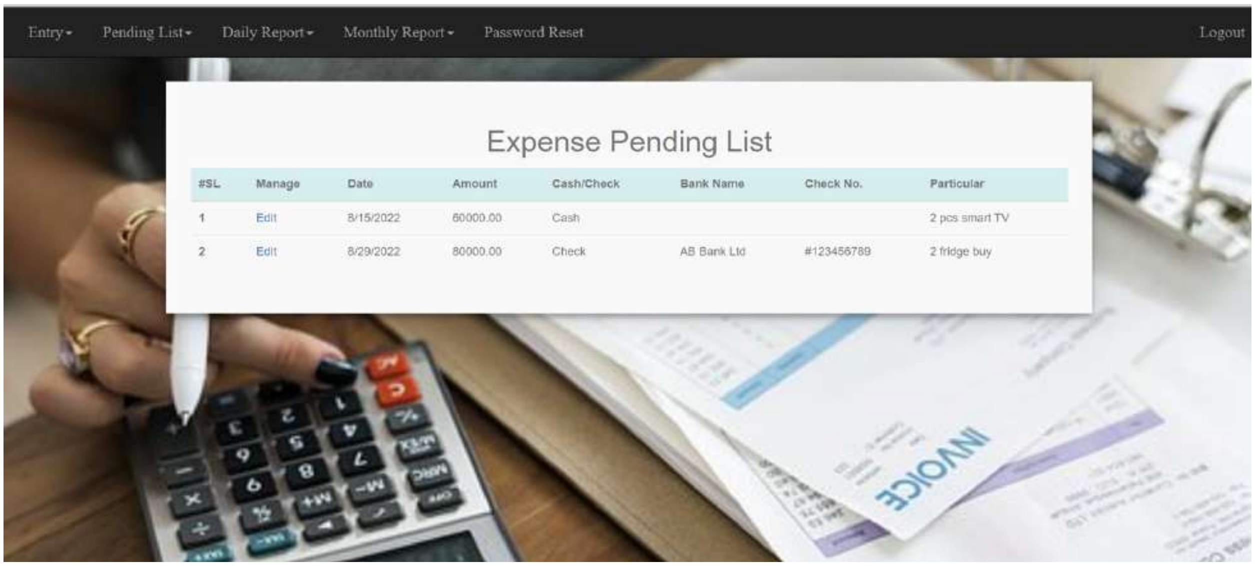


Figure: 2.7 Expense Pending List

When clic Edit:

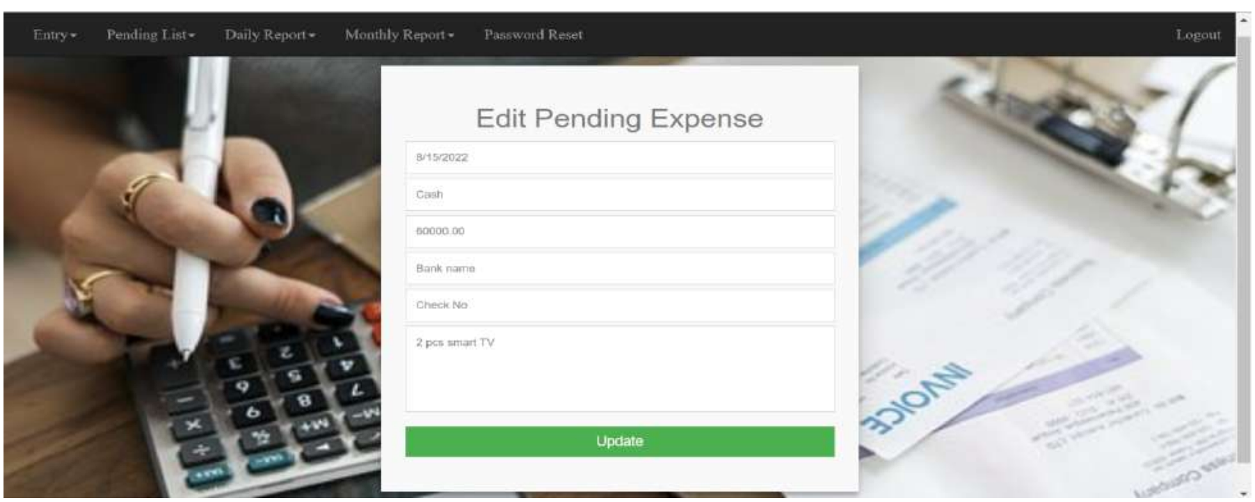


Figure: 2.7.1 Expense Edit

2.8 Daily Income Report:

A date input box is given and a button named show is given. Select that date and click on the show button. All the records that are in the approved status of that date will be displayed in your table and the total income on that date will be displayed. A date input box is given and a button named show is given. Select that date and click on the show button. All the records that are in the approved status of that date will be displayed in your table and the total income on that date will be displayed.

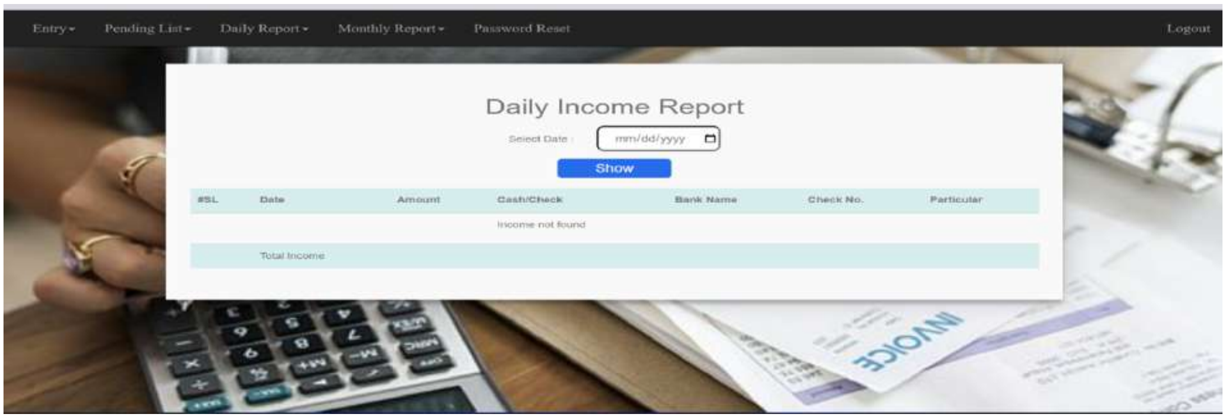


Figure: 2.8 Daily Income Report

When select date and show button click

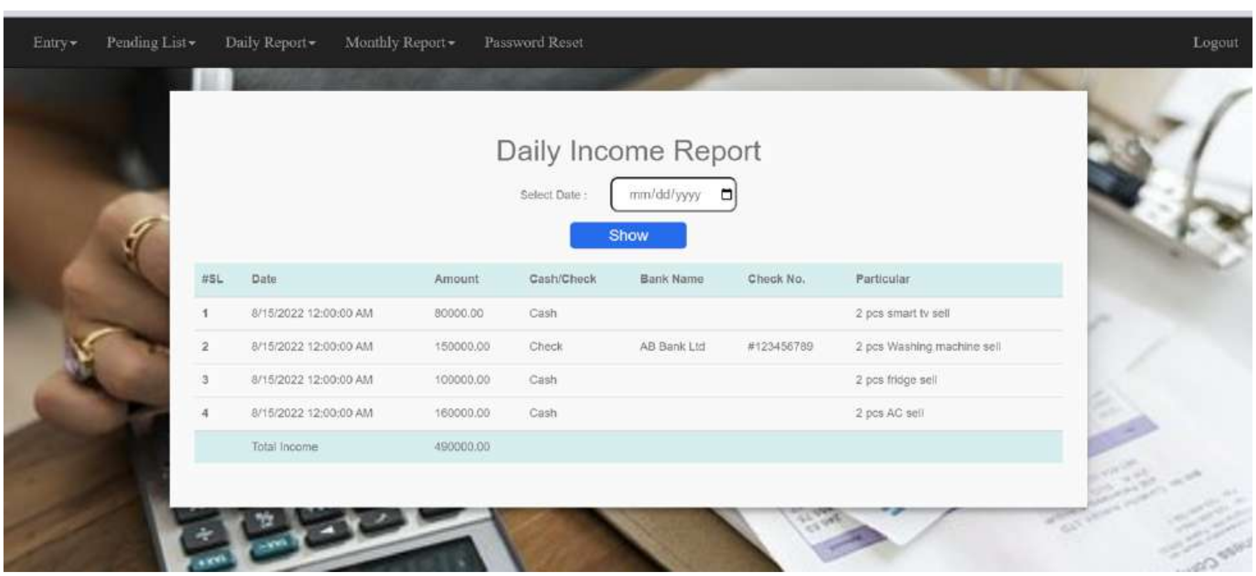


Figure: 2.8.1 Date Show Button

2.9 Daily Expense Report:

A date input box is given and a button named show is given. Select that date and click on the show button. All the records that are in the approved status of that date will be displayed in your table and the total income on that date will be displayed.

