



Sri Lanka Institute of Information Technology

## Tea Factory Management System

### Project Report

Information Technology Project 2020

Project ID: ITP2020\_S2\_05\_G2

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Date of submission - 23/10/2020

## **Declaration**

We declare that this project report or part of it was not a copy of a document done by any organization, university any other institute or a previous student project group at SLIIT and was not copied from the Internet or other sources.

### Project Details

Project Title	Factory Management System for Niyandagala “Ambrosia” Tea Uva Co (Pvt) Ltd.
Project ID	ITP2020_S2_05_G2

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# **Abstract**

## **Client - Niyandagala “Ambrosia” Tea Uva Co (Pvt) Ltd**

The project is based on a tea factory management system. Currently, the management system of the factory is handling records, details and calculations poorly using the manual process of book-keeping. Through this developed system, the factory will be able to automate processes like managing employee details, attendance, supplier details, vehicle records, inventory, leaf stock details, final auction stock details, calculating employee salary, supplier payments, vehicle service cost. And also, the factory outlet will be able to handle their stock and sales without an extra effort.

The system was developed using Python language and Django framework. As this system is a web-based system the client can access to the system anywhere through internet. This is an additional advantage to the client, so that the client is always updated about the processes running in the factory and outlet. So decisively by automating the management system, the productivity and effectiveness of the factory increase systematically.

## **Acknowledgement**

We would like to express our heartfelt gratitude and appreciation towards all those who provided the opportunity and support to complete this project. First of all, special thanks goes to our Lecturer- in- Charge Ms. Uthpala Samarakoon who has given her full effort in guiding the team in achieving the goal as well as her encouragement to maintain our progress in track. And also, for giving us her valuable time to solve our conflicts regarding project. We would like to express our appreciation towards Mr. Anuruddha Abeysinghe who provided us suggestions, feedbacks, valuable advices and encouragement in the progress evaluation, Ms. Ishana Dahanayaka and Ms. Poornami Wijekoon for giving us new ideas for more improvements in final evaluation.

Furthermore, we would like to acknowledge our client Mr. Minosha Wickramasuriya, the owner of Niyandagala “Ambrosia” Tea Uva Co (Pvt) Ltd for giving us a chance to build a system to his factory. And all the staff members for providing necessary information about the requirements to be fulfilled.

I pledge my sincere gratitude towards my teammates for their contribution towards a successful project during this pandemic situation. The strength and unity we put together as a team help us to achieve more than we expected. And also, we sincerely thank to all our colleagues who have given us their support and suggestions to improve our project. Last but not least, we are extremely grateful for our parents for their love, caring and sacrifices.

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## **List of Acronyms and Abbreviations**

ER - Entity Relation

# **1. Introduction**

## **1.1 Problem Statement**

Niyandagala “Ambrosia” Tea Uva Co (Pvt) Ltd, Which is a tea factory situated in Welimada, Uva Province. The main problem in this factory is that they do not have an IT based system to run their operations or to keep their records on each section. Currently they are following a manual process to handle each task in the factory by maintaining books. The client said that there is trouble in managing these operations manually because a simple mistake can affect the whole process and waste a long time to complete that task. So, there can be miscalculations and mistakes happen during this manual process. And also, daily transactions are kept in record books. It is a very difficult and time-consuming task to manage those records and the process is not efficient and effective. In this factory process, there is a huge collection of complex data which needs to be maintained in a specific manner. And it would be a major responsibility to manage many files as well as it would be a cause for the data inaccuracy.

## **1.2 Product Scope**

Through this project, the client will be able to solve above mentioned problems. The system is a web-based application. Reason for choosing web application over the desktop application is that the client needed to access the system through the internet from anywhere at any time. This system will provide,

- Employee details, salary, and attendance management
- Supplier details and operations management
- Leaf stock management
- Transport and vehicle repair management
- Inventory management
- Final production auction stock management,
- Sales and stock management in factory outlet.

## Individual Scope

<b>Reg. No</b>	<b>Name</b>	<b>Function</b>
IT19000336	Mudannayake I.G.M.J.	<p>Employee Details and Attendance Management</p> <ul style="list-style-type: none"> <li>• Add employee details to the system</li> <li>• Update employee details</li> <li>• Delete resigned employees</li> <li>• Retrieve employee details and display as profiles</li> <li>• Manage daily attendance of workers</li> <li>• Generate reports based on attendance</li> </ul>
IT19039350	Siriwardana S.M.T.N.	<p>Supplier Details &amp; Operation Management</p> <ul style="list-style-type: none"> <li>• Add / Register suppliers to the System</li> <li>• Update supplier details</li> <li>• Delete resigned suppliers' details</li> <li>• Calculate suppliers' payments</li> <li>• Generate supplier payment invoices</li> </ul> <p>Leaf Stock Management</p> <ul style="list-style-type: none"> <li>• Add daily stock details</li> <li>• Delete false stock records</li> </ul>
IT19046976	Amarawansa T.N.W.	<p>Transport and vehicle repairs management</p> <ul style="list-style-type: none"> <li>• Add driver details, vehicle details, vehicle driving records and vehicle repair details.</li> <li>• Update driver details and repair details.</li> <li>• Delete unwanted past records.</li> <li>• Calculate daily travelled distance and calculate total meter readings monthly</li> <li>• Calculate total amount spent for vehicle maintenance.</li> <li>• Generate meter readings report and vehicle maintenance report.</li> </ul>

IT19041926	Onella Natalie P.A.D.	<p>Sales Management of the factory outlet</p> <ul style="list-style-type: none"> <li>• Add buying items to bill</li> <li>• Update bill amount, income and price table</li> <li>• Delete unwanted bill items</li> <li>• Generate Bills, Transaction / Income reports</li> <li>• Calculate item price, total item price and total bill amount</li> </ul>
IT19009728	Amaranayake W.N.S.	<p>Stock management of the factory outlet</p> <ul style="list-style-type: none"> <li>• Add tea category, the weight and number of packets to the system, add a new category (when needed)</li> <li>• Update current stock</li> <li>• Delete unwanted product, packet records</li> <li>• Generate reports of stocks</li> <li>• Calculate stock balance</li> </ul>
IT19210148	Wijethunga R.M.	<p>Inventory management and daily final product management</p> <ul style="list-style-type: none"> <li>• Add Inventory details</li> <li>• Update Inventory details</li> <li>• Generate reports about the inventory stock and the final product stock</li> <li>• Delete inventories</li> <li>• Add and delete daily productions</li> <li>• Add and delete tea grades</li> </ul>
IT19008110	Perera L.A.V.U	<p>Employee salary management</p> <ul style="list-style-type: none"> <li>• Add OT hours and advances to employees</li> <li>• Update rates of salaries according to the government salary rates</li> <li>• Retrieve full reports of all employee salaries monthly and annually</li> <li>• Delete salary records of resigned employees</li> <li>• Get all the daily attendance of workers and calculate the monthly salary</li> </ul>

		<ul style="list-style-type: none"> <li>• Search individual employee of calculating basic salary</li> <li>• Search monthly calculated reports of salary, ETF and EPF</li> </ul>
IT19362854	Abeygunawardana S.L.	<p>Final production auction stock management</p> <ul style="list-style-type: none"> <li>• Add catalog (collection of sub stocks) details, sold stock details, broker details and buyer details.</li> <li>• Update sub stock details sold stock details and not sold stocks according to the auction sales.</li> <li>• Update buyer details and broker.</li> <li>• Delete unwanted records.</li> <li>• Calculate sold stock amount and catalog weight details.</li> <li>• Search catalog details and sold stock details.</li> <li>• Generate reports about sold stocks according to the auction sales.</li> </ul>

Table 2.1.1-1/Product Scope

### 1.3 Project Report Structure

The Introduction of the report contains the problem statement which indicate the problem that the company faced and the product scope of the project.

The middle part contains the Methodology with the requirement analysis which contain functional and non-functional requirements, use case diagram, use case scenarios and activity diagrams. And in the design part, high level architecture diagram, class diagram ,database diagrams and user interfaces of the project are included. Then the implementation is defined. After that, the testing phase with integrate testing, system testing and test cases are illustrated.

The later part of the report contains the Conclusion and the References which were used to develop the project and reports.

## **2. Methodology**

### **2.1 Requirements and Analysis**

#### **2.1.1 Functional Requirements**

Following are the requirements gathered for each function from the factory staff to develop the system

- Employee Details Management
  - Register new employees to the system
  - Update existing employee details (E.g. – update temporary workers as permanent)
  - View profiles of the employees in order to get all the details when needed
  - Keep records of employees in the factory
- Attendance Management
  - Mark daily attendance of the employees
  - Get reports of marked attendance
- Salary Management
  - Calculate the basic salary
  - Calculate the final employee salary
  - Calculate the EPF of the employee in the month
  - Calculate the six-month ETF of the employee
  - Generate reports of the calculated results
- Supplier Management and Leaf Stock Management
  - Register new suppliers
  - Update / Delete already added suppliers
  - Add daily leaf stocks
  - View leaf stock details in a table

- Delete false stock records
- Calculate Supplier Payments
- Generate monthly pay slip for suppliers

➤ Leaf Inventory Management

- Keep records of the inventory history
- Manage time for the withering process
- Manage auditing process

➤ Final Daily Production Management

- Keep records of the production history
- Categorize final products
- Count the total weight of the final product

➤ Final Production Auction Stock

- Manage catalog (collection of sub stocks) details.
- Manage broker and buyer details.
- Maintain records of sold stocks.
- Calculate total amount of sold stocks.
- Calculate total weights of catalog (collection of sub stocks).
- Generate reports of sub stocks daily, monthly and annually.
- Generate reports for sold stock details monthly and annually.

➤ Transport and Vehicle Repair Management

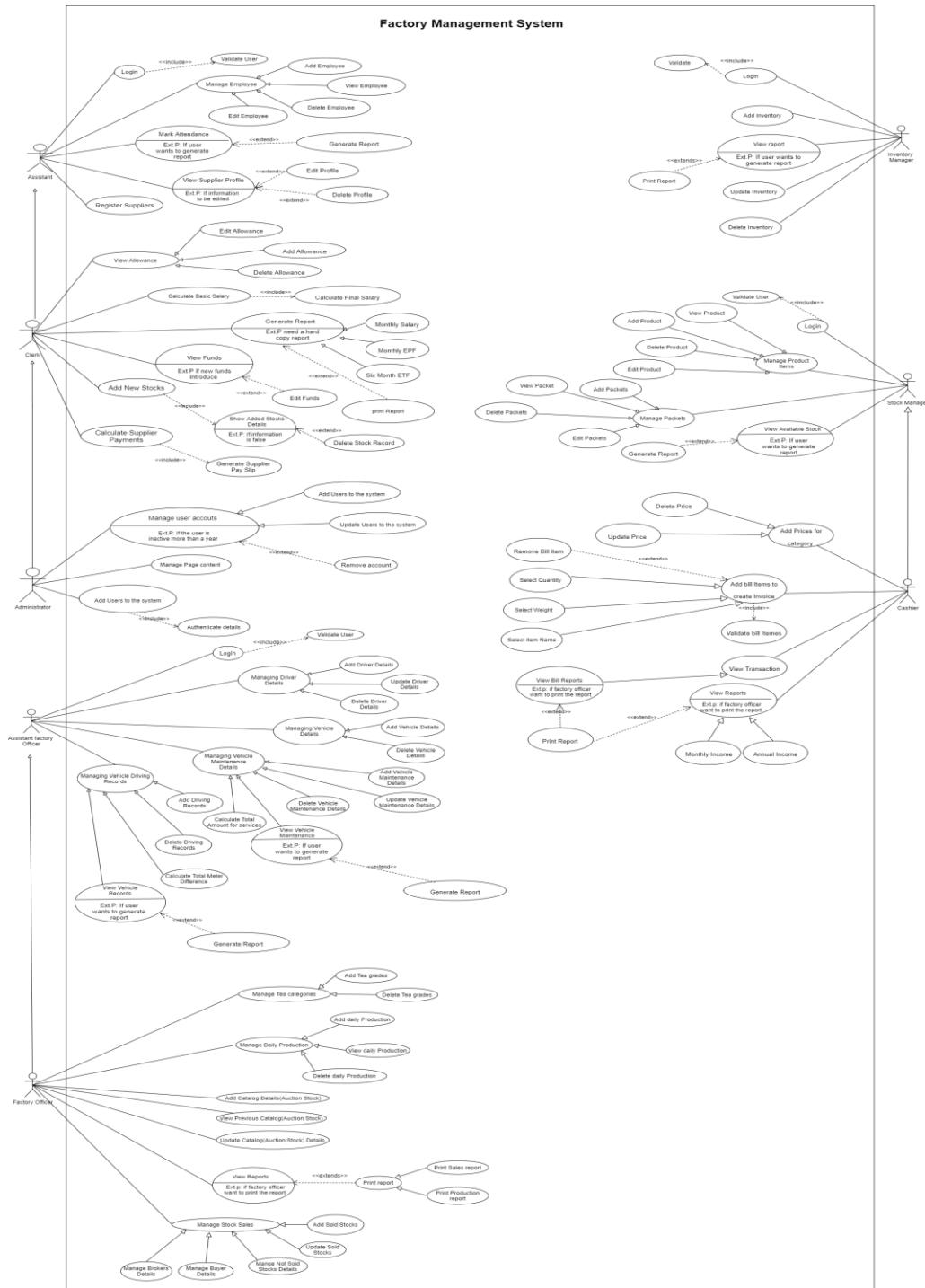
- Manage driver details, vehicle details and vehicle driving records.
- Manage vehicle maintenance details.
- Calculate total meter readings monthly.
- Calculate total amount spent for vehicle repairs monthly.
- Generate monthly meter readings report.
- Generate monthly vehicle maintenance report.

