# **Enterprise Application Development & Project**

# **ITP213**

Final Report

Group 2

Group Name: CommLiving

Lim Kei Yiang (Leader) - 161397D

Lim Pei Zhen - 162170B

Mavis Yeo - 160932F

Louis - 160685Y

Elizabeth - 151776x

Supervisor Name: Lo Siaw Ling

Nanyang Polytechnic (School of Information Technology)

Last Amendment Date : 6 February 2018

EADP Final Report	2
Executive Summary	3
Project Plan	4
Project Team Organization	4
Gantt Chart	4
Software tools used for development	4
Requirement Analysis and System Design	5
Use Case Diagram	5
Class Diagram	6
Database Modelling (ER Diagram)	8
User Interface	8
Consultation	32
Medicine Shop	36
Product Page	37
Problems Encountered	42
Future Enhancements	43
Conclusion	43

#### **Executive Summary**

In conclusion, our website aims to provide convenience for the residents and administrator of the Ang Mo Kio community. The content of our website includes Community; Booking, Course and Event, Finance, Web Chat and Pharmacy chatbot and shopping. Community features provides a platform for both the residents and administrator to interact without the hassle of real life interactions. Finance features provides accessibility for the residents as they get to record and track their finance effortlessly. The Web Chat counters the problem where residents have to make frequent trip down to the the hospital as our website provides a communication platform between the doctor and patient.

Our team created a friendly community website that allows the residents to obtain the community information easily online. This idea came about when we realised that notifications from the notice boards are often neglected or not read by the residents in real life. Therefore, we decided to come up with a community website that allows both the administrator and residents to interact and allows the administrator to reach for the residents effortlessly.

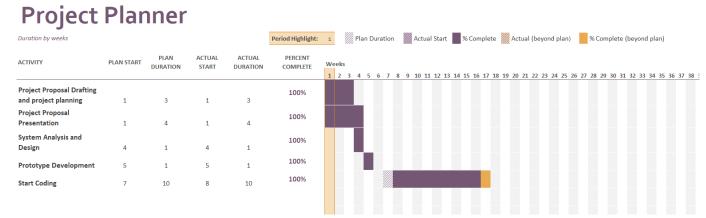
### **Project Plan**

#### **Project Team Organization**

Leader - Lim Kei Yiang

Member - Pei Zhen, Mavis Yeo, Louis.

#### **Gantt Chart**

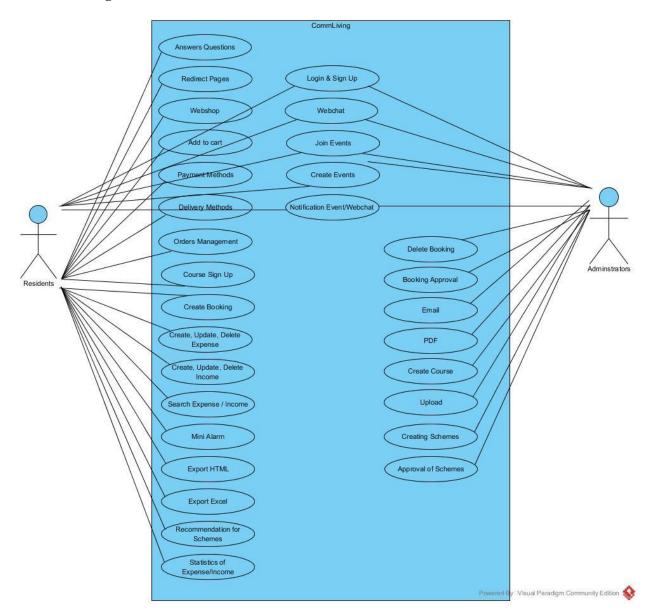


#### Software tools used for development

Visual Studio 2017, Visual Paradigm, Git Hub, Excel for Gantt Chart.