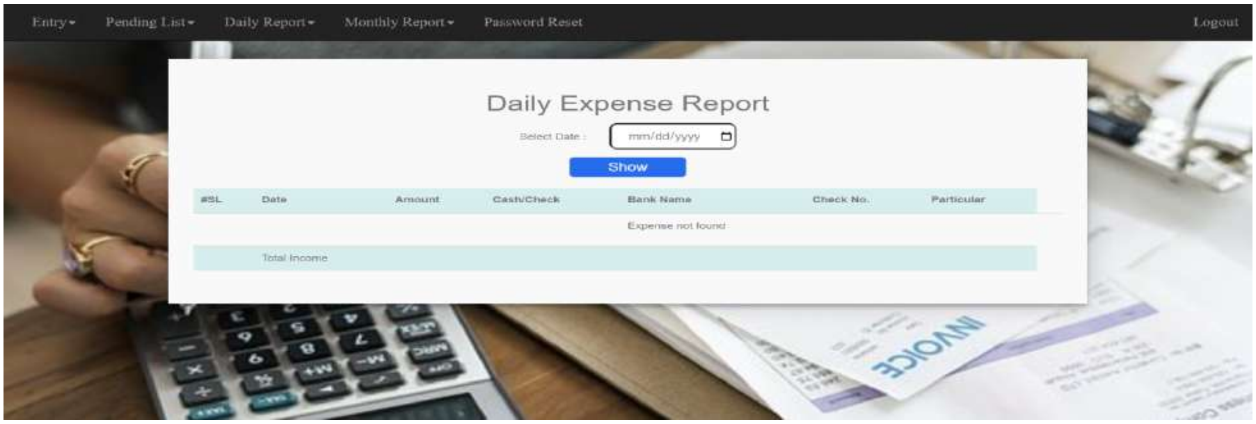


Figure: 2.9 Daily Expense Report

When select date and click show button

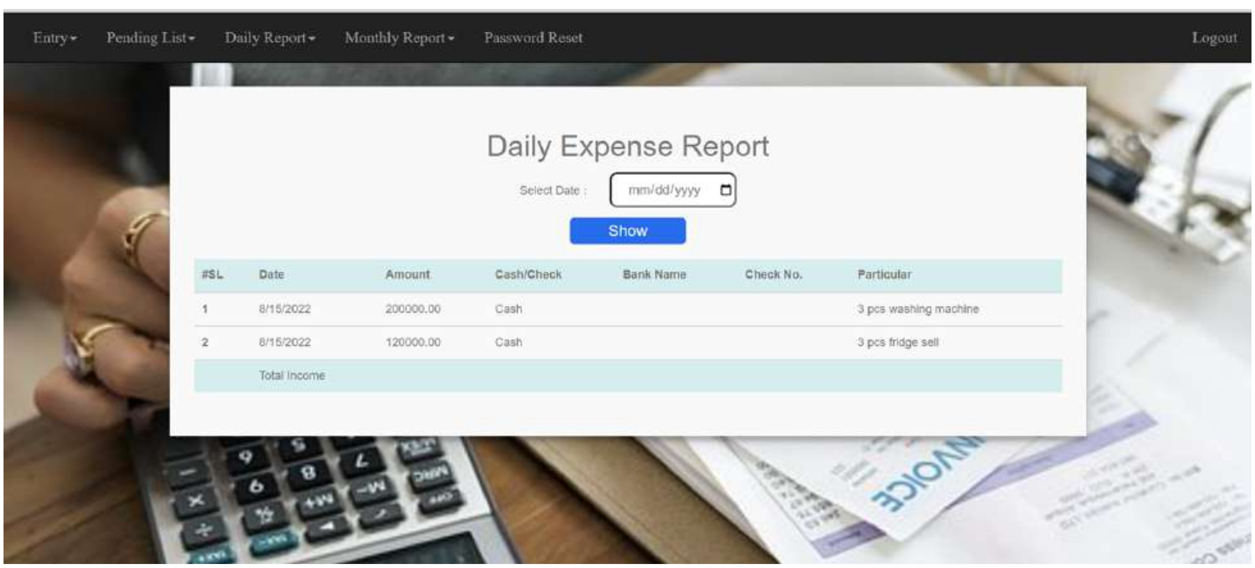


Figure: 2.9.1 Daily Expense Buttom

2.10 Income Monthly Report:

After clicking on Income Monthly Report, there is a drop-down box for selecting a month on the page and it is given every month from January to December. From there the user can select any month and another dropdown box for selecting a year is the database of that box. By searching all the years that have income will be auto loaded from there year can be selected there is a button called month and select year and click on show button all the income records of the month will be in the table form below and the table will be monthly income.

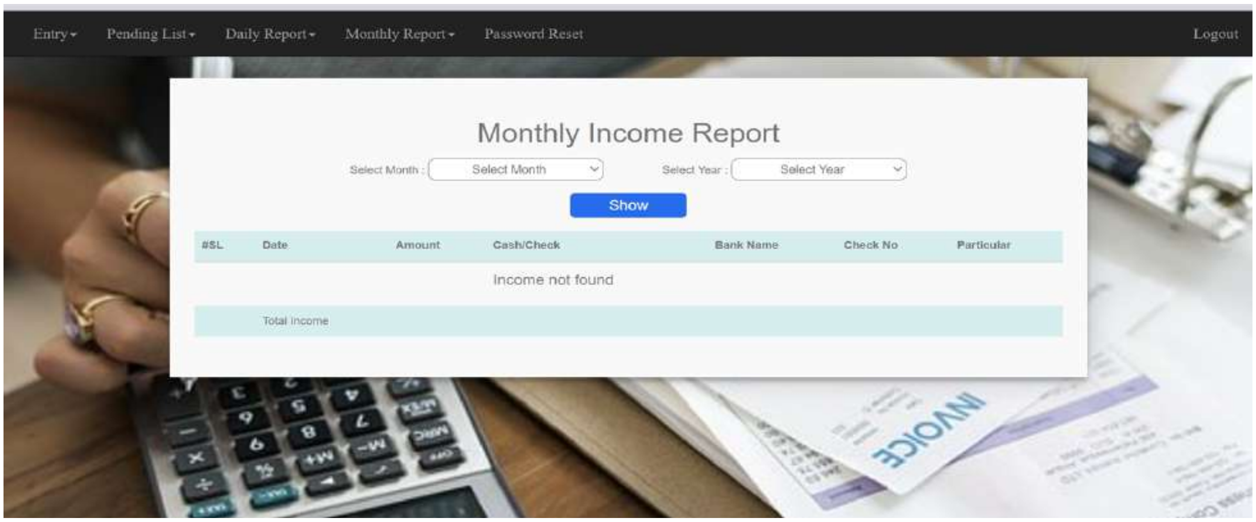


Figure: 2.10 Income Monthly Report

When select month and year and click show button

Figure: 2..10.1 Income Monthly Report Button

2.11 Expense Monthly Report:

After clicking on Income Monthly Report, there is a dropdown box for selecting month on the page why and month name from January to December is given here. From there the user can select any month and another dropdown box for selecting a year is coming from the database. By searching all the years that have income will be auto loaded from there. Year can be selected here. There is a button named ‘Show’. By clicking this button, all the income records of the month will be populated in the table form below. Users can exit the application by logout.

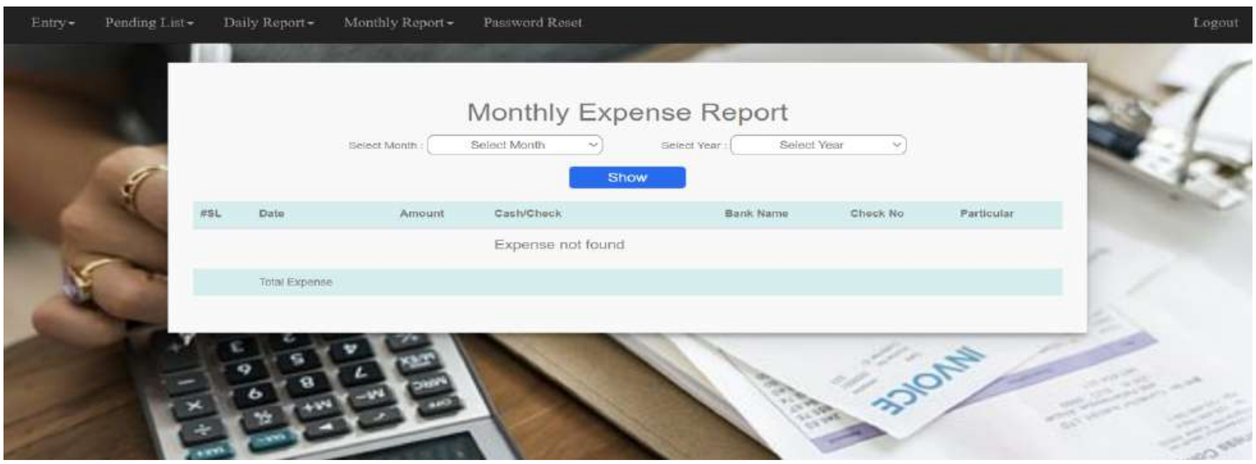


Figure: 2.11 Monthly Expense

When select month and year and click show button

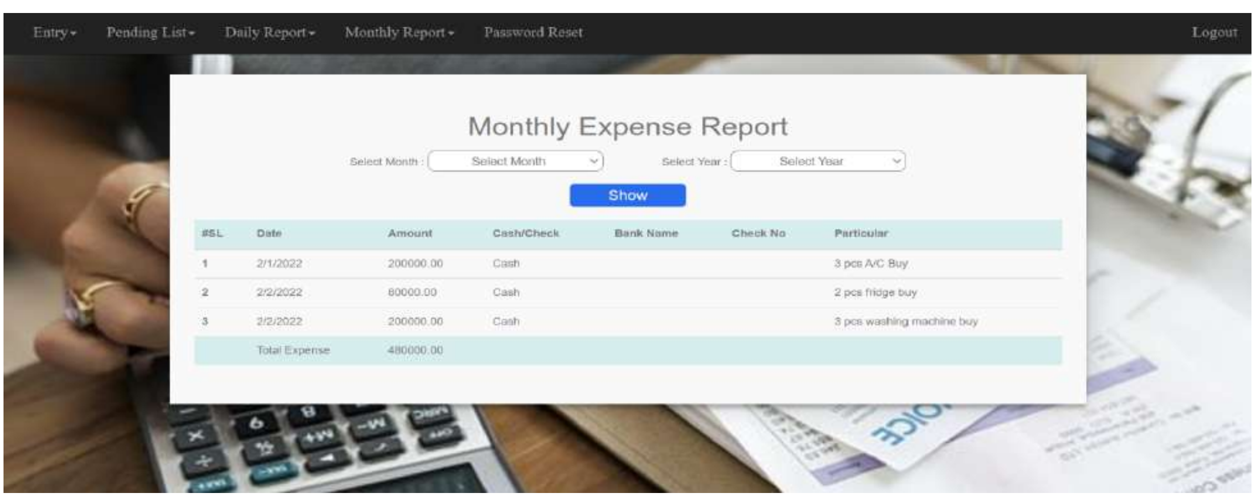


Figure: 2.11.1 Monthly Expense button

2.12 Password Reset:

If the user wants to reset his password, he can reset the password from the menu bar. On clicking the password reset, a page will open for password reset. There are three input boxes and a button called Reset Password. All the input fields are validated. If the user has the current password and new password. The password will then show the new password of the current password. Please change your new password. If the email address is wrong and the current password is wrong,

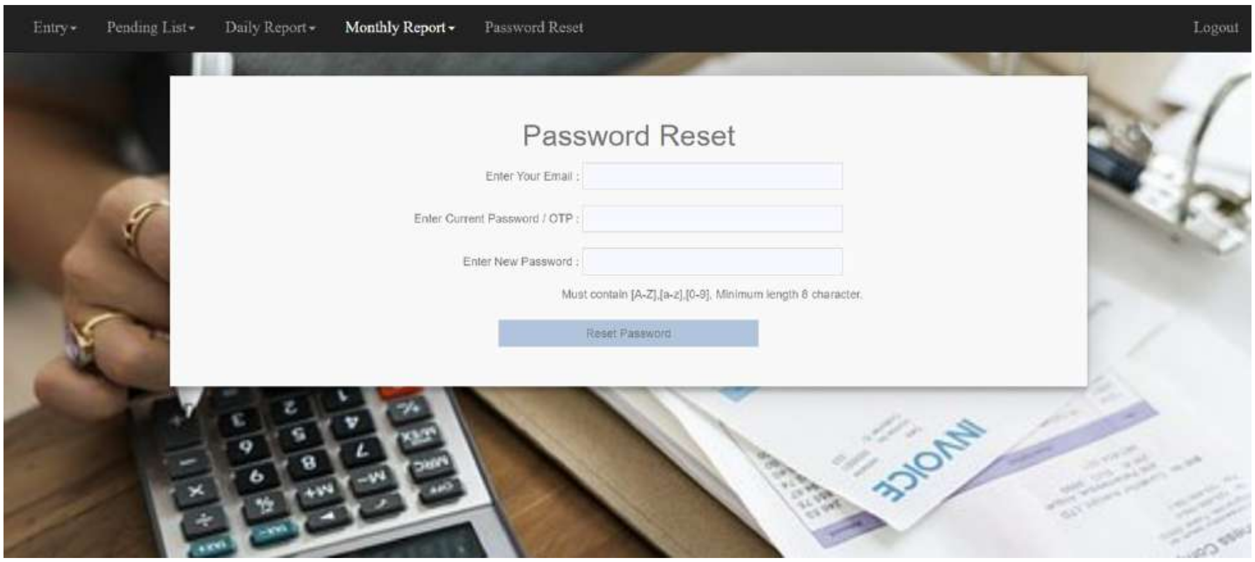


Figure: 2.12 Password Reset

2.13 Conclusion

To summarize, a junior accountant has some responsibilities that have to be done through this desktop application. He is recruited for enlisting income and expense. In addition, he can view daily and monthly reports such as Daily Income Report, Monthly Income Report, Daily Expense Report and Month Expense report. His additional job is to print vouchers after the approval by the senior accountant. He can only view the pending list. That's what the job of junior accountant is all about.