- Sales Management in Factory Outlet
  - Create invoice to get the total amount of bill.
  - Calculate the bill.
  - View all the transactions and get bill items from bill record and print the bill.
  - Added prices for the tea category and manage the price
  - Generate the income report (monthly, annually)
  
- Stock Inventory Management in Factory Outlet
  - Keep records of the tea packet stock
  - Update packet stock
  - View available stock
  - Generate monthly, annual report of stock

### **2.1.2 Non- Functional Requirements**

- Security – User can access the system by registering and they cannot access or view information without login to the system. System check the real- time identity of the user when they are using the system. Only a valid user can login to the system by providing valid credentials.
  
- Reliability – User should have a legitimate account to login accurately.
  
- Speed – Accurate user event response time.
  
- Portability and Scalability – This website can run on different computers with compatible operating systems and processors without installation.
  
- Availability – 24/7 customer can access for the system when internet connection is available

### 2.1.3 Use Case Diagram



*Figure 2.1.3-1/Use Case Diagram*

#### 2.1.4 Activity Diagrams

<b>Use Case ID</b>	U001	
<b>Use Case Name</b>	Login	
<b>Pre-Condition(s)</b>	<ul style="list-style-type: none"> <li>The system should be in operation</li> <li>Members must be registered to system</li> </ul>	
<b>Post -Condition(s)</b>	Logged in to the user profile	
<b>Primary Actor(s)</b>	Registered User, Administrator	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1	Use case begins when the user wishes to log in
	2	User enter username and password
	3	System validates the login information
	4	System displays Administrator page
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	3.a	If the username or password is incorrect, display an error message
	3.b	User will be requested to enter the username and password again
	3.c	User will be requested to select the forgot password option

Table 2.1.4-1/Use Case Scenario- login

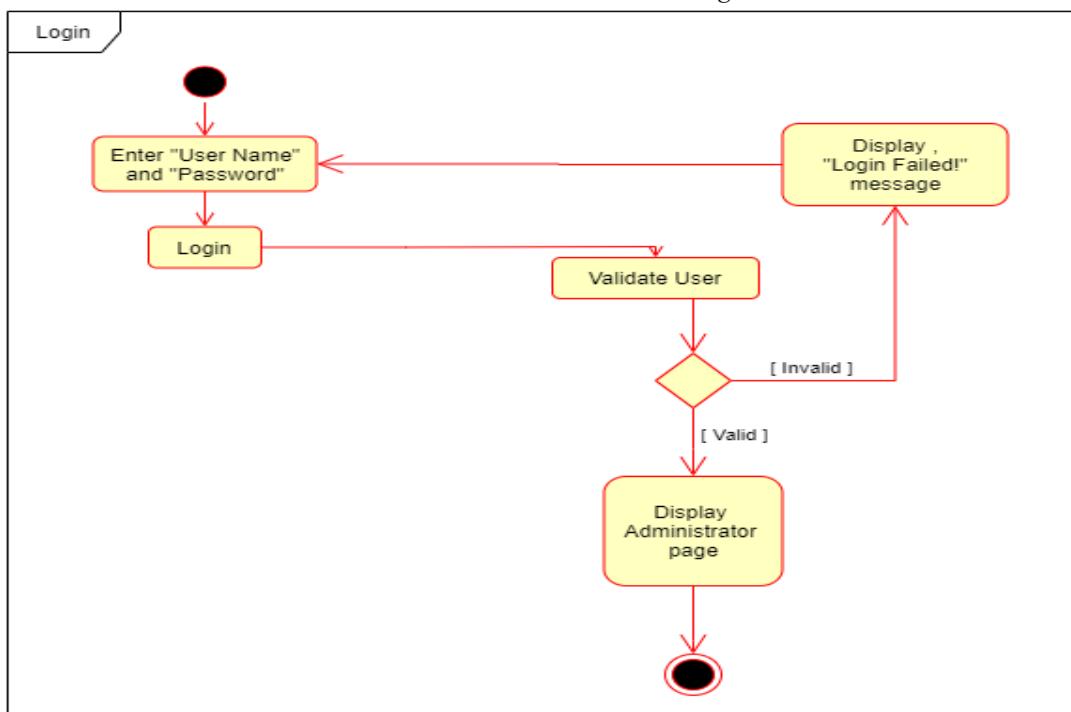


Figure 2.1.4-1/ Activity diagram-Login

<b>Use Case ID</b>	U002	
<b>Use Case Name</b>	Mark Attendance of factory workers	
<b>Pre-Condition</b>	User must log into the system as a valid user	
<b>Post -Condition</b>	Attendance marked successfully	
<b>Primary Actor(s)</b>	Clerk, Assistant	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1	Go to the application.
	2	Include: (Login).
	3	User Clicks on the “Tea Factory ” from the Admin Home Page.
	4	User Clicks on the “Employee Management” from the Tea Factory Home Page.
	5	User selects a date from the attendance page
	6	User clicks on “Mark attendance” button
	7	System redirect user to the mark attendance page with all factory worker details
	8	User mark attendance of the factory workers
	9	System remove marked attendance details from the list
	10	User clicks on “View All” button
	11	System display all marked attendance
	12	User click on “Generate Report”
	13	System display report of marked attendance
	14	User clicks on the document and download the report
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	11.a	If user marked present for an absent employee , user change the attendance status to absent.
	11.b	If user marked absent for a present employee , user change the attendance status to present.

11.c

If user marked day type of the employee incorrectly. user correct the day type.

Table 2.1.4-2/Use Case Scenario – Employee Details and Attendance Management

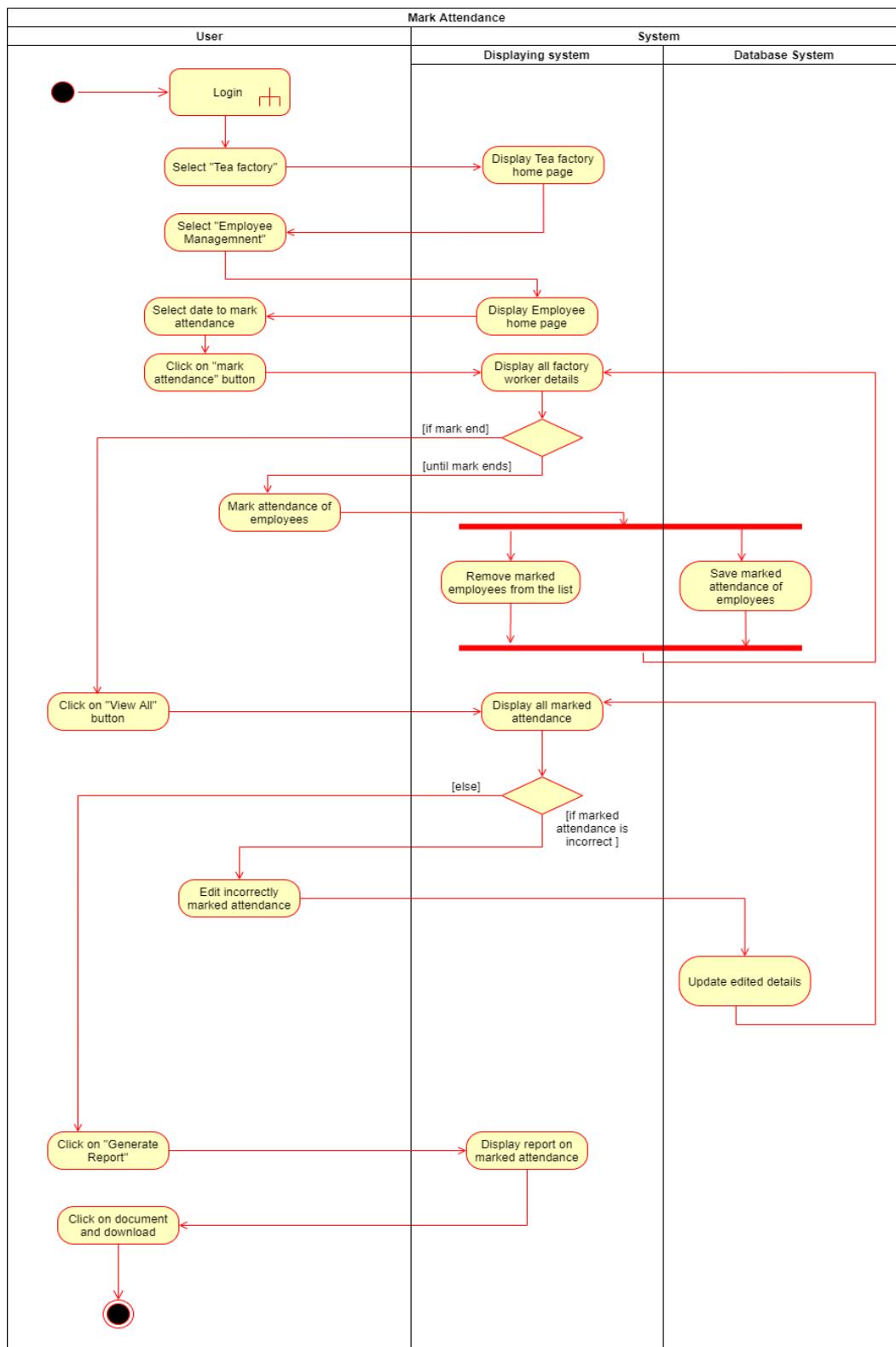


Figure 2.1.4-2/Activity Diagram – Employee Details and Attendance Management

<b>Use Case ID</b>	U003	
<b>Use Case Name</b>	Register Leaf Suppliers to the system	
<b>Pre-Condition</b>	The user should be logged into the user account	
<b>Post -Condition</b>	Suppliers registered to the system successfully	
<b>Primary Actor(s)</b>	Clerk	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1	Go to the website
	2	Include :: (Login)
	3	User clicks on “Supplier Management” button on Factory Home page
	4	System navigates to “Registered Suppliers” page
	5	User clicks on “Add a new Supplier” button on Registered suppliers page
	6	System navigates to “Supplier Registration” page
	7	User inputs the relevant supplier information to relevant fields given in the registration form
	8	User clicks “Submit” button to submit the form
	9	System validates the user inputs
	10	System save the input data and re-navigates to “Registered Suppliers” page
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	7.a	If any given input mismatched with validations, system will print an Error message
	8.a	If any compulsory input fields have null values, warning message will be generated and stop the form submission.
	4.c	If any mismatch found, print error message