### **Requirement Analysis and System Design**

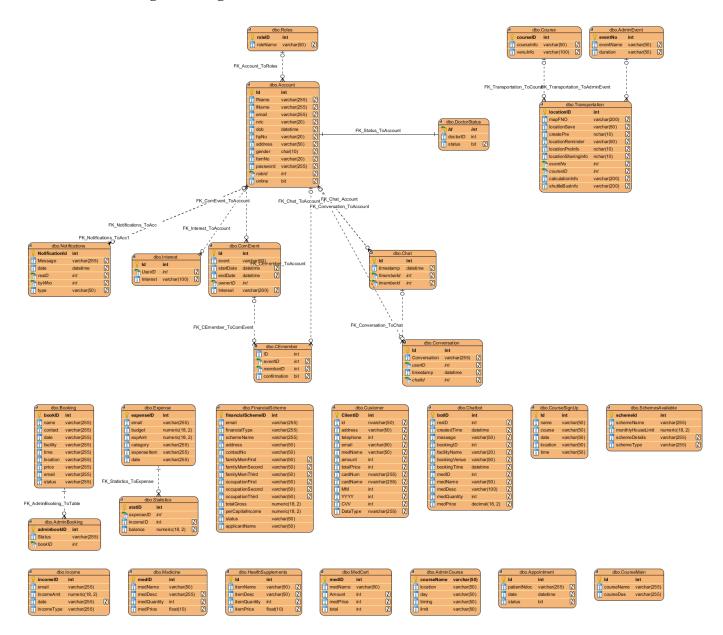
### **Use Case Diagram**



## **Class Diagram**

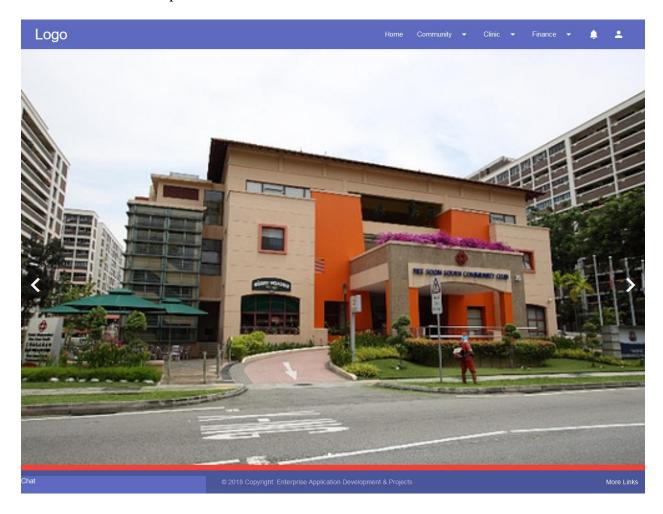


## **Database Modelling (ER Diagram)**



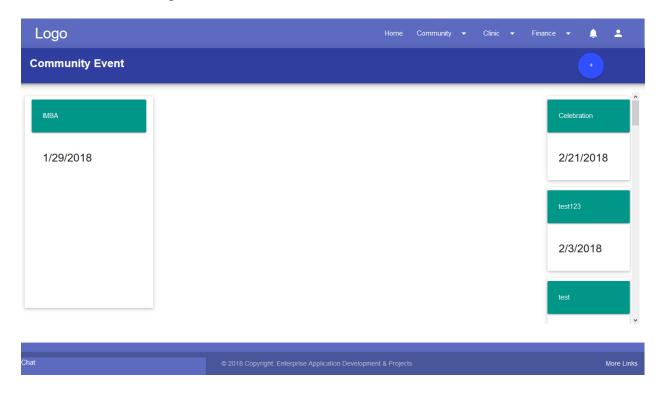
## **User Interface**

# Home



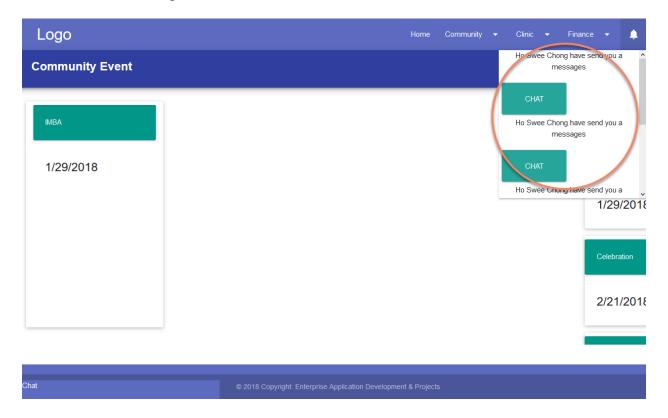
See what the page is mostly about.

# **Community Event**



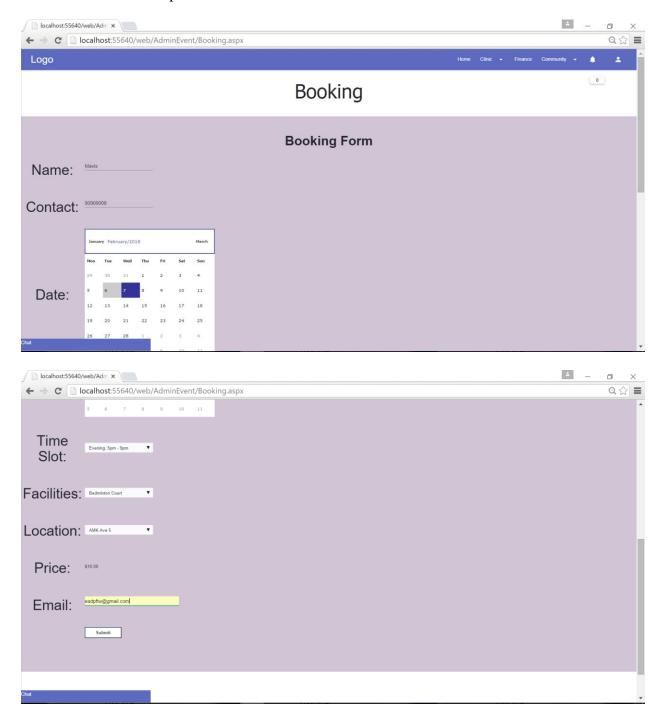
Display Event they created or invited to. Those events are displayed in cards