CHAPTER 3

INTRODUCTION TO SENIOR USER ANALYSIS

3.1 Introduction:

Now we are entering the application as Senior Accountant. As a Senior Accountant user enters the application the following menu will open:

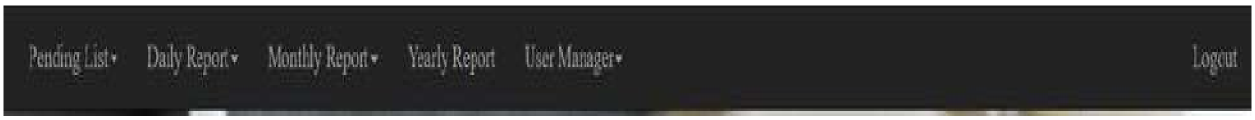


Figure: 3.01 Manu Bar

3.2 View Income Pending List:

If a senior easily enters this page, by default all the approved incomes of Junior Accountants will be populated on the page in the form of a table. In the table there is a check box for approving every row and record, two buttons will be seen under the name of Edit and Approve. There is a button, if the user wants to select one or more record check boxes at the same time and click the OK button, the income will be changed from the pending list to income and the page will be recorded, the approved data will be there. When opened, all the information of that record will be presented in editable status in the input field and below there is a button named Update, edit as required and click on the update button, the record will be updated, then the remaining records will be on the Income Pending List page, if the user needs to remove any record. If you click the remove button of that record, it will be removed and the page will be reloaded and the remaining pending data will be displayed.

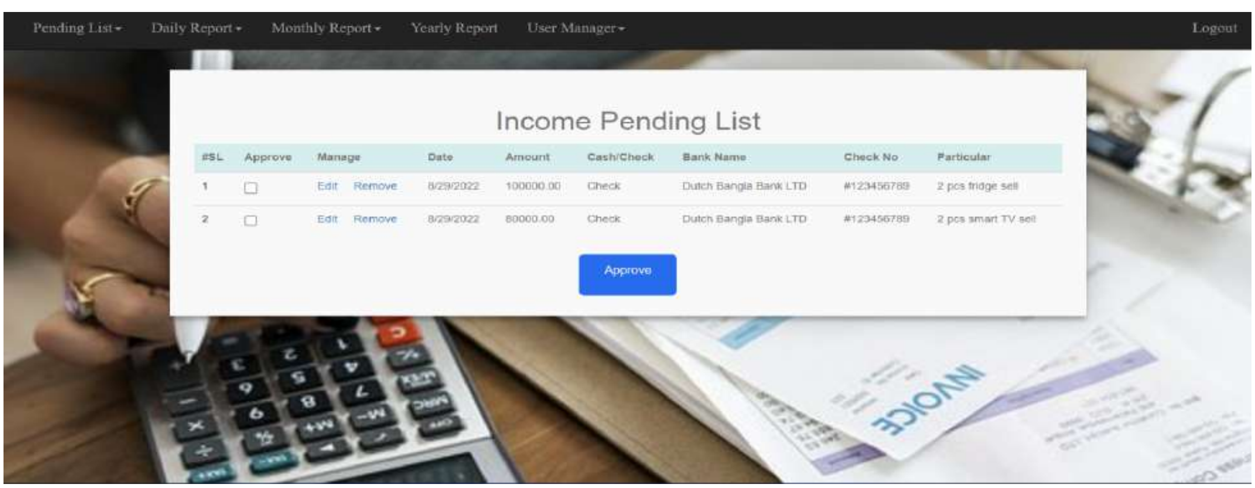


Figure: 3.2 Income Pending List

When click edit from a row

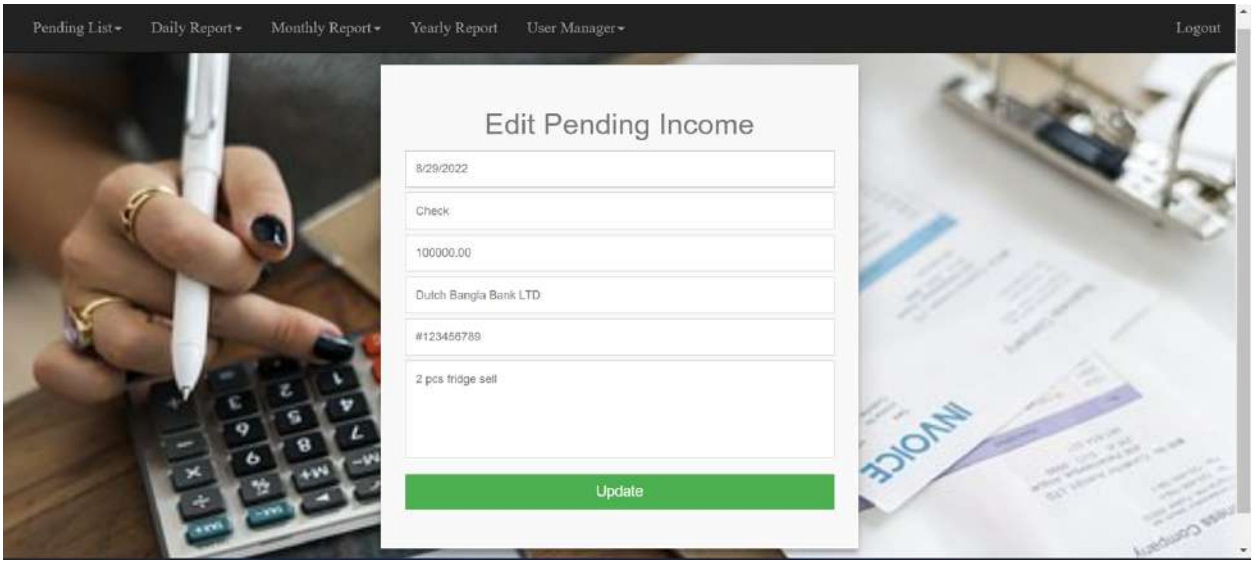


Figure: 3.2.1 Income Pending From

3.3 Senior User Flowchart:

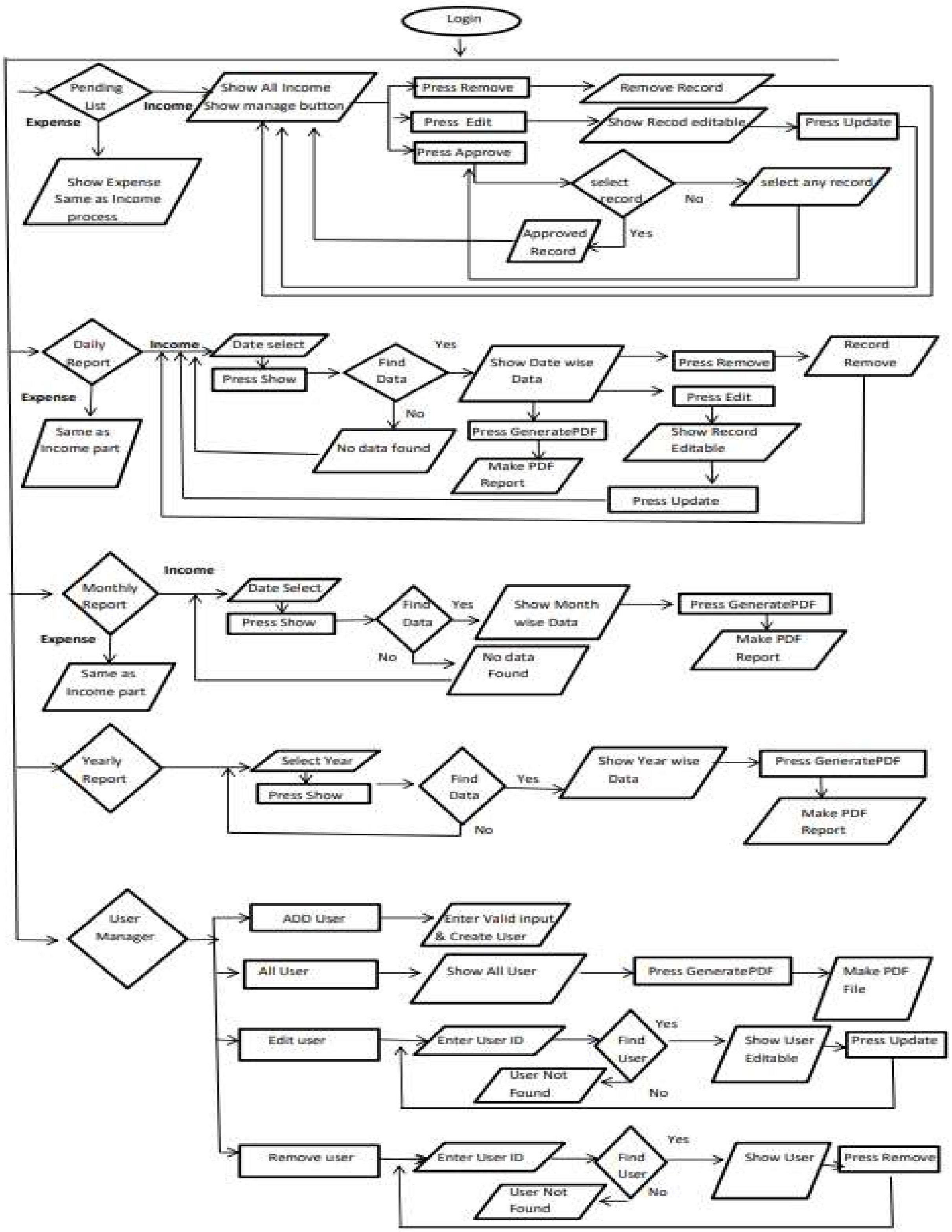


Figure: 3.3 Senior User Flowchart

3.4 View Expense Pending List:

If a senior easily enters this page, by default all the approved incomes of Junior Accountants will be populated on the page in the form of a table. In the table there is a check box for approving every row and record, two buttons will be seen under the name of Edit and Approve. There is a button, if the user wants to select one or more record check boxes at the same time and click the OK button, the income will be changed from the pending list to income and the page will be recorded, the approved data will be there. When opened, all the information of that record will be presented in editable status in the input field and below there is a button named Update, edit as required and click on the update button, the record will be updated,then the remaining records will be on the Income Pending List page, if the user needs to remove any record. If you click the remove button of that record, it will be removed and the page will be reloaded and the remaining pending data will be displayed.