Table 2.1.4-3/Use Case Scenario -Supplier Management

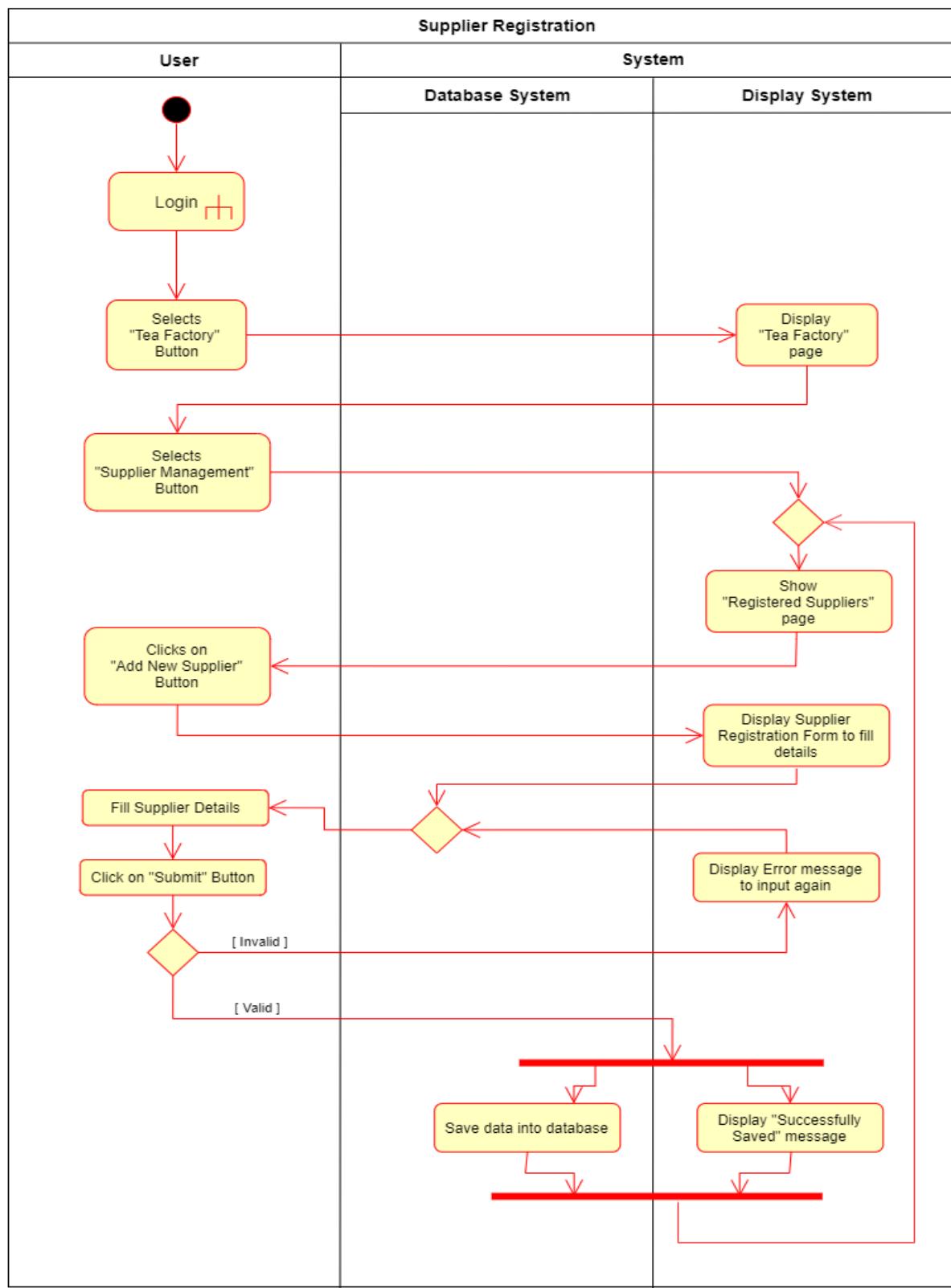


Figure 2.1.4-3/Activity Diagram – Supplier Management

<b>Use Case ID</b>	U004	
<b>Use Case Name</b>	Manage Vehicle Driving Records.	
<b>Pre-Condition</b>	User must log in to the system	
<b>Post -Condition</b>	Details added successfully	
<b>Primary Actor(s)</b>	Assistant Factory Officer	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1	Go to the application.
	2	Include: (Login).
	3	User navigates to “Tea Factory ” from the Admin Home Page.
	4	User navigates to “Transportation Management” from the Tea Factory Home Page.
	5	User navigates to Vehicle Driving Records page.
	6	User add vehicle driving records to system successfully.
	7	System will validate the added details and display added vehicle record in “Driving records table”.
	8	User delete unwanted vehicle driving records. (Delete)
	9	User search vehicle driving records and get records of the particular vehicle.
	10	User Click on the “Analysis” button on the side bar.
	11	User input data to Meter difference report.
12	System generate a monthly Meter Readings Report.	
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	6.a	If user input characters to input fields in vehicle records page system generates an invalid message (“start reading and end reading must contain only numbers.”)
	6.b	If user input less number to end reading in vehicle records system generates an error message (“End reading Number Error”).

9.a

If user input characters or incorrect data to search system generate an invalid message.

Table 2.1.4-4/Use Case Scenario - Transport Management

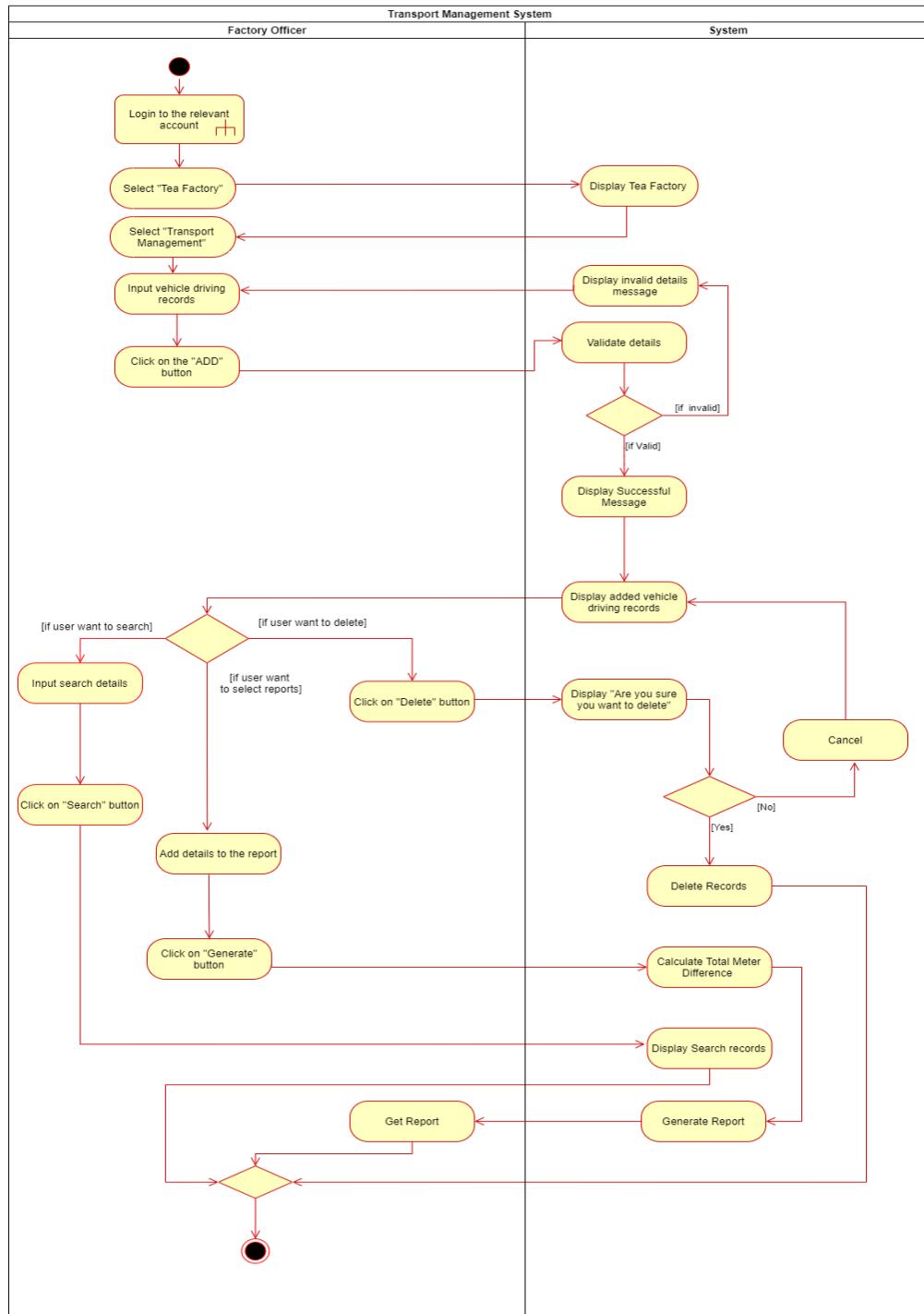


Figure 2.1.4-4/Activity Diagram – Transport Management

<b>Use Case ID</b>	U005	
<b>Use Case Name</b>	Get Income report in the Sales Management	
<b>Pre-Condition</b>	User has log into site	
<b>Post -Condition</b>	Sales manager can get the annual and monthly income reports	
<b>Primary Actor(s)</b>	Sales manager/Cashier	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1	Go to the Application
	2	When the login is successful, the user has to click the "Tea Shop Button".
	3	Then the system will navigate to the Tea shop.
	4	Sales manager click the "Sales management" button.
	5	Then after, the screen will display the Sales management.
	6	User create an invoice by clicking the menu tag called "Create Invoice".
	7	To create invoice, user has to input quantity, item name, weight and the price.
	8	For to get the total of the Invoice user has to click the "Calculate" button, then navigate to the Transaction.
	9	User has to see all the daily transactions and also the user can view and print the bill items that are included in the particular transaction.
	10	Sales manager also manage the item price Table. (Add, Update)
	11	The Sales manager get print monthly and annual Income reports.
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	1.a	If the site not working, System display error message and display back button
	1.b	If user invalid, Display error message and give chance to re-enter
	7.a	If the user entered exceed quantity, Display the Error message "Maximum quantity exceed"
	7.b	If the entered Category (item and weight) is not available in the stock, Display a message "Invalid input"
	7.c	If the user entered negative value for the quantity, Display Invalid message
	7.d	If the user wanted to delete entered bill item row, user has to click the "Delete" Button.
	8.a	If they got a calculate error, Display Exception error message.

	10.a	If the User add minus value for the price., Display message “Invalid input”
	10.b	If the price table is not added input successfully (add, update), Display message “Prices not added successfully”

Table 2.1.4-5/ Use Case Scenario – Sales Management in factory outlet

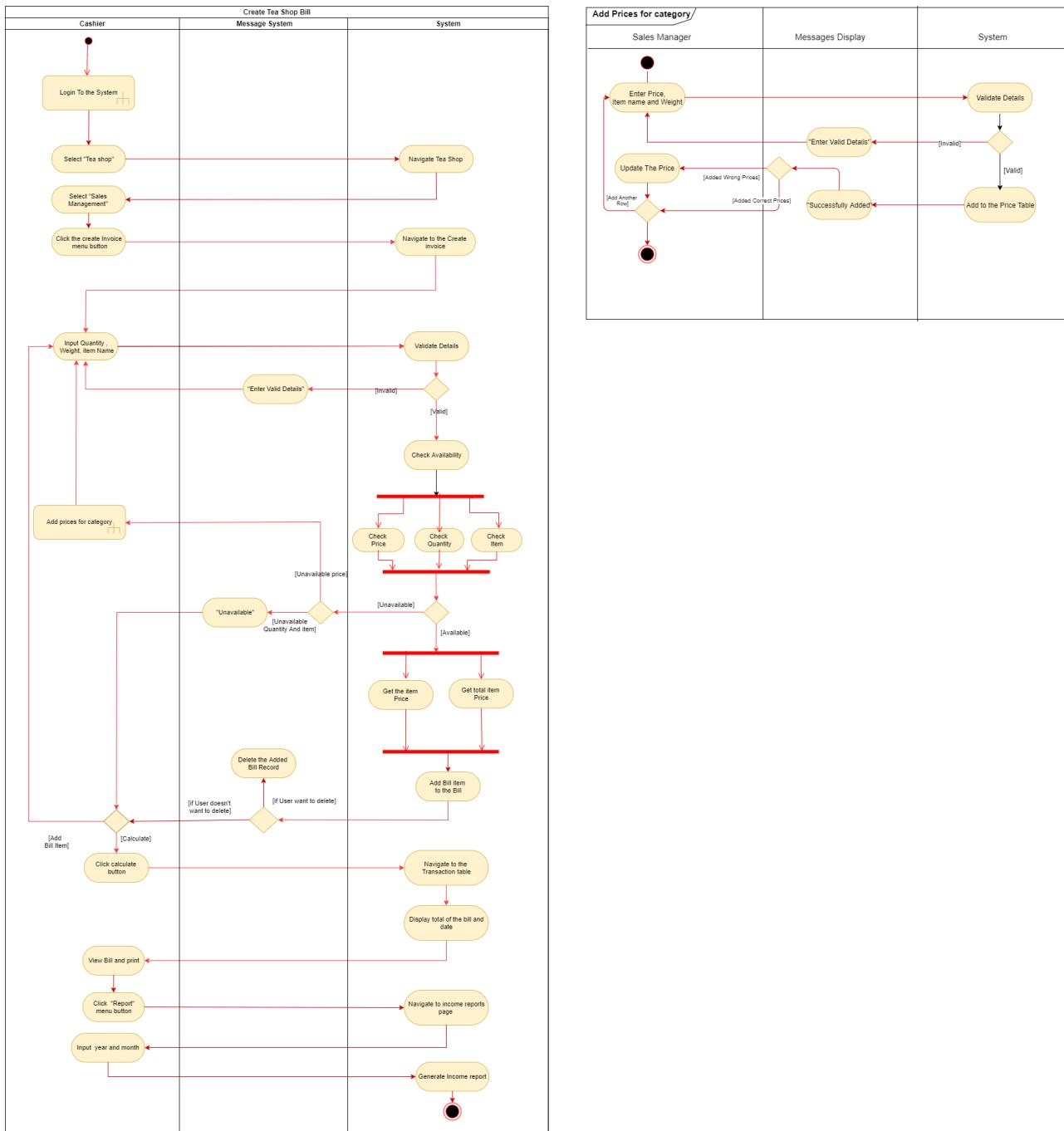


Figure 2.1.4-5/Activity diagram – Sales Management in factory outlet

<b>Use Case ID</b>	U006	
<b>Use Case Name</b>	Add tea packets of Factory outlet	
<b>Pre-Condition</b>	User must log into the system as a valid user	
<b>Post -Condition</b>	Details added successfully	
<b>Primary Actor(s)</b>	Admin, Tea shop cashier	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1.	Go to the application.
	2.	Include: (Login).
	3.	User click on the ‘Tea Shop’ from the admin home page.
	4.	User click on the ‘Inventory Management’ from tea shop home page.
	5.	System redirect user to reports page.
	6.	User click on the ‘Category Product’ button on the side bar.
	7.	User add category product details.
	8.	System displays “Successfully Added” message.
	9.	User Click on the “Add Packets” button on the side bar.
	10.	User add packet details.
	11.	System displays “Successfully Added” message.
	12.	User Click on the “View Tea Packets” button on the side bar.
	13.	User view tea packet details.
	14.	User Click on the “Available Stock” button on the side bar.
	15.	User View current stock.
	16.	User Click on the “Reports” button on the side bar.
	17.	User input month, year and click button to generate reports.
	18.	System display report

Extensions	Step	Branching Action
	6.a	If user input same category product details, system generates an invalid message("Error Invalid Details").
	9.a	If user input characters to date field in add packet details page, system generates an invalid message("Enter a valid date").