# Notification



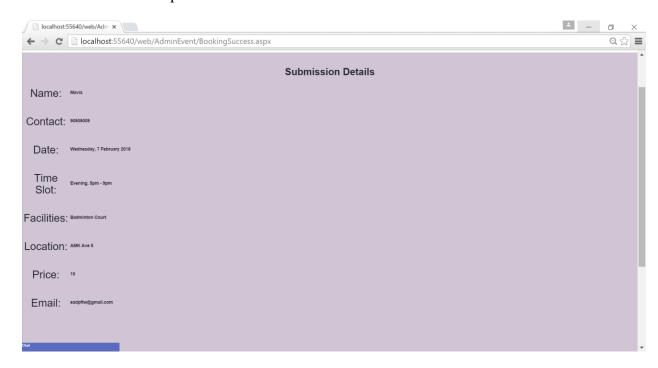
Display notification if user invite another user to an community event or in chat they have send messages.

# **Booking - Residents**



- > This residents will key in the relevant information and submit the booking form.
- > Upon clicking on "Submit" button, the details will be saved.

## After submission;



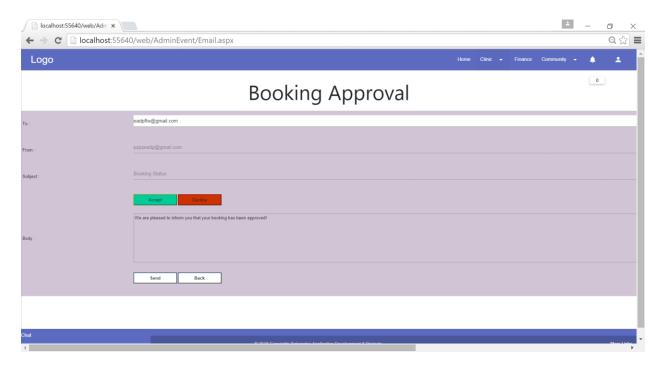
# **Booking - Administrator**



> Selecting a particular cell for approval.

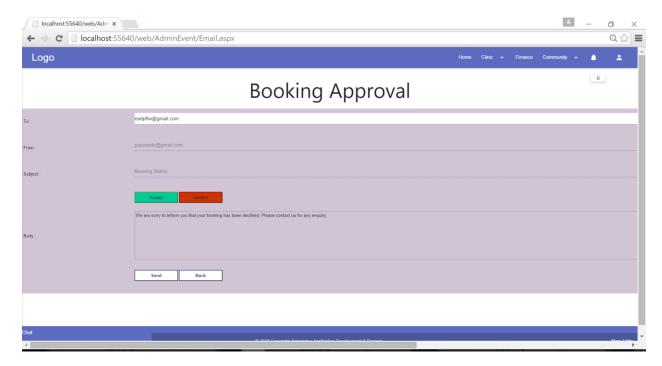
➤ Clicking on the "Select" leads to the email page where user gets to send email to the particular selected email recipient.

## **Approved button**



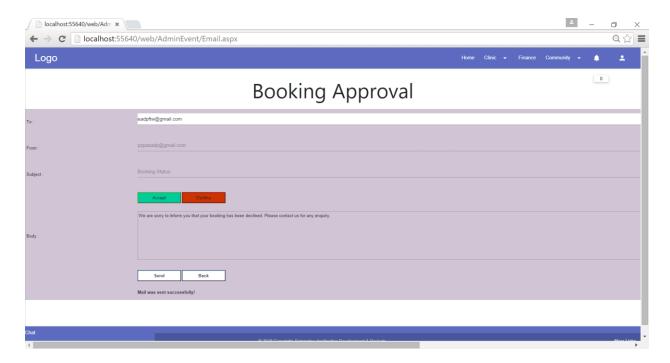
➤ Display relevant text when the user clicks on "Approve" button and update the status from "Pending" to "Approved".

## **Declined button**



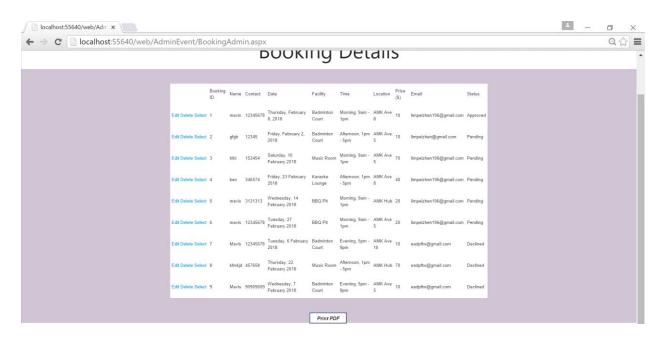
➤ Display relevant text when the user clicks on "Declined" button and update the status from "Pending" to "Declined".