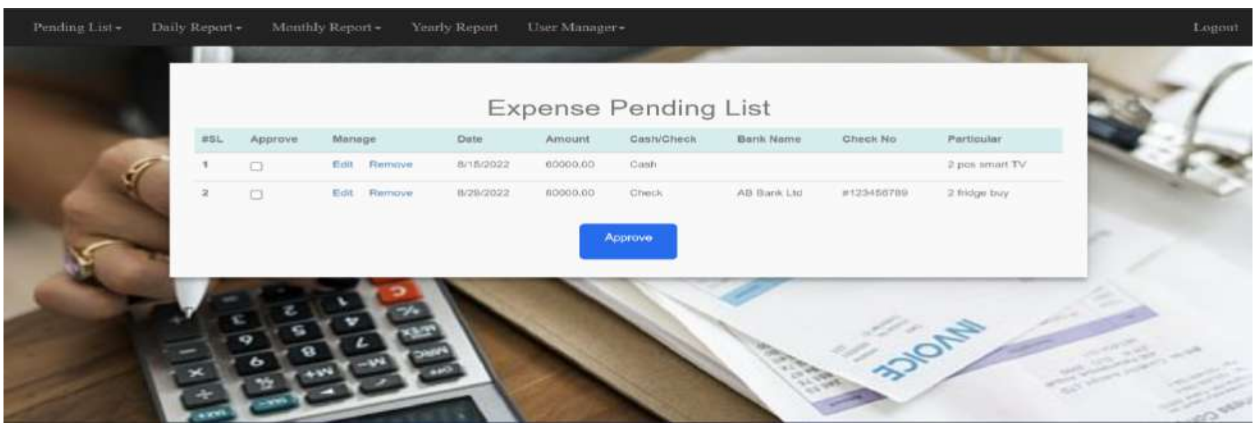


Figure: 3.4 Expense Pending List

When click Edit button in a row

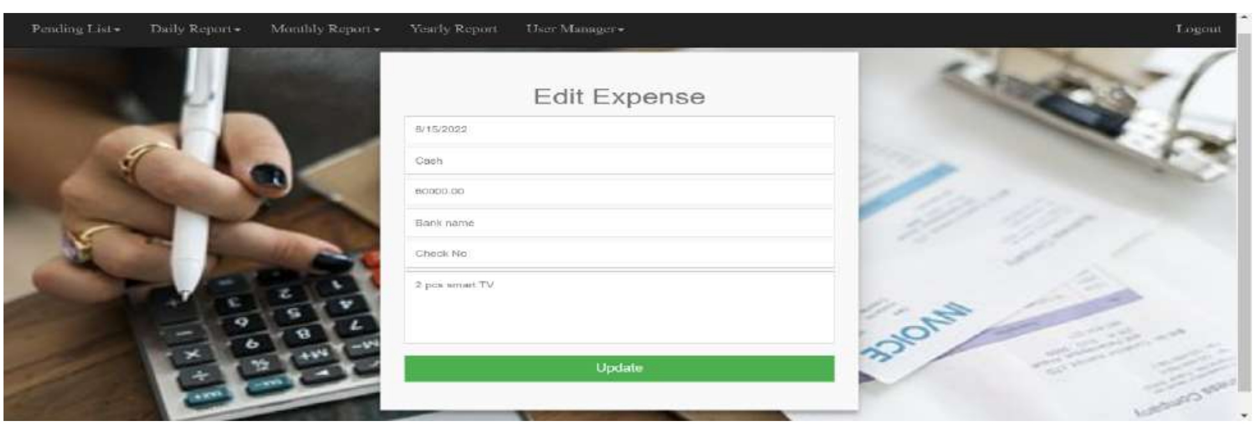


Figure: 3.4.1 Expense Edit Button

3.5 Daily Income Report:

A date input box is given and a button named show is given. Select that date and click on the show button. All the records that are in the approved status of that date will be displayed in your table and the total income on that date will be displayed. If the user wants to edit a record, a new page called Income will open on clicking the edit button of that record, a table input box will show all the information of that record, there is a button named Update below and after editing as needed, clicking on the Update button will show more income again. If the user wants to remove a record, the record will be removed by clicking the remove button of the record.

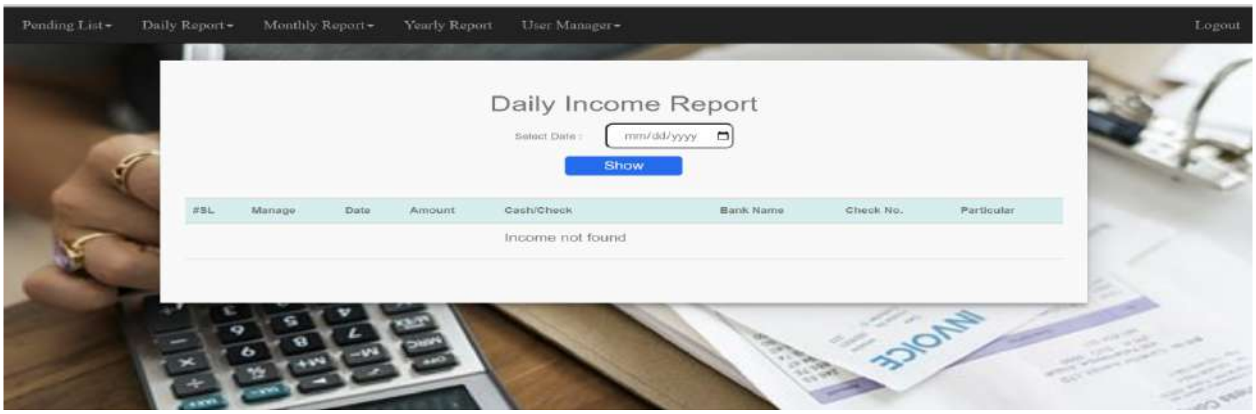


Figure: 3.5 Daily Income Report

When date select and show button click

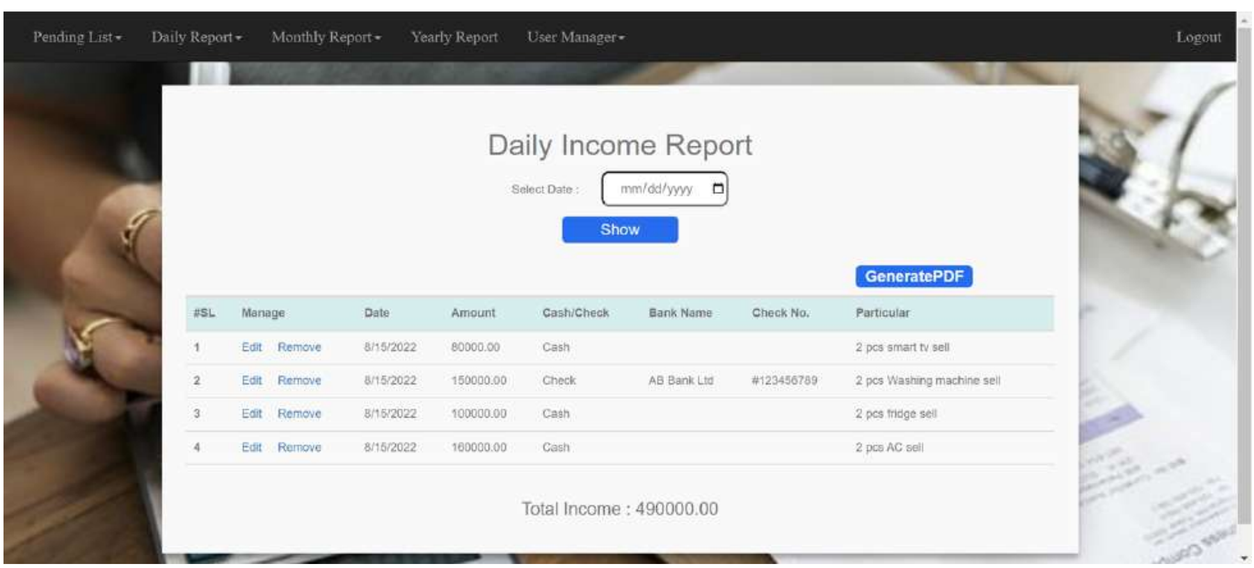


Figure: 3.5.1 Daily Income Report Select Button

When edit button click in a row

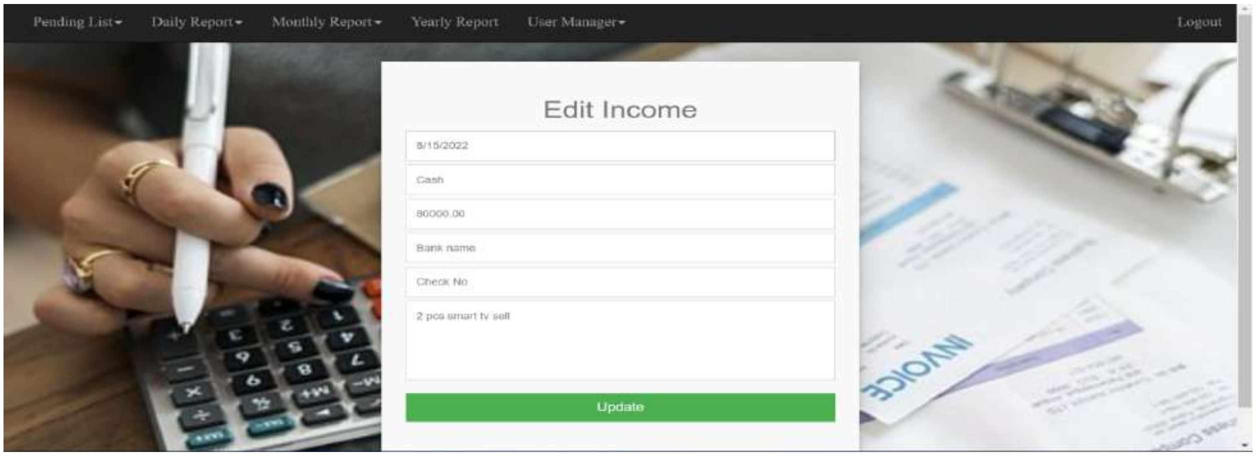
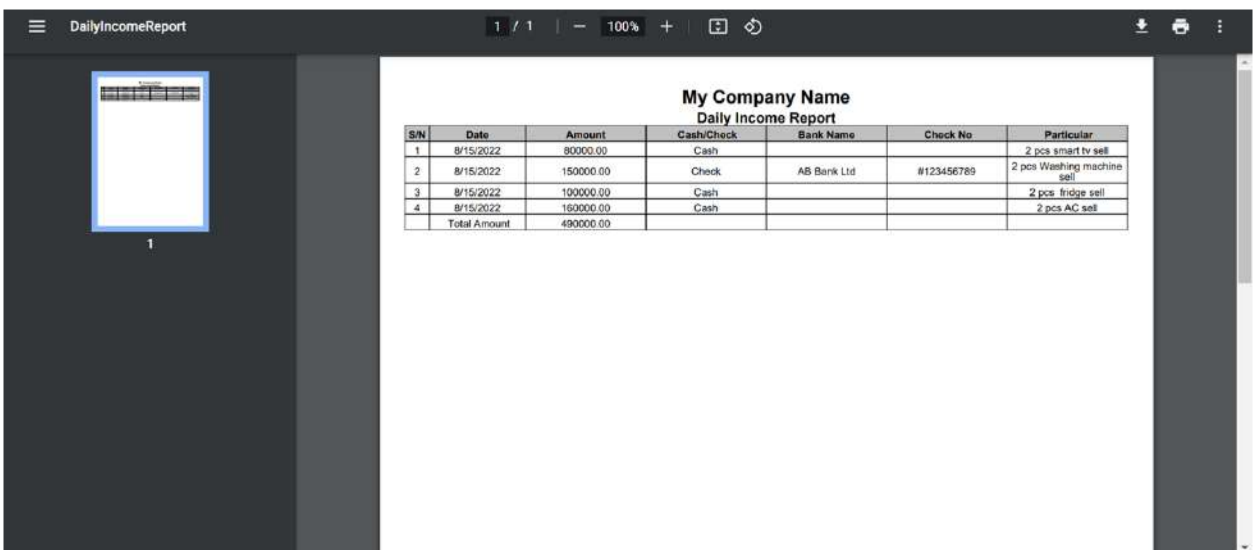


Figure: 3.5.2 Income Report Button

When click GeneratePDF



S/N	Date	Amount	Cash/Check	Bank Name	Check No	Particular
1	8/15/2022	80000.00	Cash			2 pcs smart tv sell
2	8/15/2022	150000.00	Check	AB Bank Ltd	#123456789	2 pcs Washing machine sell
3	8/15/2022	100000.00	Cash			2 pcs fridge sell
4	8/15/2022	160000.00	Cash			2 pcs AC sell
	Total Amount	490000.00				

Figure: 3.5.3 GeneratePDF

3.6 Daily Expense Report:

A date input box is given and a button named show is given. Select that date and click on the show button. All the records that are in the approved status of that date will be displayed in your table and the total expense on that date will be displayed. If the user wants to edit a record, a new page called expense will open on clicking the edit button of that record, a table input box will show all the information of that record, there is a button named Update below and after editing as needed, clicking on the Update button will show more expense again. If the user wants to remove a record, the record will be removed by clicking the remove button of the record.