Table 2.1.4-6/ Use Case Scenario -Stock Management in factory outlet

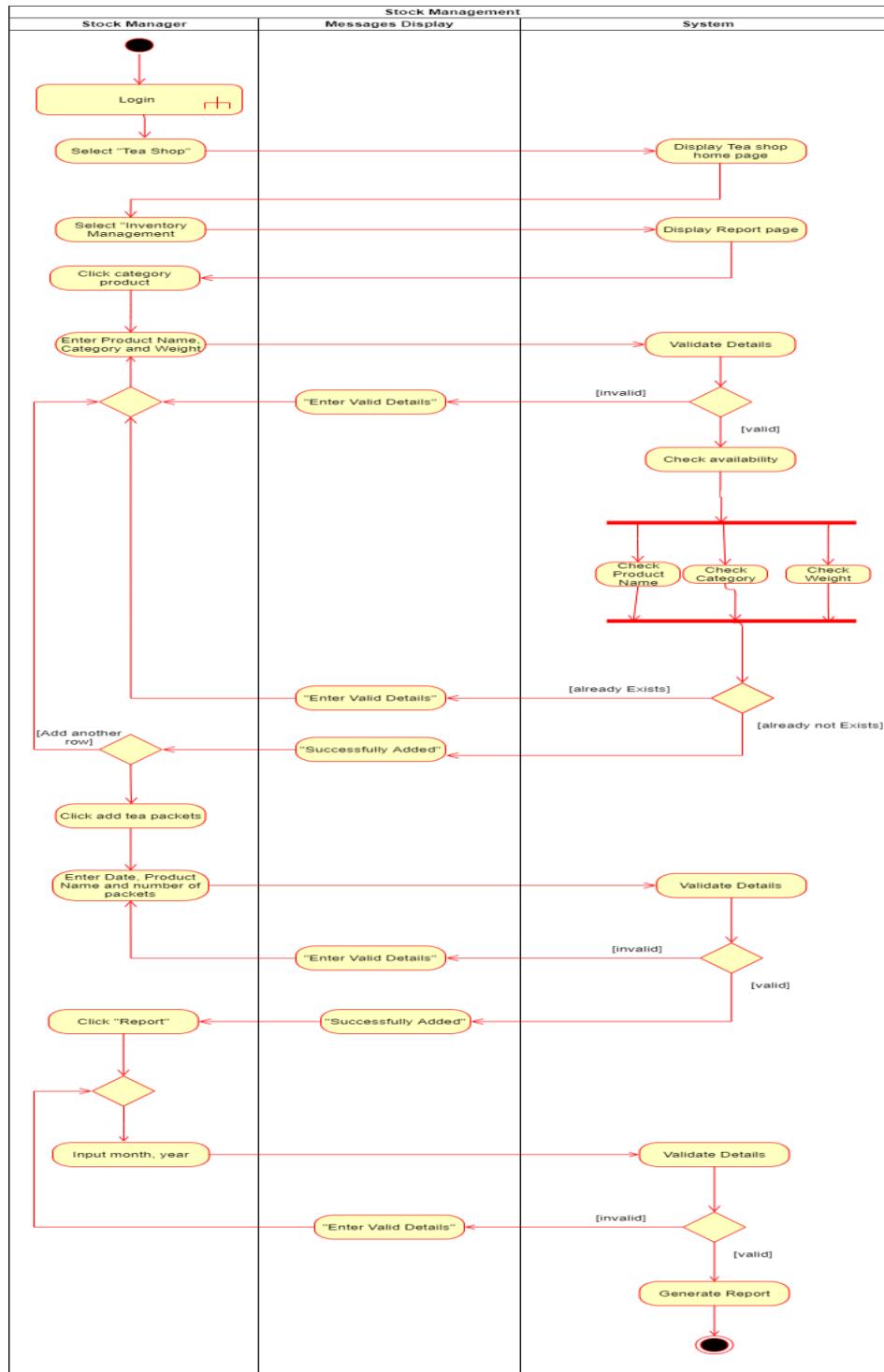


Figure 2.1.4-6/Activity Diagram – Stock Management in factory outlet

<b>Use Case ID</b>	U007	
<b>Use Case Name</b>	Inventory Management System	
<b>Pre-Condition</b>	User must log into the system as a valid user	
<b>Post -Condition</b>	Details added successfully	
<b>Primary Actor(s)</b>	Inventory Manager	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1	Go to the application.
	2	Include: (Login).
	3	User Clicks on the “Tea Factory ” from the Admin Home Page.
	4	User clicks on “Leaf Inventory Management” from the menu
	5	User can Create a new Inventory
	6	User can Update Previous Inventories
	7	User can generate reports with all the details for each inventory
	8	User can Delete Previous Inventories
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	5.a	If the details are valid system Shows “Inventory details saved successfully” message
	5.b	If the details are invalid system Shows “Invalid details” message
	6.a	If the details are valid system Shows “Inventory details updated successfully” message
	6.b	If the details are invalid system Shows “Invalid details” message
	8.a	The system shows “Are you sure? click yes to delete” confirmation message.
	8.b	Delete if the user selects “yes”

Table 2.1.4-7/Use Case Scenario - Inventory Management

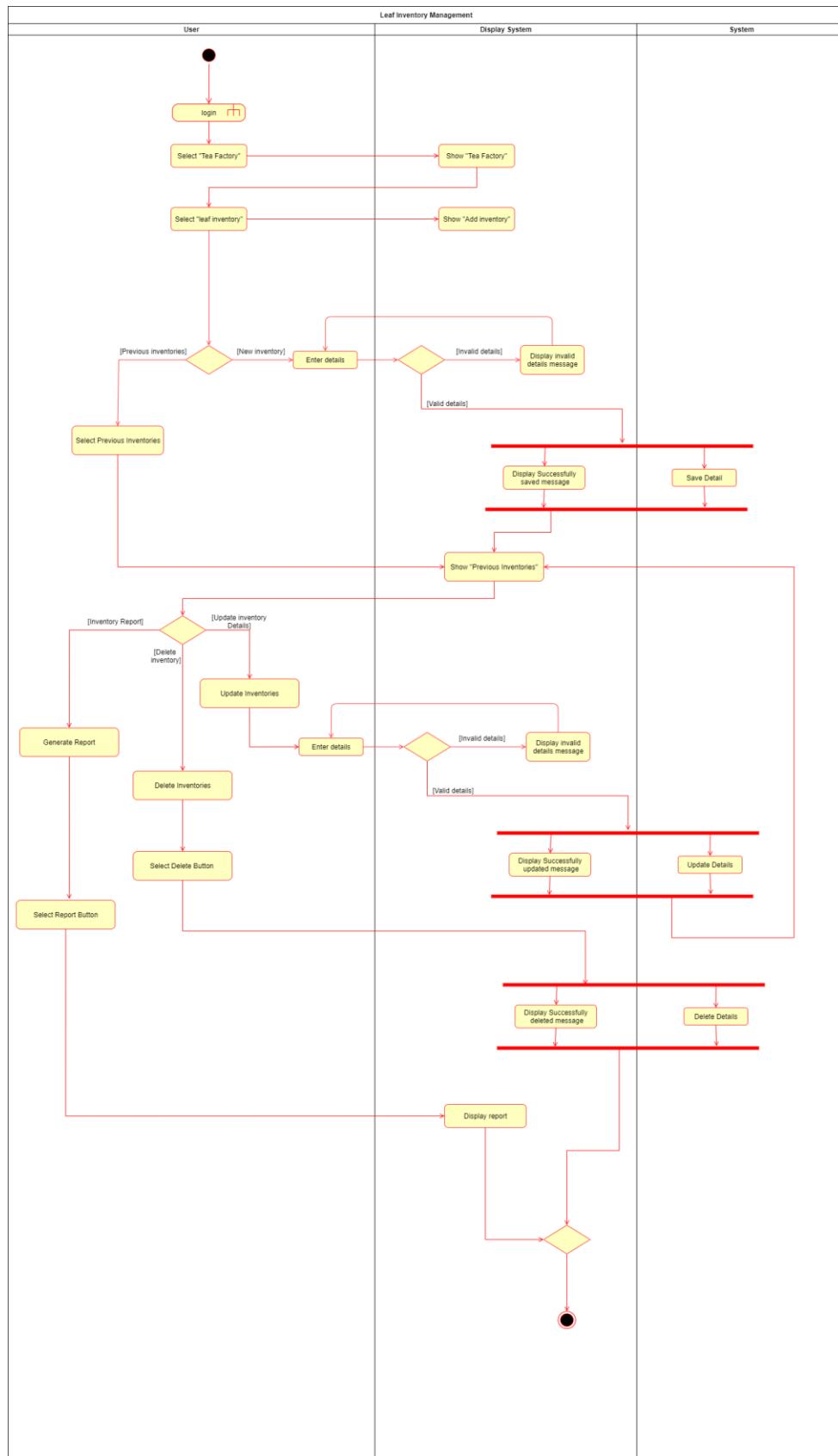


Figure 2.1.4-7/Inventory Management System- Activity Diagram

<b>Use Case ID</b>	U008	
<b>Use Case Name</b>	Calculating a single Employee Salary	
<b>Pre-Condition</b>	User must log into the system as a valid user	
<b>Post -Condition</b>	Attendance added successfully, Funds Been Added, Allowance been Added	
<b>Primary Actor(s)</b>	Clerk	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	1	Go to the application.
	2	Include: (Login).
	3	Clerk Clicks on the “Tea Factory” from the Admin Home Page.
	4	Clerk Clicks on the “Employee Management” from the Tea Factory Home Page.
	5	Clerk clicks the salary title on the menu bar in the “Employee Management” page
	6	Clerk search the Employee by his/her NIC number or EPF ID
	7	System Displays “Employee Found” and display the Employee Details in the search Results
	8	Clerk then click the view details button of the employee
	9	System then navigates form the table of the basic employee salary details to the single view basic salary details
	10	Clerk then add the year and the month of which he or she need to calculate the salary and search
	11	System will then generate the basic salary of the employee
	12	Clerk add the result by clicking the add salary button
	13	System will add the result to the database and redirect clerk to the basic employee salary details

	14	Clerk then click on the final salary details page
	15	System then displays the unfinished final employee salary table
	16	Clerk search the employee from the year and the month
	17	Clerk click the view final salary details of the employee
	18	System will navigate the clerk to the single final salary view if the employee
	19	Clerk add the allowance number, add the loan, advance or add the tea advance of the employee add click the calculate button
	20	System will calculate the final salary and display the result below the page
	21	Clerk then add the final salary to the database by clicking the add salary button
	22	System will than add the salary to the database and redirect the clerk to the final salary page
<b>Extensions</b>	<b>Step</b>	<b>Branching Action</b>
	7.a	If no employee found system will display a message saying “No employee Found”
	12.a	If the employee basic salary is already added to the database, the system will display an error msg saying “employee already added to the database”
	16.a	If there are no employee found in the search results system will display an error message “no Employee found”
	21.a	If the employee final salary is already added to the database, the system will display an error msg saying “employee already added to the database”