### Sent email to resident



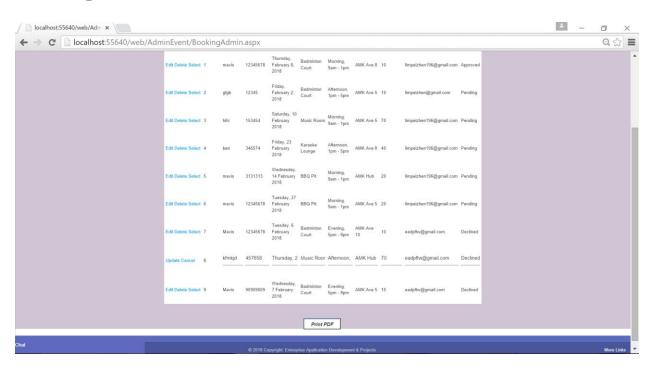
➤ An Email will be sent to the recipient email to notify them of the Booking Status when the user clicks on the button "Send".

#### After declined



> Status is changed to "Declined" for booking ID 8.

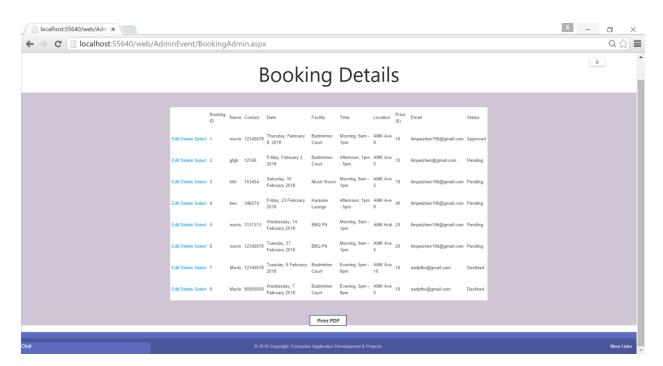
## **Before Update**



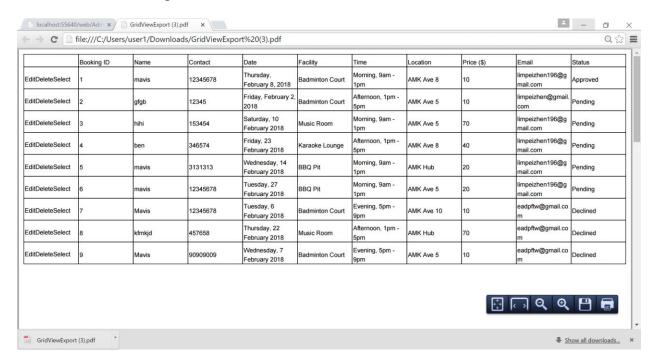
### **After Update**



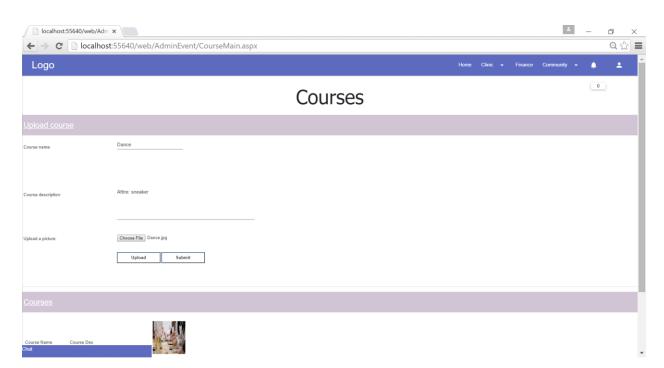
#### **After Delete**

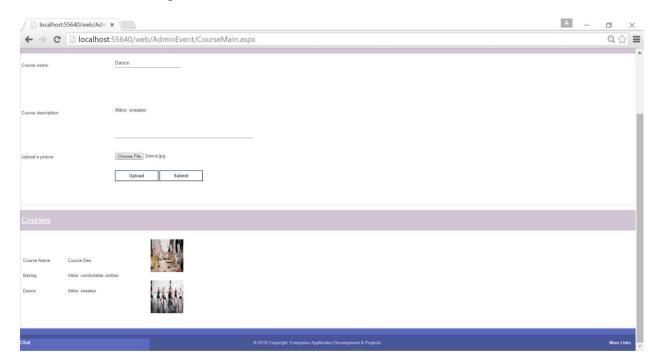


**Printing of PDF** 



# **Course Main Page - Administrator**





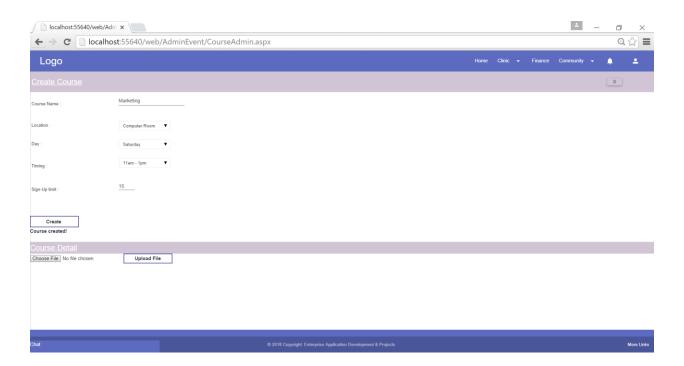
- ➤ Administrator will create and upload picture of the course created in the course main page for the residents to view.
- > "Upload" button allows the user to upload pictures.
- ➤ "Submit" button allows the user to create the course name and course description in the main page.