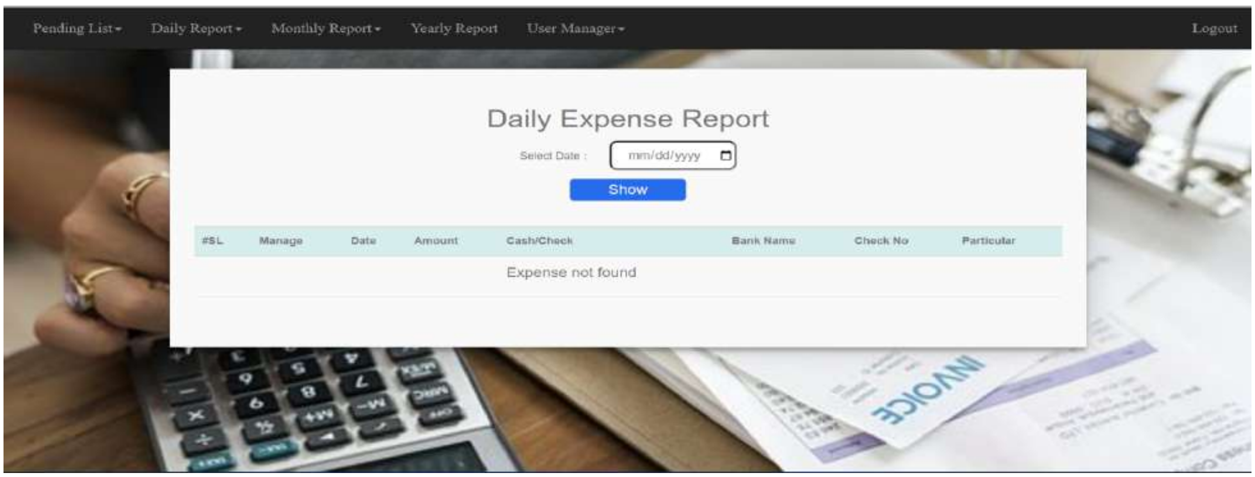


Figure: 3.6 Daily Expense Report

When select date and click show button

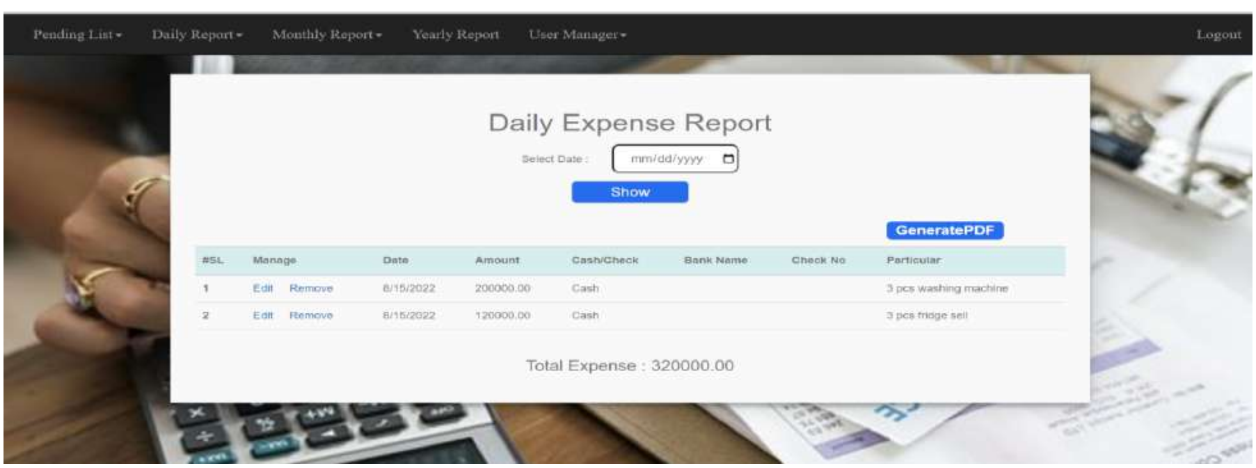


Figure: 3.6.1 Daily Expense Report click Button

When edit button click in a row

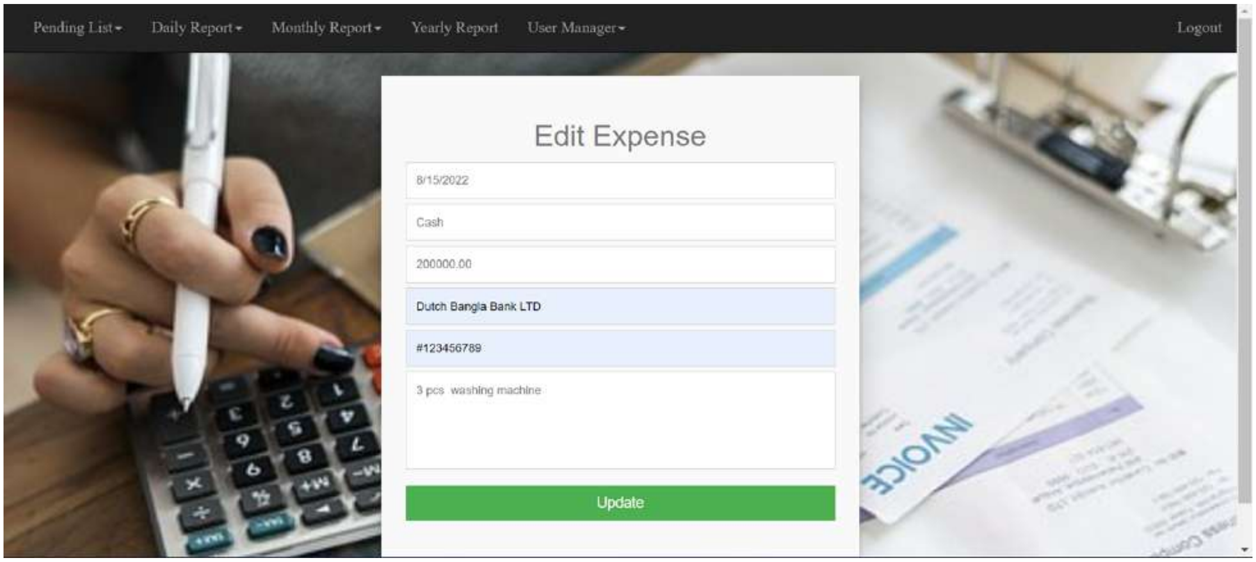


Figure: 3.6.2 Daily Expense Report Button

3.7 When click GeneratePDF Click

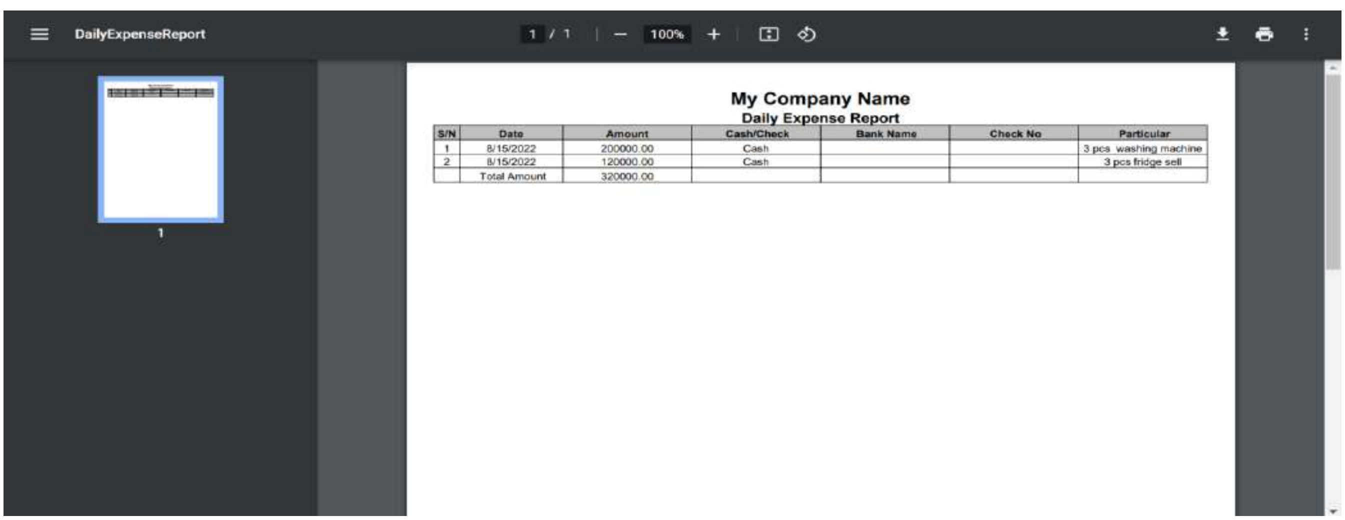


Figure: 3.7 GeneratePDF

3.8 Monthly Income Report:

This page has a dropdown box to input the data. In this box all the months from January to December are loaded. There is another dropdown box to select the year, where the years that have records will be loaded in the dropdown box. All records for that month can be viewed in report form which can be printed and downloaded.