Table 2.1.4-8/Use Case Scenario - Salary Management

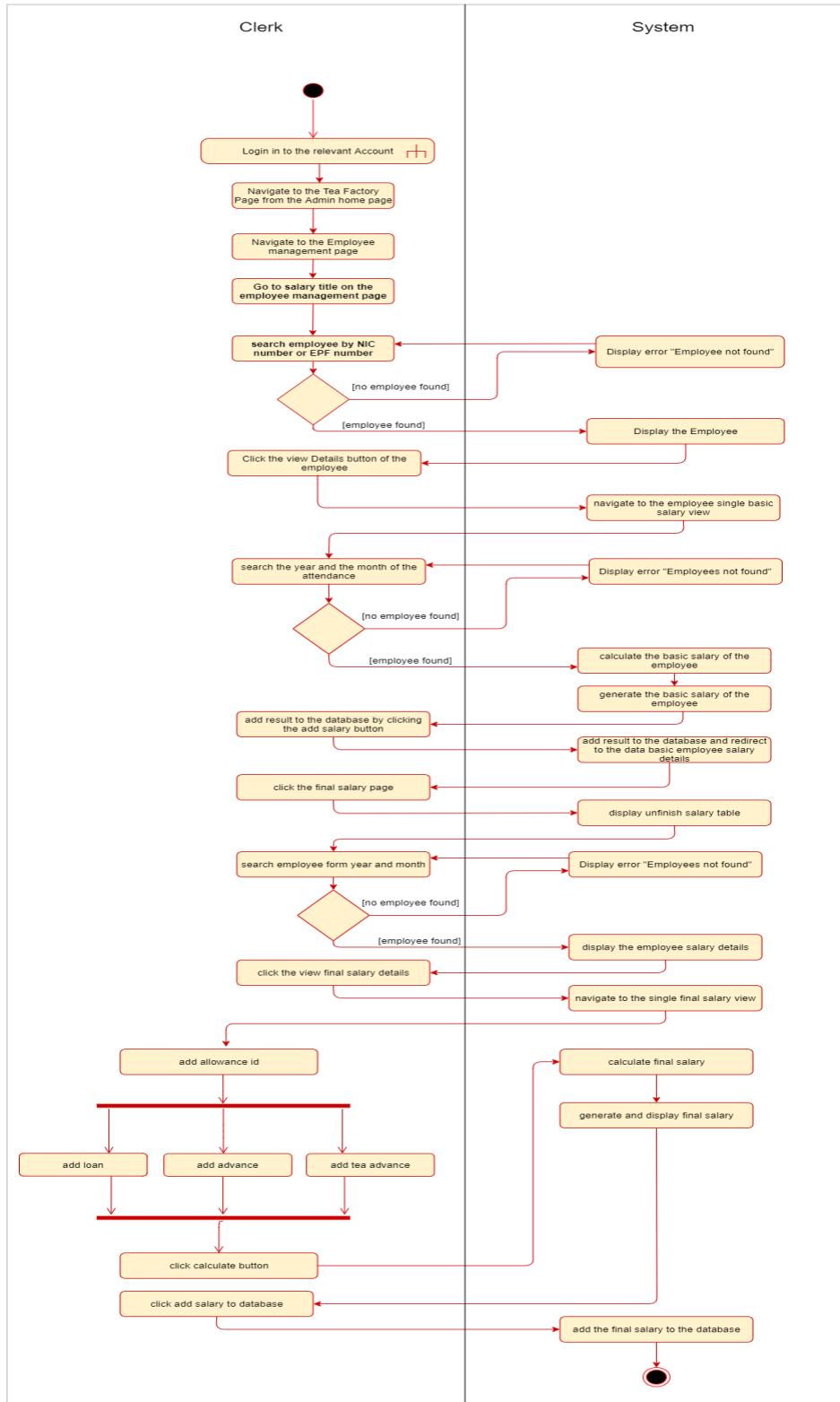


Figure 2.1.4-8/Activity diagram – Salary Management

<b>Use Case ID</b>	U009	
<b>Use Case Name</b>	Manage final production catalog details.	
<b>Pre-Condition</b>	User have to login to the system	
<b>Post -Condition</b>	Manage catalog details	
<b>Primary Actor(s)</b>	Factory Officer	
<b>Main Success Scenario</b>	<b>Step</b>	<b>Action</b>
	<b>1</b>	Go to the application.
	<b>2</b>	Include: :(Login)
	<b>3</b>	User select “Tea Factory”
	<b>4</b>	System display tea factory home page
	<b>5</b>	User select “Final Production Menu”
	<b>6</b>	System display final production home page
	<b>7</b>	User select “Auction Stock Menu”
	<b>8</b>	User select “Prepare Catalog”
	<b>9</b>	User add new sub stock details
	<b>10</b>	System add Sub stock into the relevant catalog
	<b>11</b>	System display added sub stock in catalog
	<b>12</b>	User display Added sub stock in catalog

<b>13</b>	User submit catalog details
<b>14</b>	System display successful message
<b>15</b>	System display all catalog details
<b>16</b>	User select Report
<b>17</b>	System print report
<b>18</b>	User get report
<b>Extensions</b>	<b>Step</b> <b>Branching Action</b>
	<b>9.A</b> If user added sub stock details are invalid a) Repeat from step 8
	<b>15.A</b> If user want to update catalog a) User select relevant catalog b) User select sub stock c) User update sub stock details d) Update sub stock in the relevant catalog e) Repeat from step 15
	<b>15.B</b> If user want to delete catalog a) User select relevant sub stock b) User Select Sub Stock c) User delete the sub stock d) While deleting the sub stock details from the database , system update relevant catalog details in the database e) Repeat from step 15

Table 2.1.4-9/ Use Case Scenario - Final Production Auction Stock

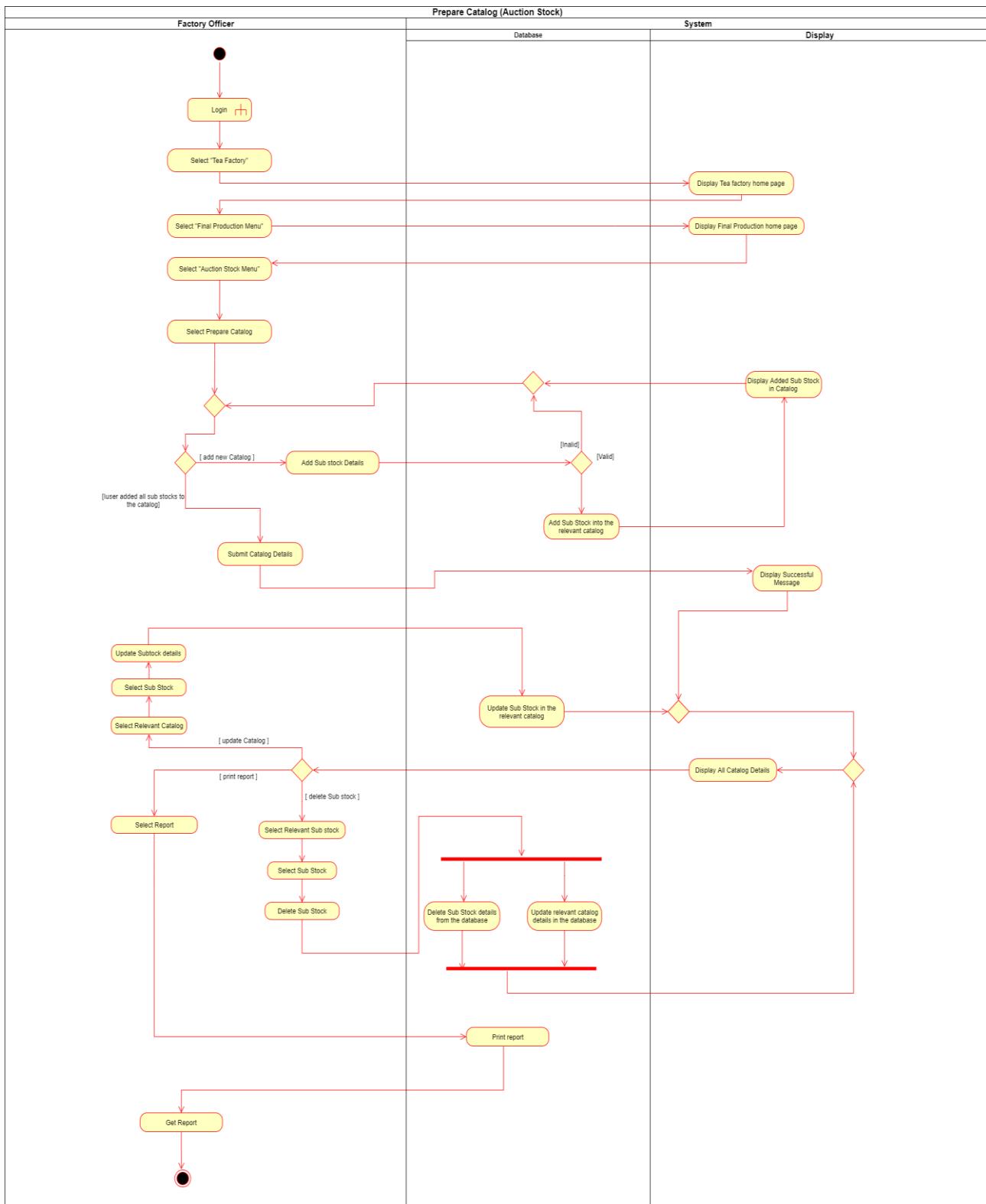


Figure 2.1.4-9/Activity diagram – Final Production Auction Stock Management

## 2.2 Design

### 2.2.1 High level architecture diagram

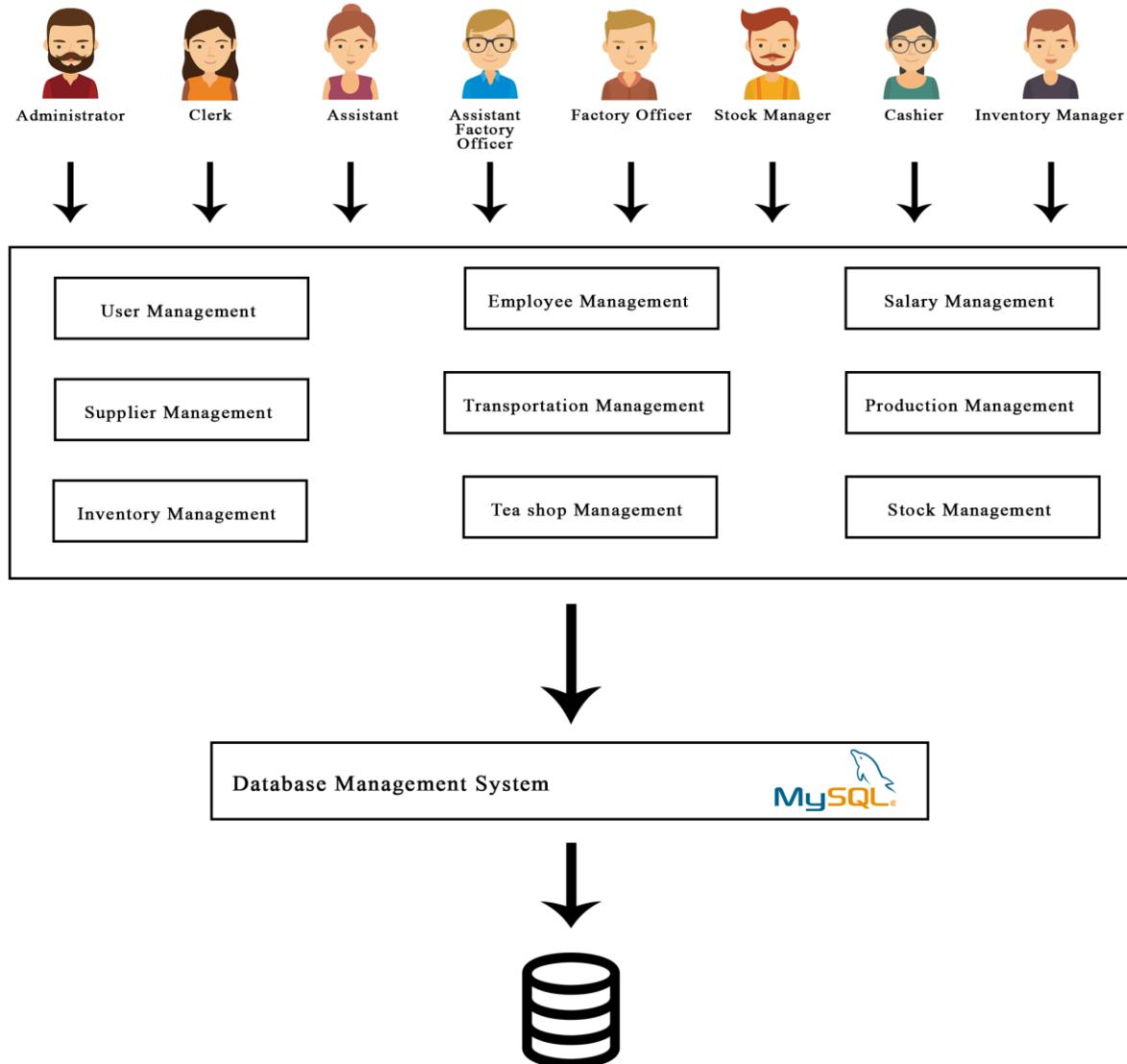
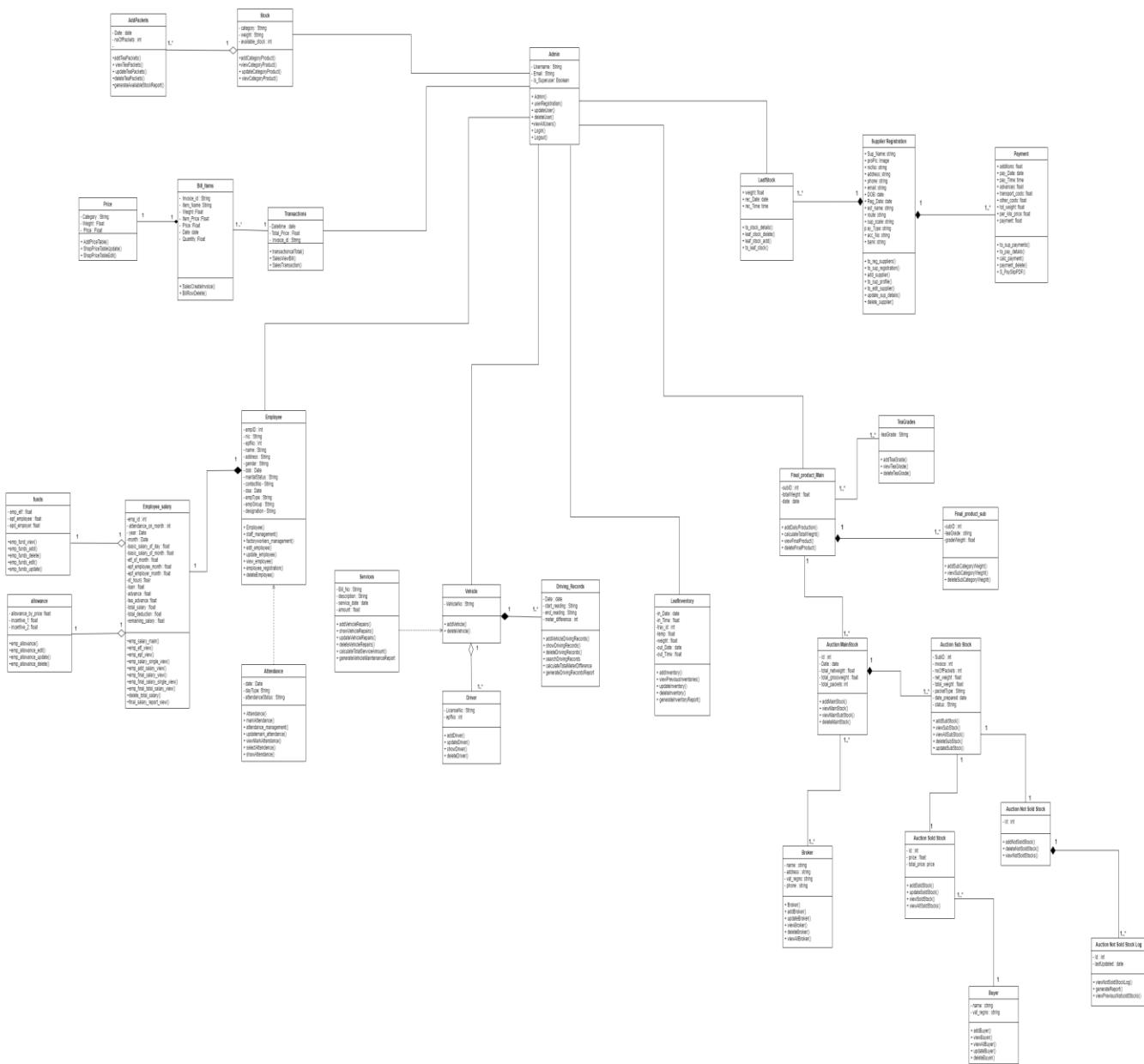