# **Course Main Page - Residents**



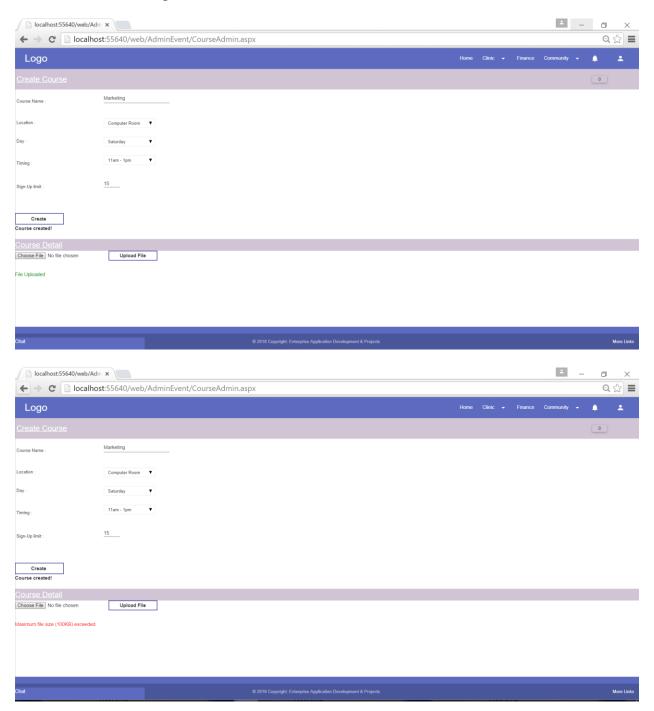
➤ Residents only get to view the created and uploaded part as they will not be able to create and upload anything.

# **Creating courses - Administrator**

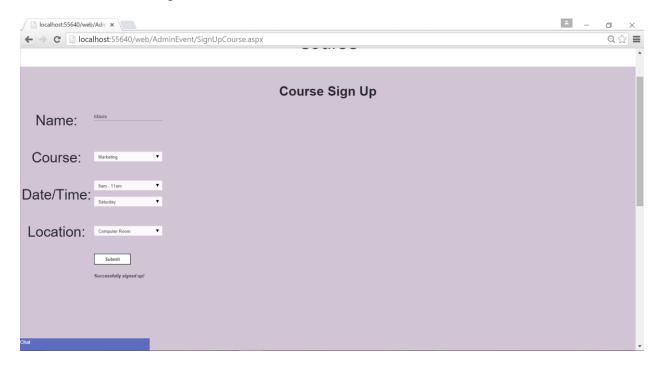


- > "Create" button allows administrator to create course for the residents to join.
- > "Upload file" button allows the user to upload documents of the course details and save inside a file.

## Validation of maximum document size upload

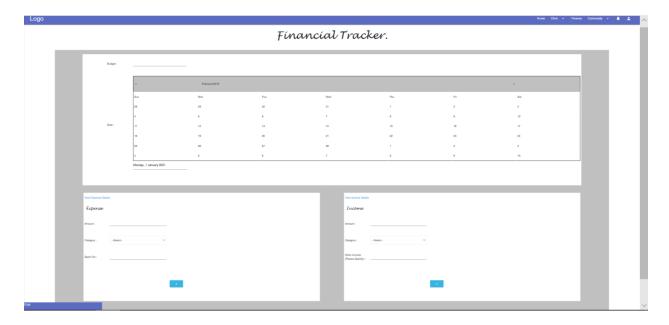


**Course Sign Up - Residents** 



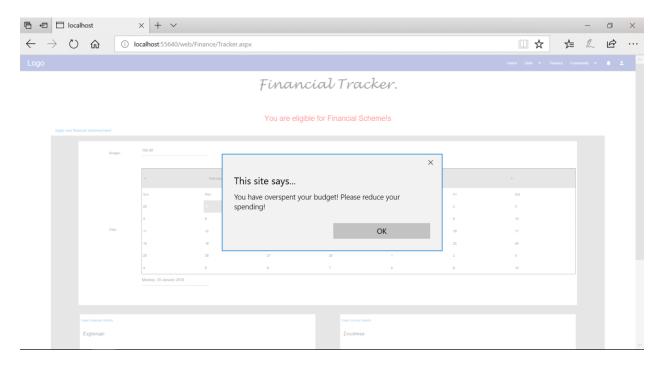
- > Residents will sign up for the courses created by the administrator.
- > "Submit" button saves the sign up details of the resident.

# **Financial Tracker - Residents**



- > First page to financial tracker
- ➤ Users are required to input in their budget that they want to achieve , date, expense amount, expense category, expense item, income amount and income type.
- ➤ Users can click on the link provided for them to view their expenses and income details created.