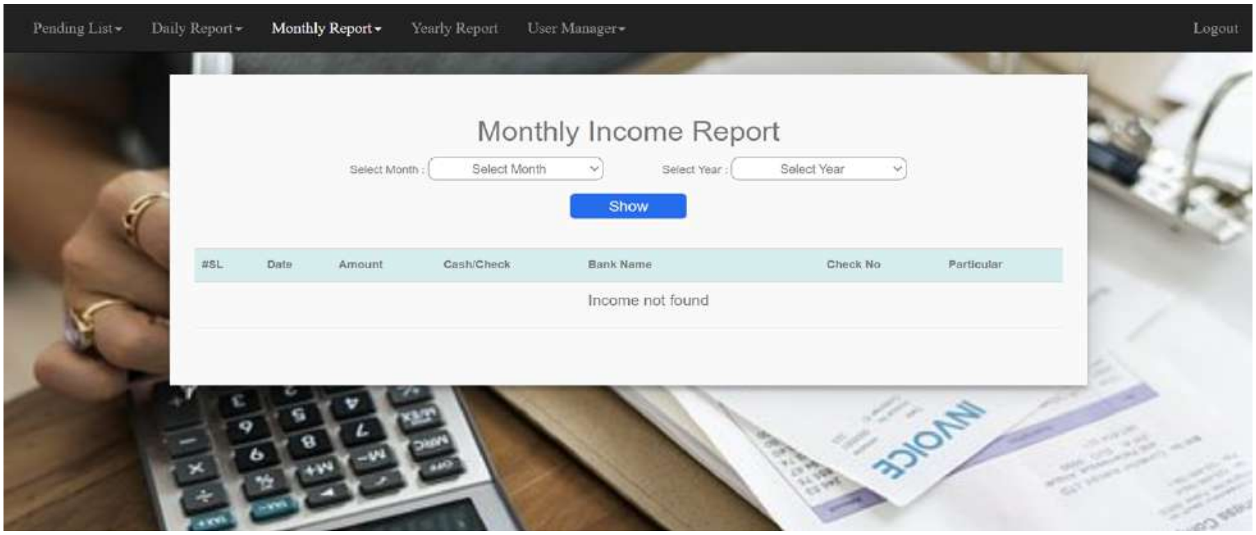


Figure: 3.8 Monthly Income Report

When month and year select and click show button

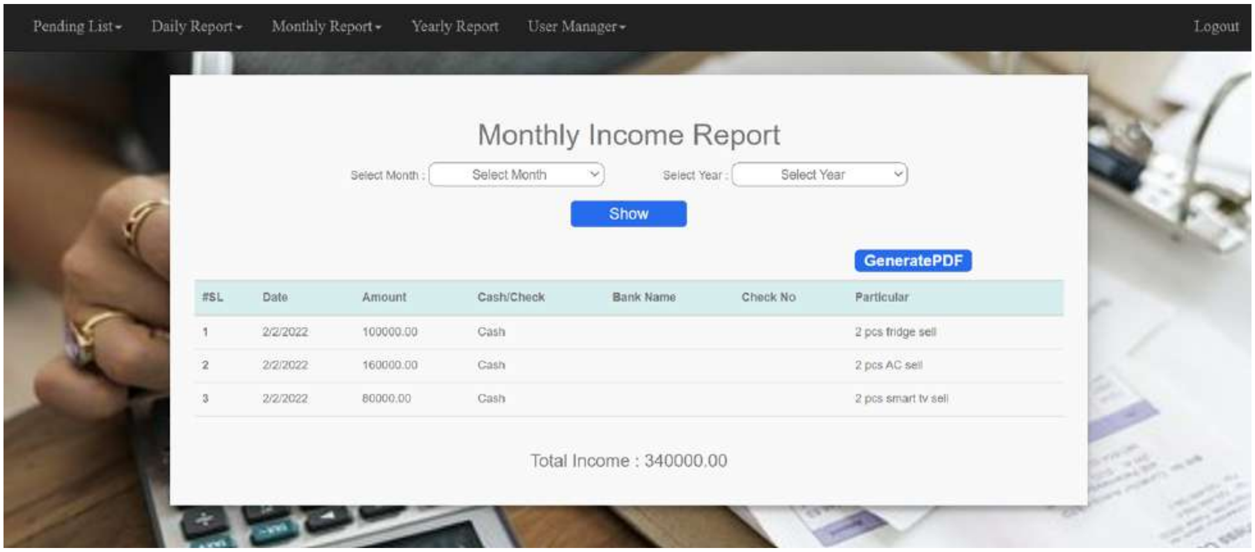


Figure: 3.8.1 Monthly Income Report Button

When click GeneratePDF

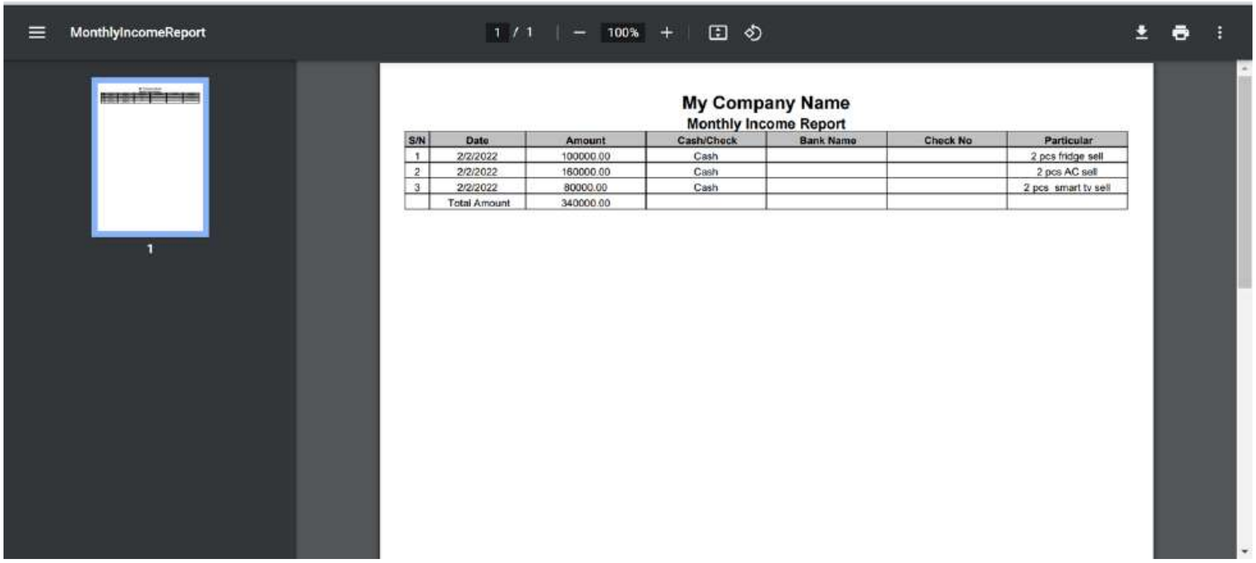


Figure: 3.8.2 GeneratePDF

3.9 Monthly Expense Report:

This page has a dropdown box to input the data. In this box all the months of January and December are loaded. There is another dropdown box to select the year, where the years that have records will be loaded in the dropdown box. All records for that month can be viewed in report form which can be printed and downloaded.