Figure 2.2.1-1/high level architecture diagram

### 2.2.2 Class diagram



*Figure 2.2.2-1/Class Diagram*

### 2.2.3 Database diagram

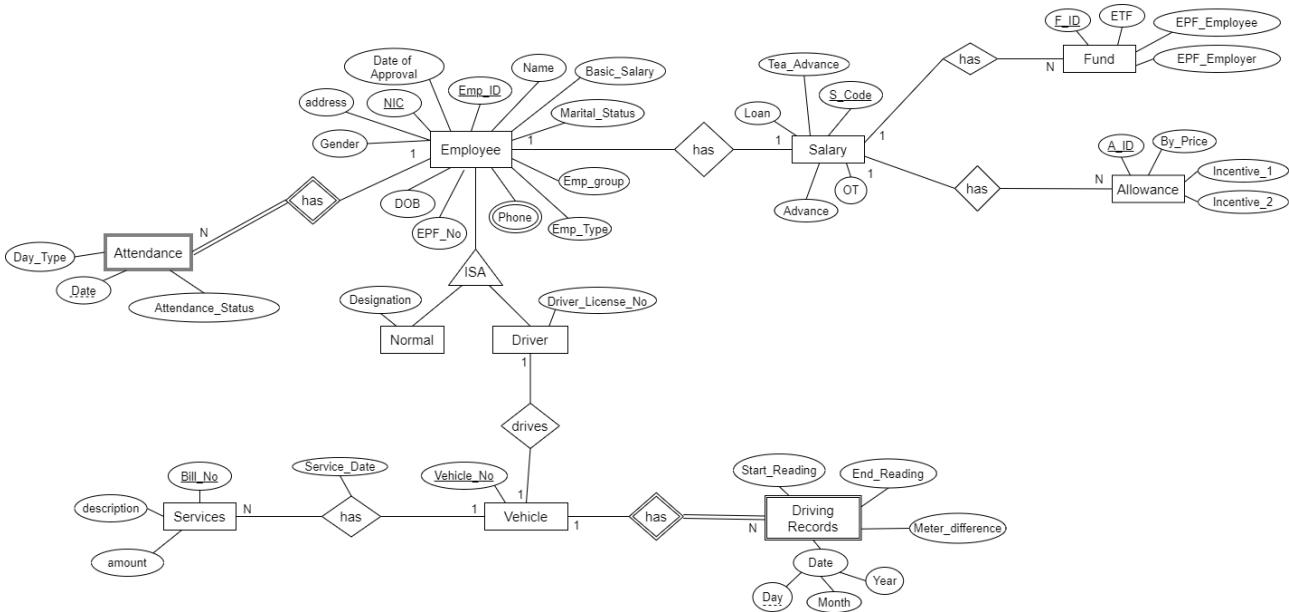


Figure 2.2.3-2/ER Diagram - Employee, Salary and Transport Management

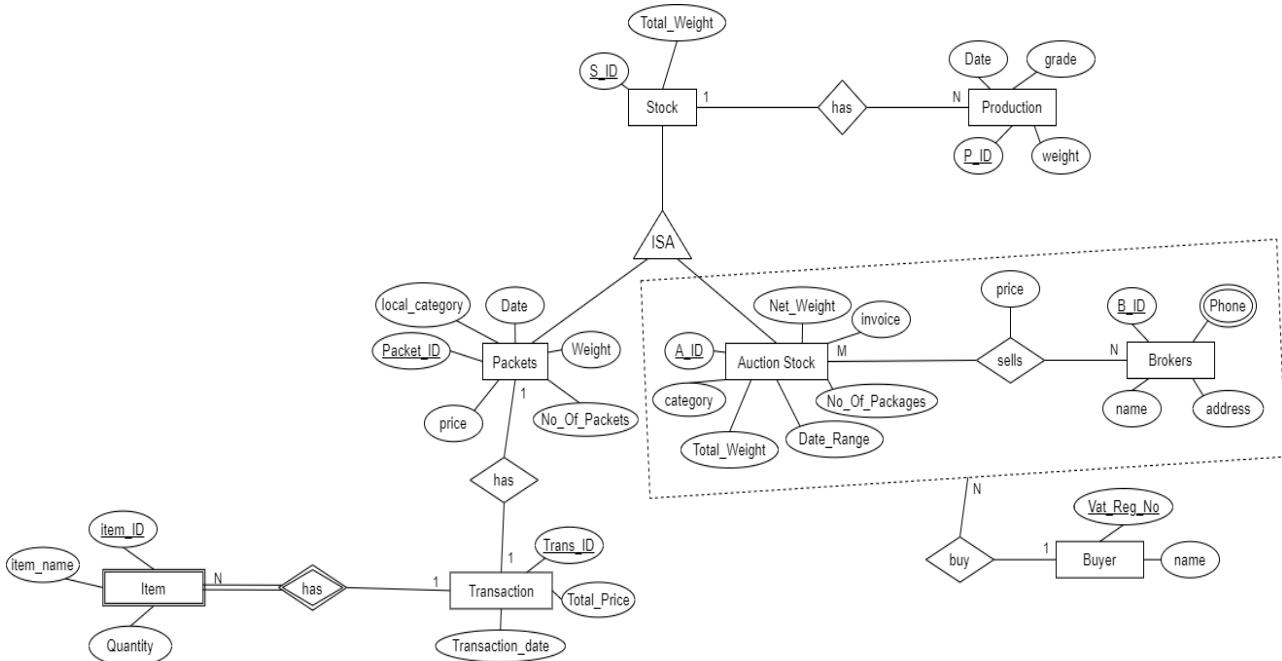


Figure 2.2.3-1/ER Diagram - final production auction stock, stock and sales in factory outlet