# Overspending of budget



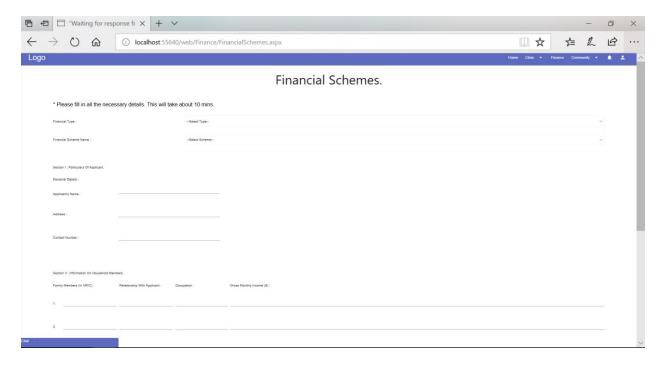
➤ A pop up will appear if expense is greater than budget inputted to notify users to cut down on their expendages

## **Recommendation for financial scheme**

You are eligible for Financial Schemels
Apply your financial schemes here!

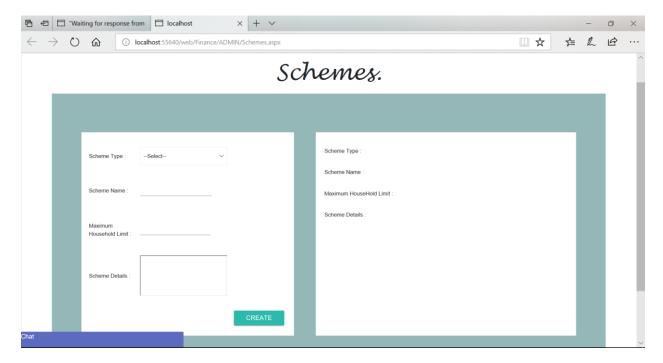
➤ A panel with a link will appear when total income earned subtract total expense earned is lesser than the max amount ,showing a optional application for financial schemes

## **Creation of financial schemes - Residents**



- ➤ The dropdownlist of the scheme type and name are bind to the table column of scheme type and name respectively.
- ➤ Validation is set if users do not select scheme type ,scheme name, enter their name , address ,contact no etc.

## **Creation of schemes - Admin**



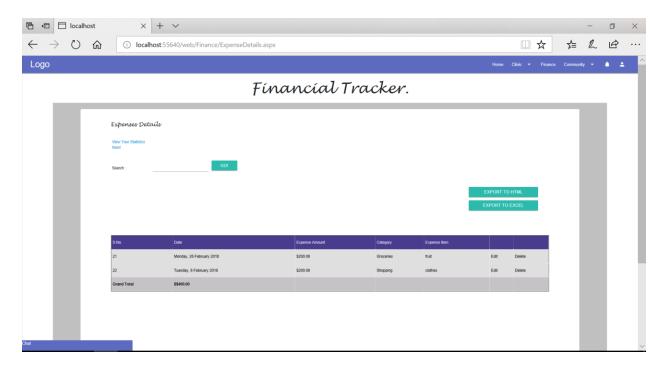
- Admin must create records of financial schemes available for users and the maximum number (limit) for monthly gross income in order for the financial scheme to be functionable.
- ➤ After applicant have created an applicant form and submitted it, admin would have to approval them

# **Approval of schemes - Admin**

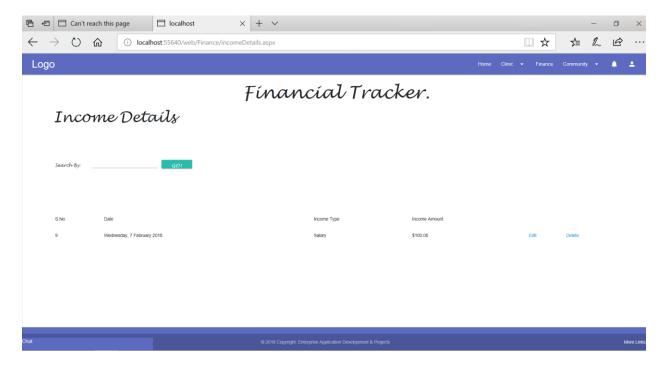


The admin would have to check the checkbox and click on the approve button for the status the turn to "Approved" else it will be "Pending"

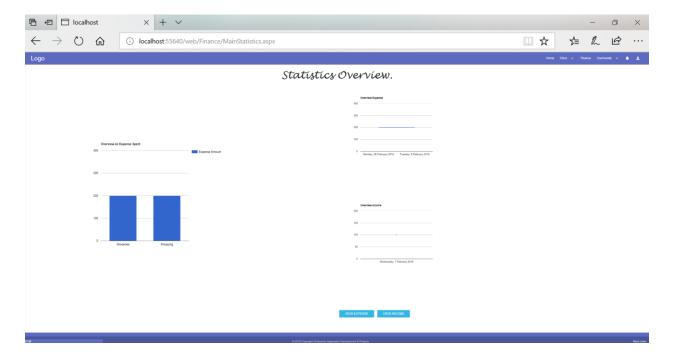
# **Expense Details - Residents**



- > Expense details page.
- ➤ Users are able to view details of all expenses created ,grand total incurred, filter and search for through records.
- ➤ Users are able to update and delete their record made.
- > Export their gridview to html or excel.
- ➤ Link to main page of statistics.