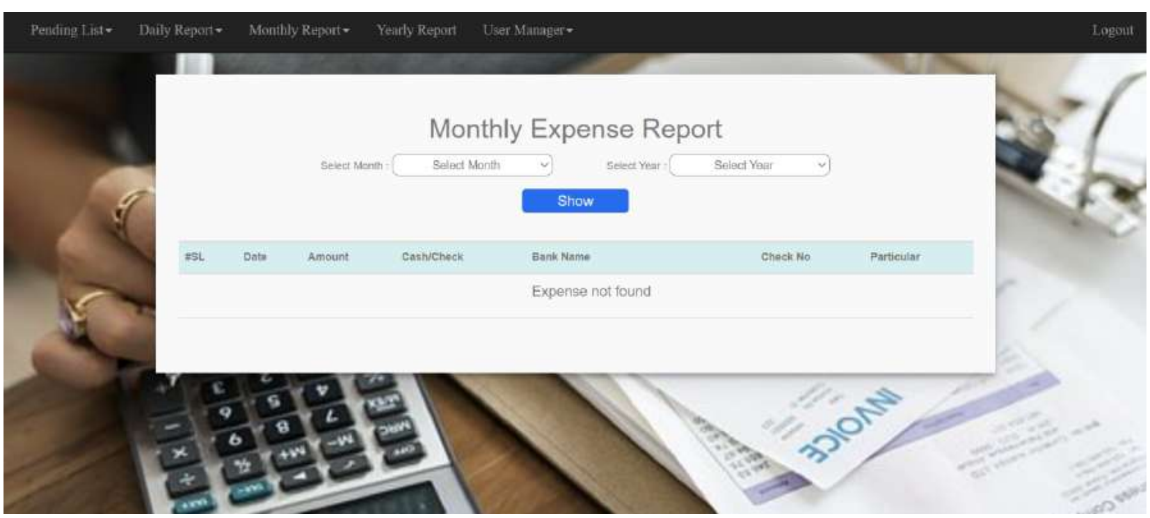


Figure: 3.9 Monthly Expense Report

When click GeneratePDF

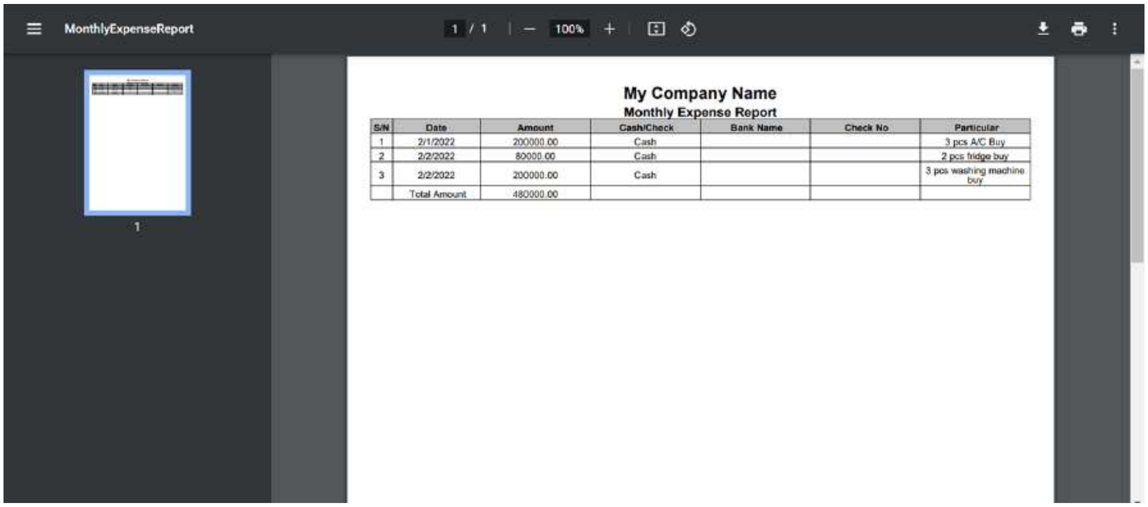


Figure: 3.9.1 GeneratePDF

Same as income report just pass month value

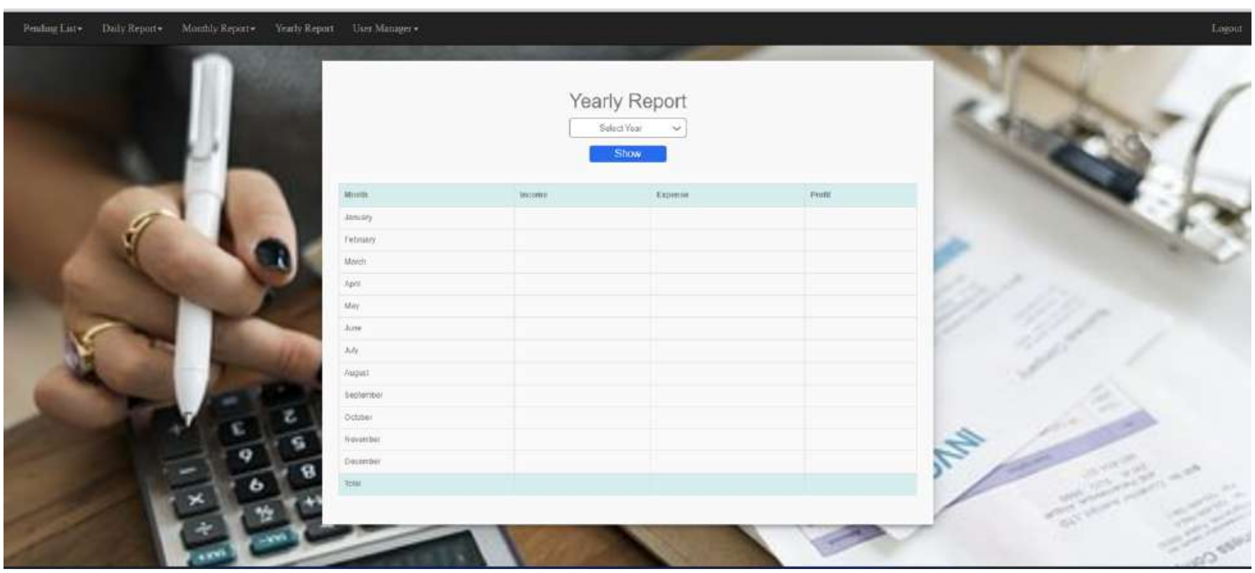


Figure: 3.9.2 Income Report

When select year and click show button

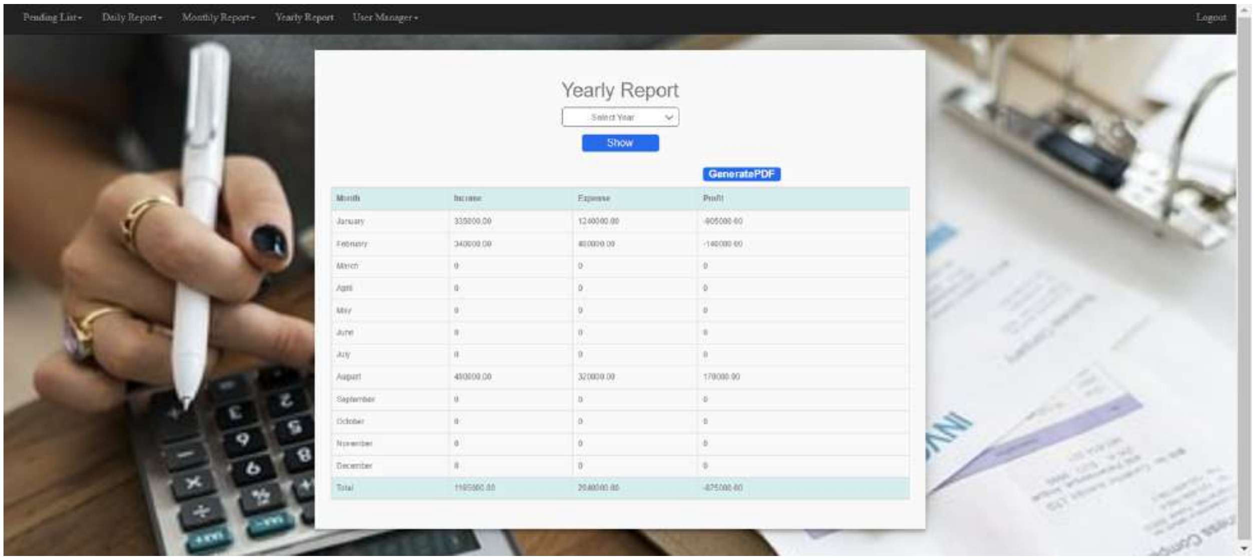
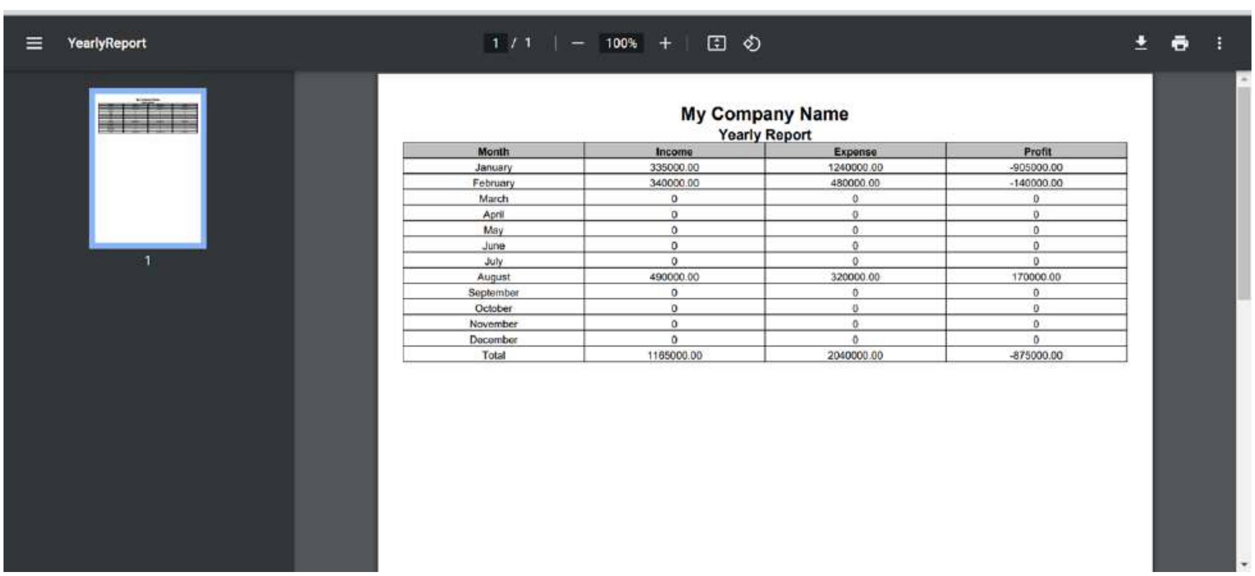


Figure: 3.9.3 Income Report Button

When click GeneratePDF



Month	Income	Expense	Profit
January	335000.00	1240000.00	-905000.00
February	340000.00	480000.00	-140000.00
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	490000.00	320000.00	170000.00
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0
Total	1165000.00	2040000.00	-875000.00

Figure: 3.9.3 GeneratePDF

3.10 Add User:

Clicking the sub menu Collider from the user manager brings up the user page. User page has an input box for User ID, Username, User Email, User Designation and in each box blank validation no input box can be left blank, users can be added and there is a dropdown box for User Designation. Junior Accountant and Senior Accountant There are two options to create a user, complete the information in each box and click on the add button, a new user will be created. After creating the user, you can logout and go to the login page.

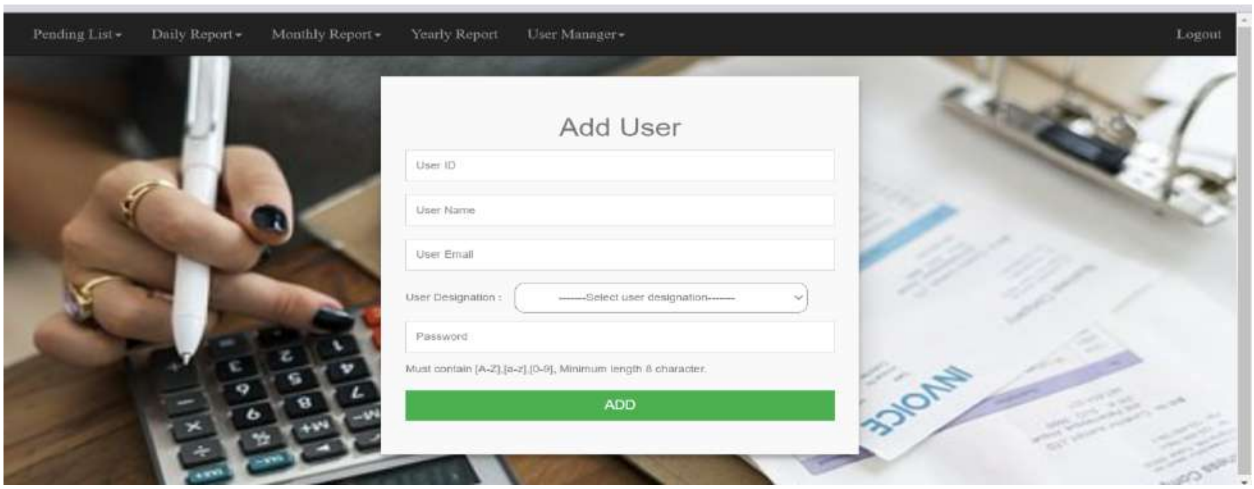


Figure: 3.10 Add User

3.11 All Users:

From here we can see User ID, Name, Email, Designation and Password.

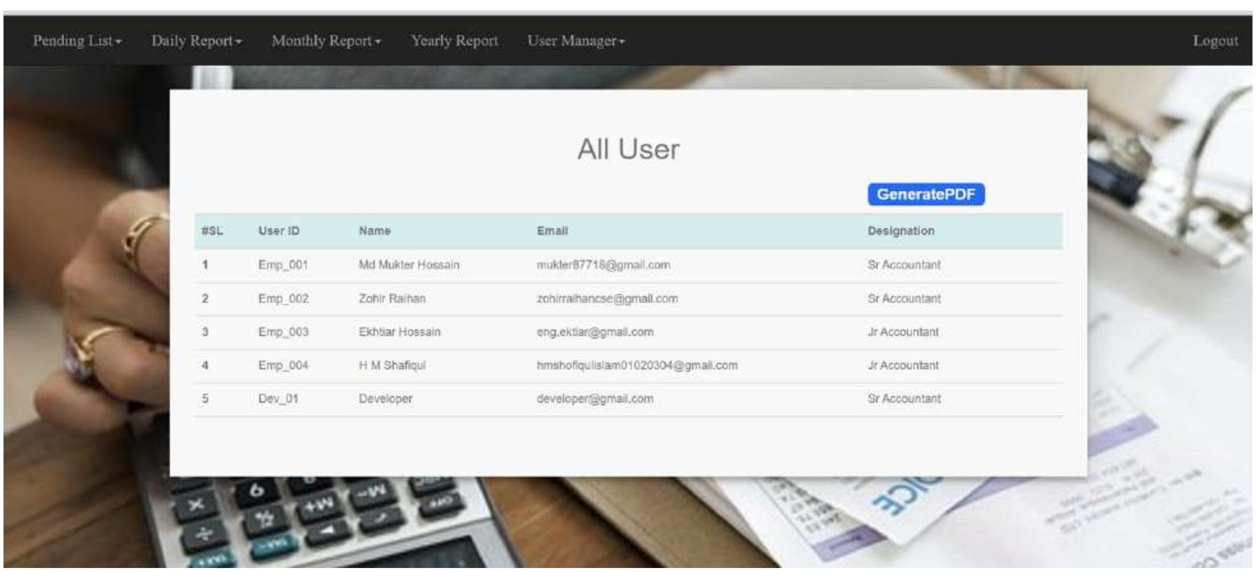
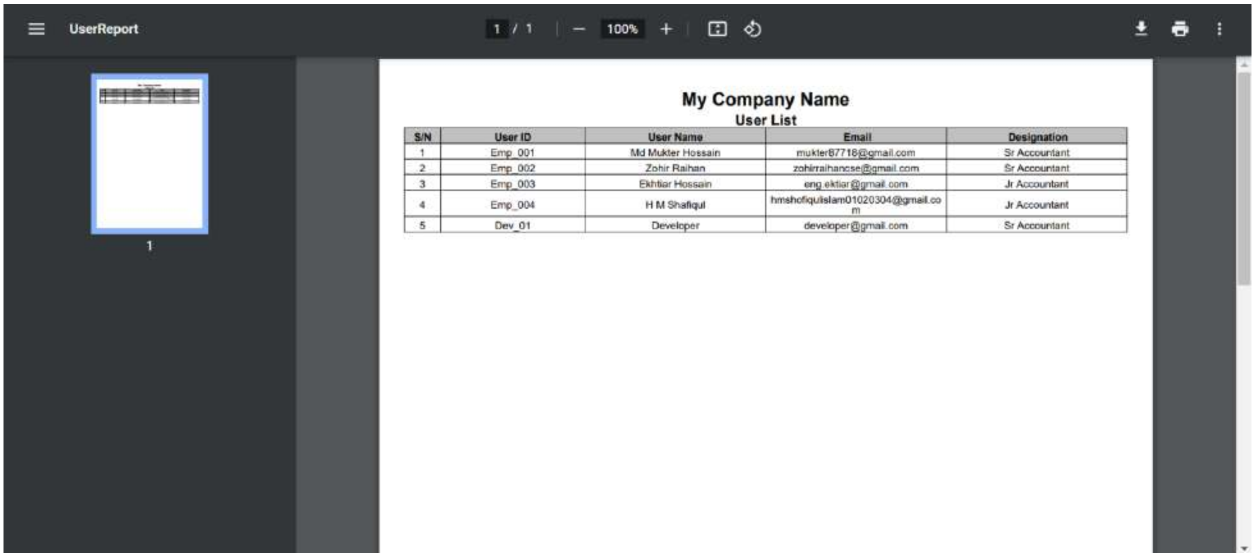


Figure: 3.11 All Users

When click GeneratePDF



S/N	User ID	User Name	Email	Designation
1	Emp_001	Md Mukter Hossain	mukter87718@gmail.com	Sr Accountant
2	Emp_002	Zohir Raihan	zohirraihancse@gmail.com	Sr Accountant
3	Emp_003	Ekhtiar Hossain	eng.ektiar@gmail.com	Jr Accountant
4	Emp_004	H M Shafiqul	hmshofiqulislam01020304@gmail.com	Jr Accountant
5	Dev_01	Developer	developer@gmail.com	Sr Accountant

Figure: 3.11.1

3.12 Edit User:

To edit the user there is an input box called User ID and there is a show button clicking on the button will open a new page.