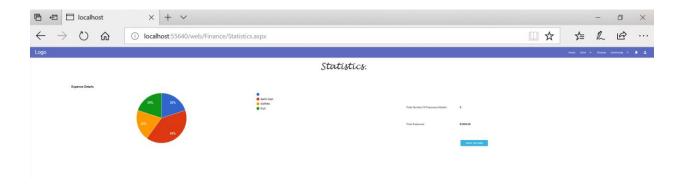
- ➤ Income Details page.
- > Users are able to view their income made, edit, delete and search through records.



> Main page of statistics.

- > Shows brief overview of records made.
- Provide links to view a more in-dept version of expenses and income incurred and earned respectively.
- ➤ The graph is hoverable meaning that users are able to view specific details pertaining to the graph.

# **Expense Statistics - Residents**



- ➤ Shows in depth (more specific form of graph)
- > Shows total number of expenses incurred up to date.
- > Count the total number of expenses record made.

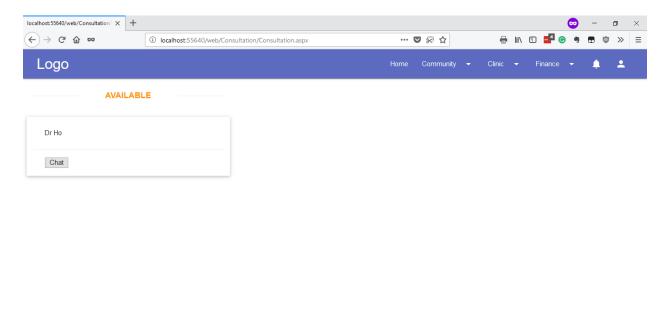
> Button used to redirect users to income statistics page.

# **Income Statistics - Residents**

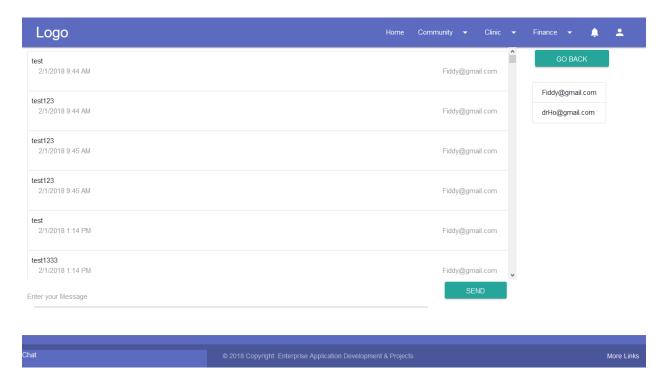


- ➤ Shows in depth (more specific form of graph)
- > Shows total number of income earned up to date.
- > Count the total number of income record made.
- > Button used to redirect users to expense statistics page.

#### Consultation

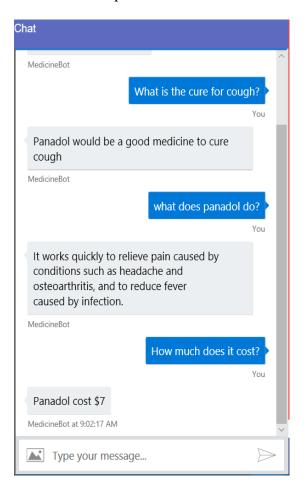


This page allow user to see which doctor is available.

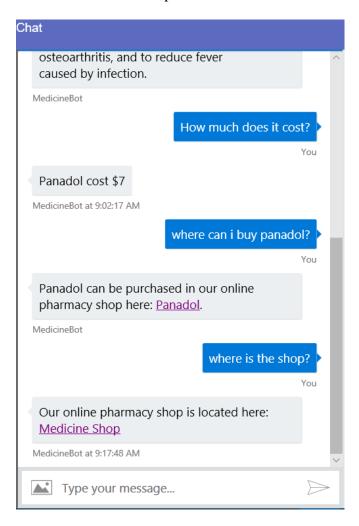


This page is to allow patient to consult doctor without having to visit the clinic. Sending message and doctor or patient on the other end will receive it.

## **Medicine Chatbot**



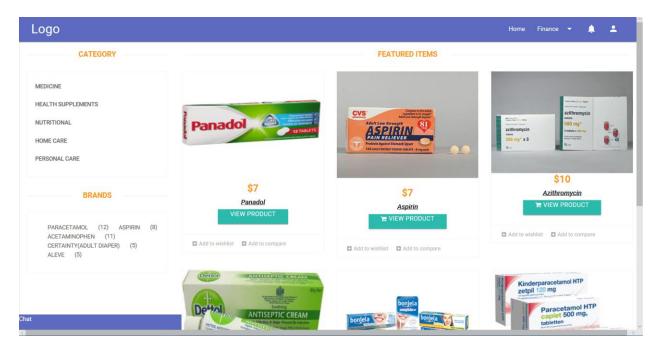
- Chatbot is informative, it can answer questions users ask it.
- Machine Learning so different sentences can be formed and the bot is able to distinguish what the user is asking.



• Chatbot is able to redirect user to pages which they ask for eg: Panadol product page.

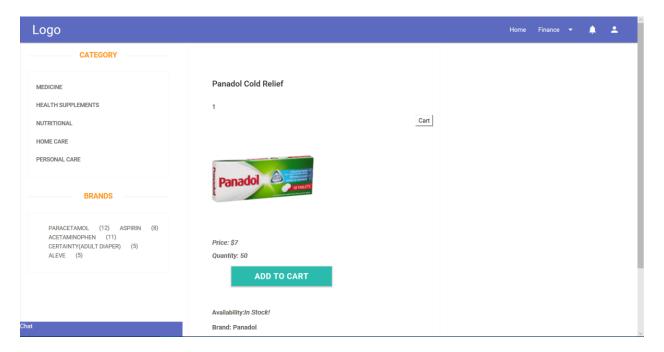
### **Medicine Shop**

#### **Homepage**



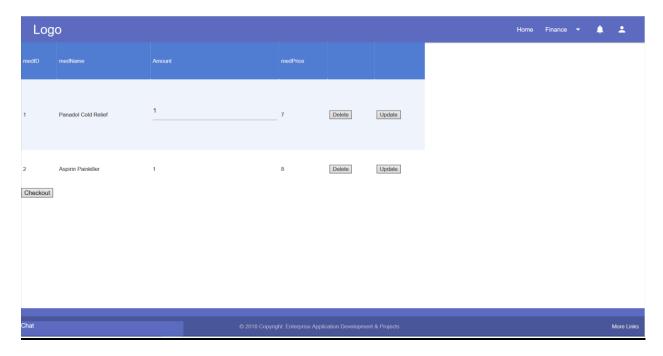
• This is the medicine homepage. Customers are able to click on a product to view the quantity, whether the product is in stock and add it to cart.

### **Product Page**



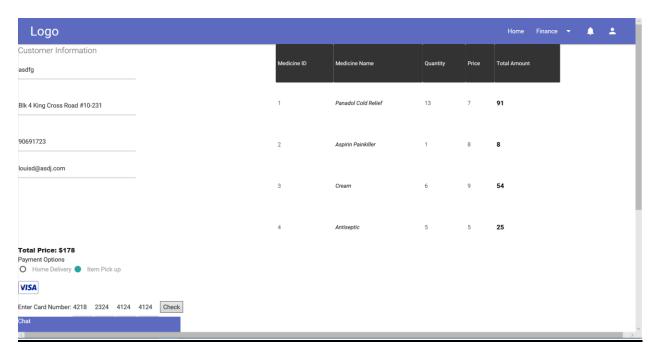
• This is the product page( Panadol). It will show the price, quantity, availability and a button to add to cart.

#### **Cart**



- The cart will show the list of items added to it.
- Customers are able to edit the quantity directly from here and update to reflect on the updated quantity.
- Customers click on ceckout to go to the checkout page.

### **Checkout Page**

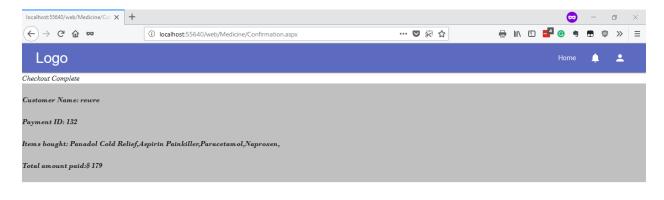


- The product lists and the total price of each product type is displayed
- Total amount is also shown.
- Customer can type his customer details beside the price list.



- Customer can choose whether he wants pick up or delivery
- Customer enters card details, either Mastercard or Visa.
- Customer press continue to finish the checkout.

#### **Confirmation Page**





After clicking confirming payment, Customers will be redirected to the webpage where
he will receive an Payment id, list of items he bought and the total amount he has paid.
All information will be saved to database.

#### **Problems Encountered**

#### 1. Overlapping of Css

The overlapping of css implemented in the master page interferes with the layout of individual web forms causing some form of alignment issues and blockage to individual web page. Therefore, manual coding must be done hence taking up a lot of our time.

#### 2. Integration of codes in two different computer

 Before integration, the codes were able to work perfectly in one of the member's computer but the exact same code cause errors that are difficult to detect in another member's computer.

#### 3. Version of Visual Studio

 The older version of visual studio does not have some functionality that is required hence, it is different to work on two different computer.

#### 4. Time management

 The time period for coding is very limited, therefore some function cannot be implemented as intended.

#### 5. Teamwork

 Lack of members turning up for project meetings which result in lack of communication, this causes the project to be delayed.

#### **Future Enhancements**

#### 1. Video conference

Aims to provide convenience for the elderly as they do not have to make an actual trip down to the hospital to get consultations from the doctors frequently. With this feature, it allows verbal communication between the patient and the doctor similar to real life interactions.

#### 2. Finding of Job

Aims to provide suitable job opportunities for the residents who has troubles looking for a job on their own. The website will recommend a suitable job that is available for the residents to sign up for and provide relevant courses to aid them in that certain field.

#### **Conclusion**

To end off, our team aims to bring unity in the community by also providing the residents and the administrator ease in communication. With that, the both parties will have a diverse living style around the community as there are many variety ranging from Booking, Finance, Online Pharmacy Shop and many more. It

promotes the smart nation living lifestyle due to the convenience that our website provides for both the administrator and residents living in the community.