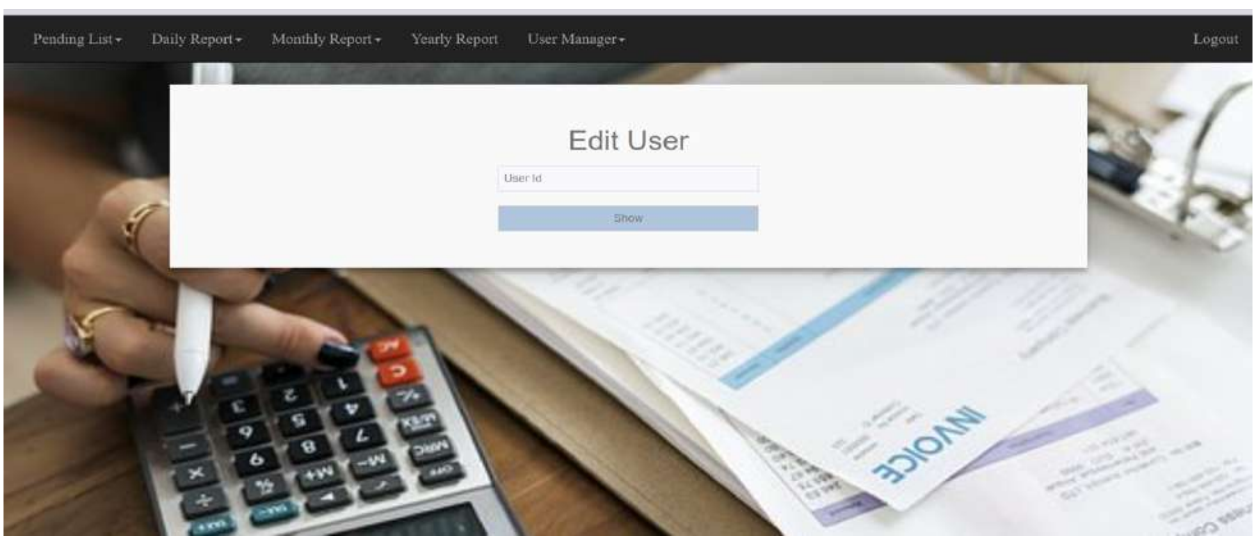


Figure: 3.12 Edit User

When enter UserID and click show button

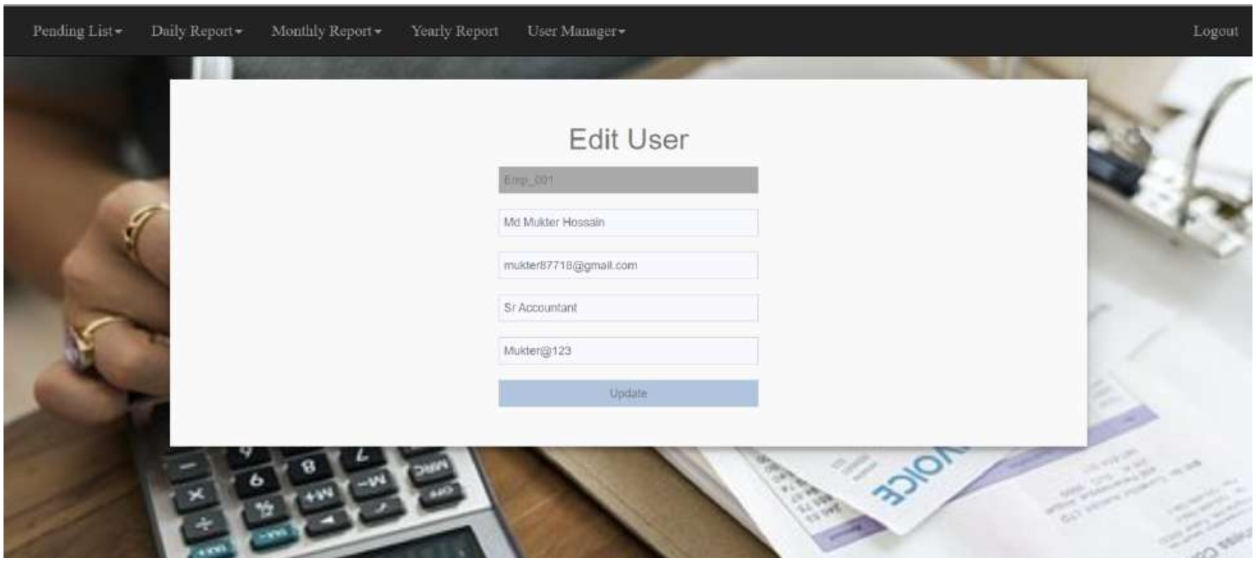


Figure: 3.12.1 UserID

3.13 Remove User:

In this page there is an input box for giving user id and there is a button named after inputting user id and clicking the show button a new page will open. This page has all the information of the user. Click on the buttons to remove, the user will be removed and the removed user page will open again.

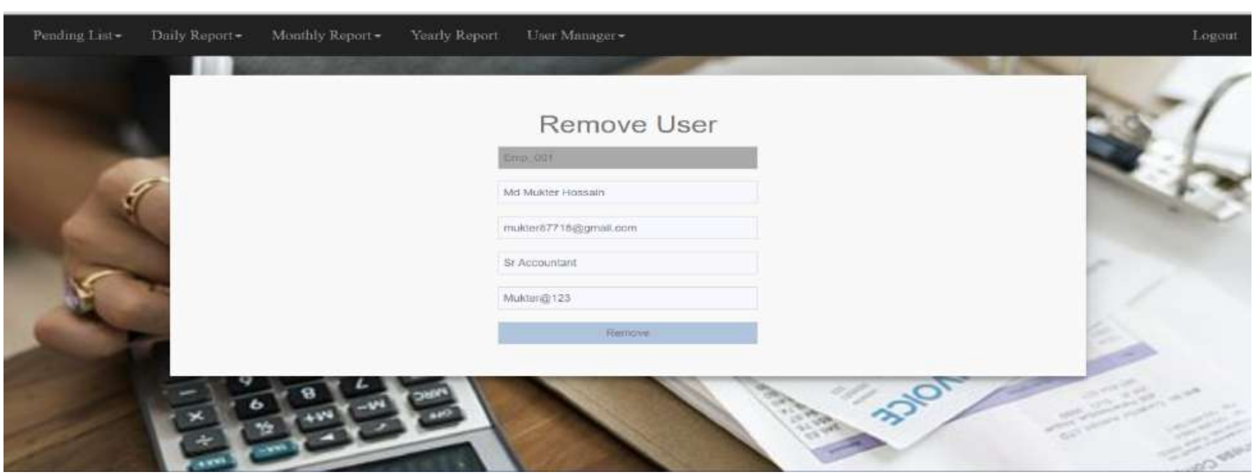


Figure: 3.12 Remove User

When enter user id and click show button

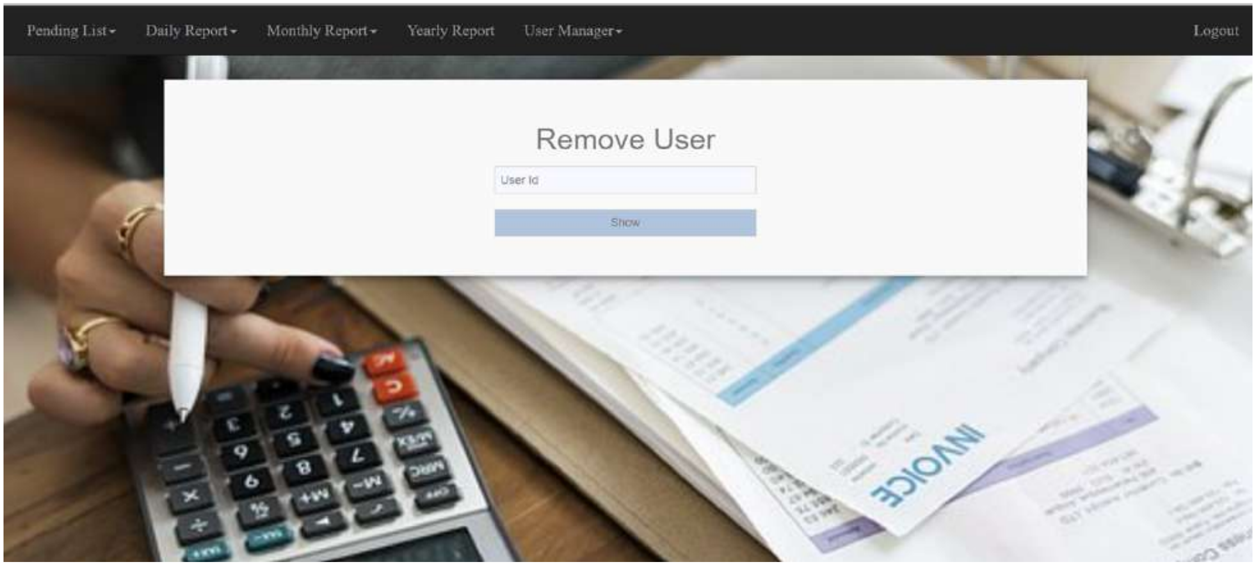


Figure: 3.12.1

3.13 Conclusion

To summarize, a senior accountant has some responsibilities that have to be done through this desktop application. He is recruited for enlisting income and expenses. In addition, he can view daily and monthly reports such as Daily Income Report, Monthly Income Report, Daily Expense Report and Month Expense report, Yearly Report. His additional job is to print vouchers.He can view the all user manager, edit and remove if he want. That’s what the job of senior accountant is all about.

CHAPTER 4

CONCLUSION AND FUTURE WORKS

4.1 Conclusion

"Income Expense Application" software developed for a company has been designed to achieve maximum efficiency and reduce the time taken to handle the payroll activity. It is designed to replace an existing manual record system thereby reducing time taken for calculations and storing data. The system uses Vb.Net as front end and Microsoft SQL as a backend for the database.

The system is strong enough to withstand regressive daily operations under conditions where the database is maintained and cleared over a certain time of span. The implementation of the system in the organization will considerably reduce data entry, time and also provide readily calculated reports.

4.2 Future Objective

Foremost, we would like to express our sincere gratitude to our honorable Teacher Nabila Anwar for the continuous support of our study and research, for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped a lot. In addition, we have added some of our purpose that we are going to implement in future to convenient and for user friendly interface of our project.

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