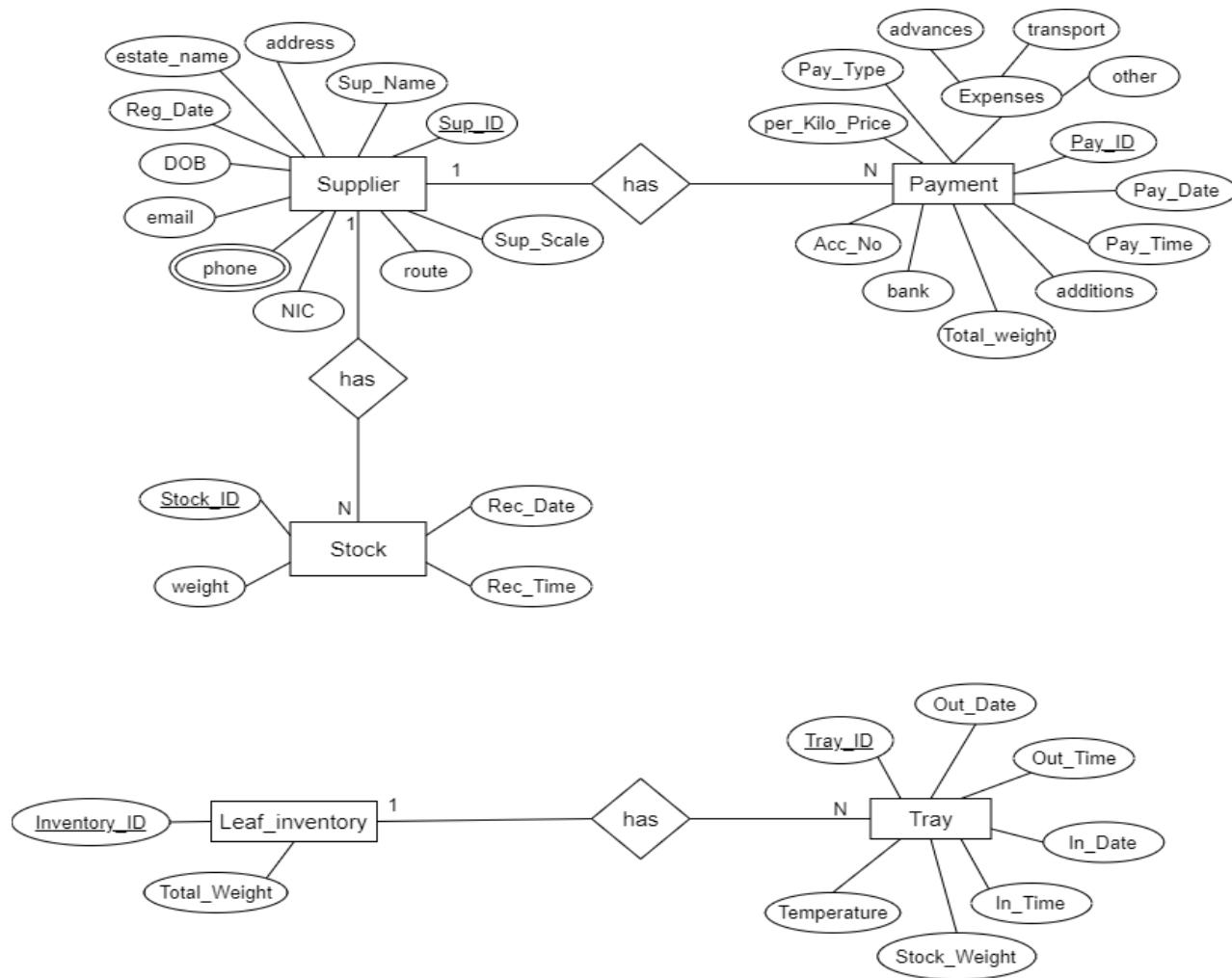


Figure 2.2.3-3/ER Diagram - Supplier and Inventory Management

## 2.2.4 User Interfaces

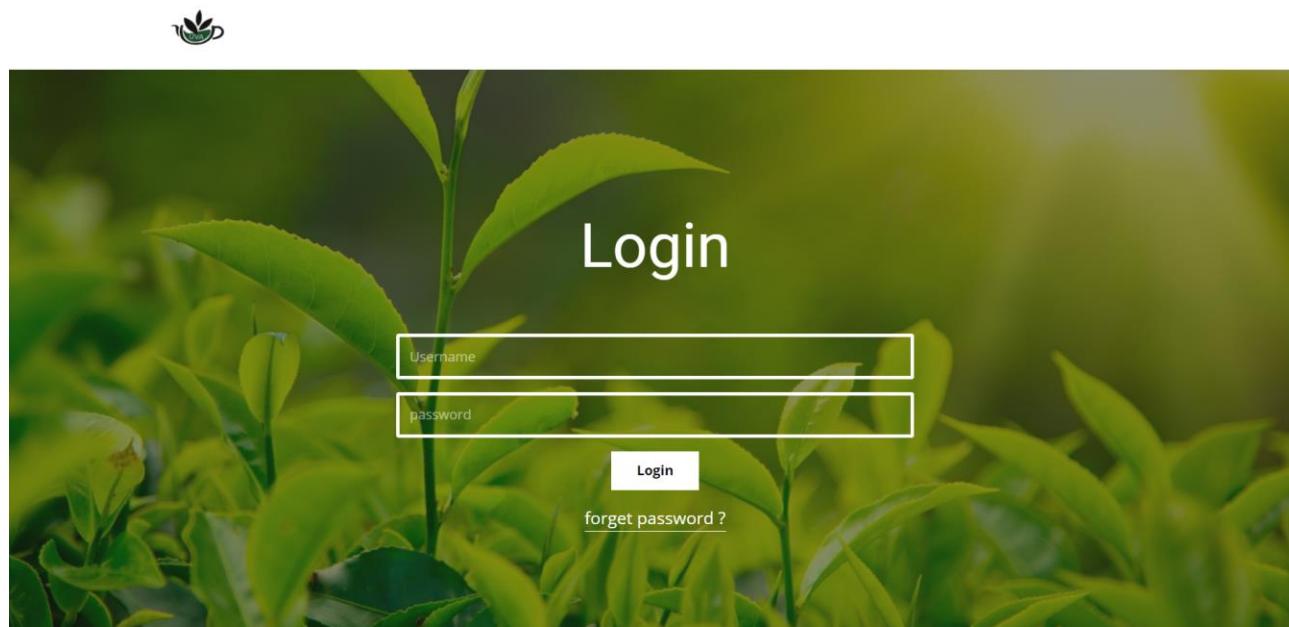


Figure 2.2.4-1/Login

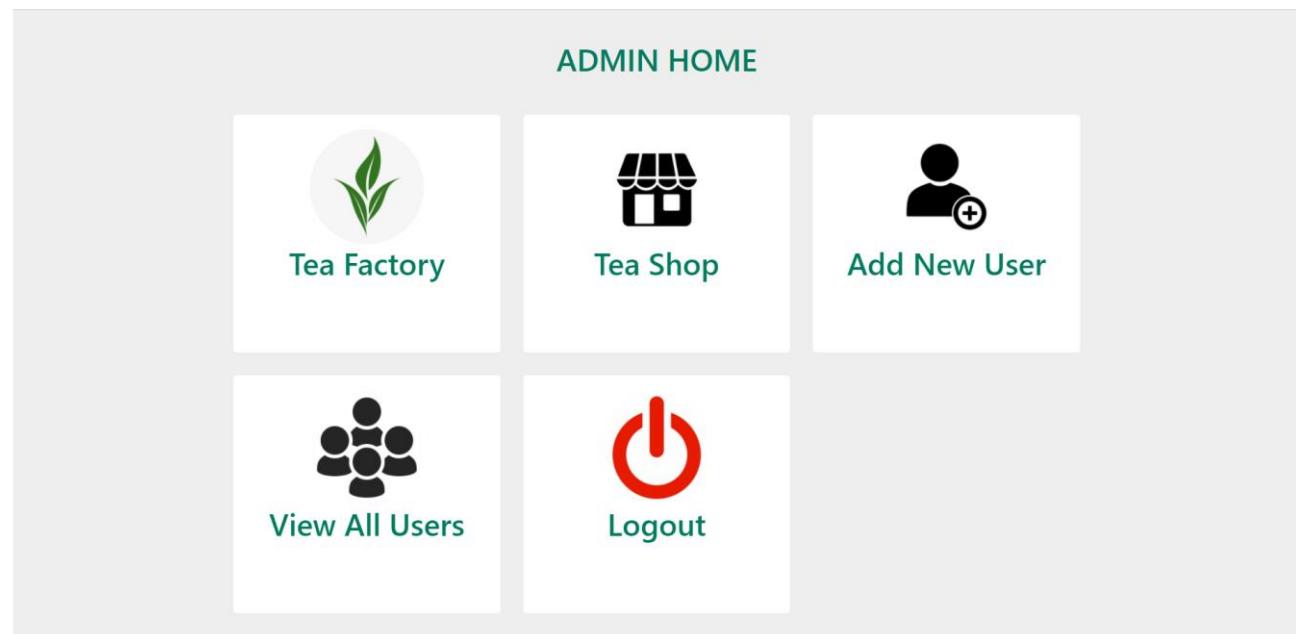


Figure 2.2.4-2/Admin Home

Main Menu

Home  
Tea Factory  
**Tea Shop**  
**Add New User**  
View All Users  
Logout

# Administration Panel

---

## Registration

Username

Email address

Password

Password confirmation

Figure 2.2.4-3/Registration

Main Menu

Home  
Tea Factory  
Tea Shop  
Add New User  
**View All Users**  
Logout

# Administration Panel

---

## All Users

Username	Email	Update
admin	admin@gmail.com	
Namal	namal@gmail.com	<span>Edit</span> <span>Delete</span>
Sunil	sunil@gmail.com	<span>Edit</span> <span>Delete</span>
Kamal	kamal@gmail.com	<span>Edit</span> <span>Delete</span>

Figure 2.2.4-4/View All Admin

Main Menu

- [Home](#)
- [Tea Factory](#)
- [Tea Shop](#)
- [Add New User](#)
- [View All Users](#)
- [Logout](#)

# Administration Panel

---

## Update User Details

Username

Email

Password

Re-Enter Password   Show Password

[Update User Details](#)

Figure 2.2.4-5/Update Admin Details



Figure 2.2.4-6/Factory Home

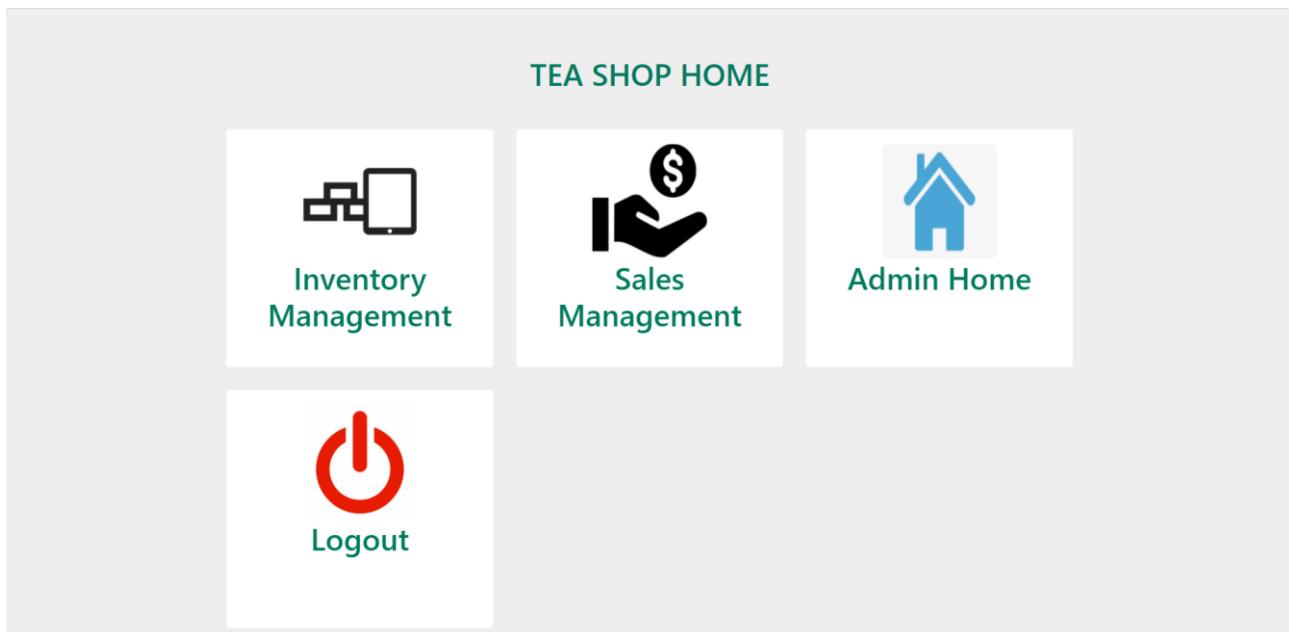


Figure 2.2.4-7/Tea Shop Home

The screenshot shows a form titled "Ambrosia" with a logo on the left. The form is used for adding employee details. It includes fields for Name, EPF No, NIC No, Address, Gender (Female), Marital Status, Contact No, Date of Birth (YYYY-MM-DD), Date of Approval (YYYY-MM-DD), Employee Group, Employee Type, Designation, and Basic Salary. There is also a red "Add" button at the bottom right.

Name	<input type="text"/>
EPF No	<input type="text"/>
NIC No	<input type="text"/>
Address	
Gender	Female <input type="text"/>
Marital Status	<input type="text"/>
Contact No	<input type="text"/>
Date of Birth	YYYY-MM-DD
Date of Approval	YYYY-MM-DD
Employee Group	<input type="text"/>
Employee Type	<input type="text"/>
Designation	<input type="text"/>
Basic Salary	<input type="text"/>
<input type="button" value="Add"/>	

Figure 2.2.4-8/Add Employee Details



Ambrosia

[Home](#)

[Factory Worker Details](#)

[Staff Details](#)

[Attendance](#)

[Funds](#)

[Allowance](#)

[Salary](#)

Name	Tharuka Siriwardana	
EPF No	91	
NIC No	714569873214	
Address	kandy	
Gender	Male	
Marital Status	Married	
Contact No	0723654789	
Date of Birth	1971-05-03	YYYY-MM-DD
Date of Approval	1999-10-14	YYYY-MM-DD
Employee Group	FactoryWorker	
Employee Type	Permanent	
Designation	-----	
Basic Salary	800.0	
<b>Save Changes</b>		

Figure 2.2.4-9/ Edit Employee Details



Ambrosia

[Home](#)

[Factory Worker Details](#)

[Staff Details](#)

[Attendance](#)

[Funds](#)

[Allowance](#)

[Salary](#)

## Employee Management

### View Employee

### Ravija Wijethunga

#### General Information

Date of Birth :	Feb. 1, 1963
Gender :	Male
Marital Status :	Married
Date of Approval :	Oct. 10, 2000
Employee Group :	staff
Employee Type :	Permanent
Designation :	Factory_Officer
Basic Salary :	60000.0

#### Contact Information

EPF No :	22
NIC No :	632514789V
Contact No :	0714563214
Address :	Kandy

Figure 2.2.4-10/View Employee Details

EPF No	NIC	Name	Contact No	Action
5	789451236V	Sandun Lakshitha	0771234567	<button>View</button> <button>Edit</button> <button>Delete</button>
3	874569321458	Vidura perera	0789654123	<button>View</button> <button>Edit</button> <button>Delete</button>
91	714569873214	Tharunii Siriwardana	0723654789	<button>View</button> <button>Edit</button> <button>Delete</button>
52	978132548V	Malika Mudannayake	0712345678	<button>View</button> <button>Edit</button> <button>Delete</button>

Figure 2.2.4-11/Factory Worker Details

EPF No	NIC	Name	Contact No	Designation	Action
71	963258741236	Nethmi Amarawansa	0776547893	Trainee	<button>View</button> <button>Edit</button> <button>Delete</button>
8	941236547891	Onella Natalie	0784561239	Clerk	<button>View</button> <button>Edit</button> <button>Delete</button>
22	632514789V	Ravija Wijethunga	0714563214	Factory_Officer	<button>View</button> <button>Edit</button> <button>Delete</button>

Figure 2.2.4-12/Staff Details

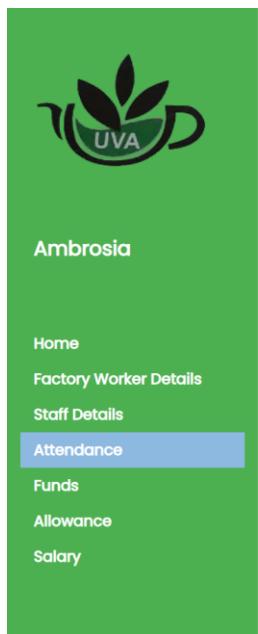


Figure 2.2.4-13>Select Date to Mark Attendance

A screenshot of the "Mark Attendance" page for the date 2020-10-20. The sidebar and header are identical to the previous screenshot. The main content shows a table with five rows of attendance data. The columns are EPF No, NIC, Name, Day Type, and Attendance. The data is as follows:

Figure 2.2.4-14/Mark Attendance

The screenshot shows the Employee Management system's Attendance Management section. At the top, there is a logo and the text "Ambrosia". Below that, the title "Employee Management" and "Attendance Management" are displayed. The date "2020-10-20" is shown. On the left, a sidebar menu includes "Home", "Factory Worker Details", "Staff Details", "Attendance" (which is highlighted in blue), "Funds", "Allowance", and "Salary". A red "Generate Report" button is visible. The main area contains a table with the following data:

EPF No	NIC	Name	Marked Day Type	Marked Attendance	Day Type	Edit	
5	789451236V	Sandun Lakshitha	FullDay	Present	Full Day	<span>Present</span>	<span>Absent</span>
3	874569321458	Vidura perera	HalfDay	Present	Full Day	<span>Present</span>	<span>Absent</span>
91	714569873214	Tharunii Siriwardana		Absent	Full Day	<span>Present</span>	<span>Absent</span>
52	978132548V	Malka Mudannayake	FullDay	Present	Full Day	<span>Present</span>	<span>Absent</span>

Figure 2.2.4-15/View Marked Attendance

The screenshot shows the Employee Management system's Employee Funds section. At the top, there is a logo and the text "Ambrosia". Below that, the title "Employee Funds" is displayed. The URL "127.0.0.1:8000/Home/Factory/EmployeeHome/emp\_fund\_view" is visible in the browser address bar. On the left, a sidebar menu includes "Home", "Factory Worker Details", "Staff Details", "Attendance", "Funds" (which is highlighted in blue), "Allowance", and "Salary". The main area contains a table with the following data:

F_ID	Date	ETF	EPF_Employee	EPF_Employer
1		3.0	8.0	12.0

Figure 2.2.4-16/View Employee Funds

Ambrosia

**Edit Funds**

**Details**

Date:

ETF:

EPF Employee:

EPF Employer:

**Update**

Figure 2.2.4-17/Edit Employee Fund Details

**Employee Allowance**

**Ambrosia**

**Allowance**

Allowance_ID	Allowance By Price	Incentive 1	Incentive 2	
1	30.0	105.0	100.0	<b>Edit</b> <b>Delete</b>

**Add New Allowance**

Figure 2.2.4-18/View Employee Allowances

The screenshot shows a web-based application titled "Ambrosia". The left sidebar is green and contains a logo with "UVA" and a stylized leaf, followed by the word "Ambrosia". Below this are navigation links: Home, Factory Worker Details, Staff Details, Attendance, Funds, Allowance, and Salary. The main content area has a white background with a green header bar. The header bar includes the title "Ambrosia Add Employee Allowance" and a "ENTER Details" button. Below the header are three input fields: "Allowance By Price:" with a value of "30.0", "Incentive 1:" with a value of "105.0", and "Incentive 2:" with a value of "100.0". A blue "Submit" button is located at the bottom of these fields.

Figure 2.2.4-19/Add Employee Allowance Details

The screenshot shows a web-based application titled "Ambrosia". The left sidebar is green and contains a logo with "UVA" and a stylized leaf, followed by the word "Ambrosia". Below this are navigation links: Home, Factory Worker Details, Staff Details, Attendance, Funds, Allowance, and Salary. The main content area has a white background with a green header bar. The header bar includes the title "Ambrosia Edit Funds" and a "Details" button. Below the header are three input fields: "Allowance By Price:" with a value of "30.0", "Incentive 1:" with a value of "105.0", and "Incentive 2:" with a value of "100.0". A blue "Update" button is located at the bottom of these fields.

Figure 2.2.4-20/Edit Employee Allowance Details

The screenshot shows a web application interface for 'Employee Salary' under the 'Ambrosia' brand. The left sidebar contains navigation links for Home, Factory Worker Details, Staff Details, Attendance, Funds, Allowance, and Salary. The main content area features the 'Ambrosia Employee Information' logo and a search bar. Below the search bar is a table listing six employees with columns for ID, NIC, Name, EPF number, Date of Attend, and Basic Salary. Each row includes a 'View Salary Details' button.

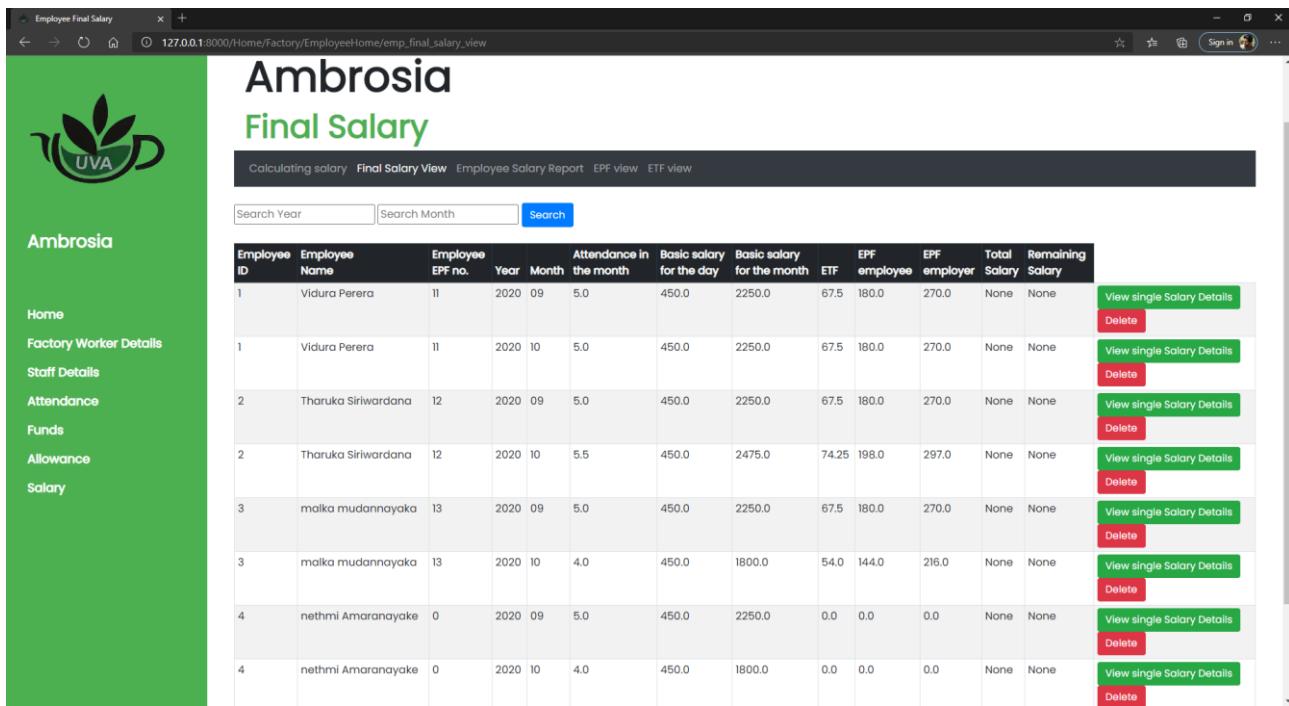
ID	NIC	Name	EPF number	Date of Attend	Basic Salary
1	972931853V	Vidura Perera	11	Jan. 20, 2020	450.0
2	983452643V	Tharuka Siriwardana	12	Jan. 20, 2019	450.0
3	973482732V	malika mudannayaka	13	Feb. 10, 2019	450.0
4	992348231V	nethmi Amaranyake	0	Sept. 12, 2020	450.0
6	983472641V	Sandun lakshitha	15	April 10, 2019	450.0

Figure 2.2.4-21/View Employee to Calculate Salary

The screenshot shows a web application interface for 'Employee Salary Single View' under the 'Ambrosia' brand. The left sidebar contains navigation links for Home, Factory Worker Details, Staff Details, Attendance, Funds, Allowance, and Salary. The main content area features the 'Ambrosia Calculate Salary' logo. It includes fields for 'Year' and 'Month', a table with one row of employee details, and a 'Salary Details' section with various input fields for monthly attendance, basic salary, monthly ETF, EPF employee, and EPF employer. A large blue 'Add salary' button is at the bottom.

ID	NIC	EPF number	Name	Date of Attend	Basic Salary
1	972931853V	11	Vidura Perera	Jan. 20, 2020	450.0

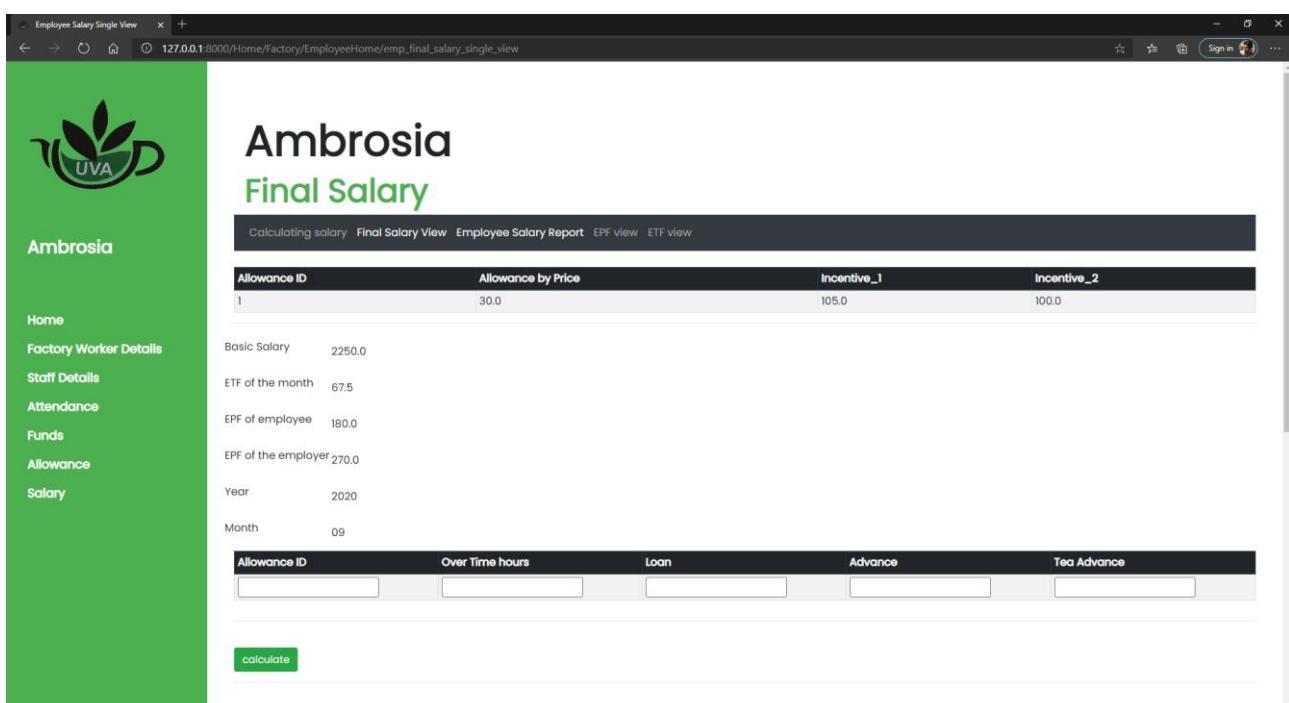
Figure 2.2.4-22/Calculate Employee Salary



The screenshot shows a web-based application titled "Ambrosia Final Salary". The left sidebar has a green background with the "UVA" logo and a navigation menu including "Home", "Factory Worker Details", "Staff Details", "Attendance", "Funds", "Allowance", and "Salary". The main content area has a white background with a header bar containing links for "Calculating salary", "Final Salary View", "Employee Salary Report", "EPF view", and "ETF view". Below the header is a search bar with fields for "Search Year" and "Search Month", and a "Search" button. The main table displays employee salary details:

Employee ID	Employee Name	Employee EPF no.	Year	Month	Attendance in the month	Basic salary for the day	Basic salary for the month	EPF ETF	EPF employee	EPF employer	Total Salary	Remaining Salary	Action
1	Vidura Perera	11	2020	09	5.0	450.0	2250.0	67.5	180.0	270.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>
1	Vidura Perera	11	2020	10	5.0	450.0	2250.0	67.5	180.0	270.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>
2	Tharuka Siriwardana	12	2020	09	5.0	450.0	2250.0	67.5	180.0	270.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>
2	Tharuka Siriwardana	12	2020	10	5.5	450.0	2475.0	74.25	198.0	297.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>
3	malika mudannayaka	13	2020	09	5.0	450.0	2250.0	67.5	180.0	270.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>
3	malika mudannayaka	13	2020	10	4.0	450.0	1800.0	54.0	144.0	216.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>
4	nethmi Amaranayake	0	2020	09	5.0	450.0	2250.0	0.0	0.0	0.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>
4	nethmi Amaranayake	0	2020	10	4.0	450.0	1800.0	0.0	0.0	0.0	None	None	<a href="#">View single Salary Details</a> <a href="#">Delete</a>

Figure 2.2.4-23/View Calculated Employee Salary



The screenshot shows a web-based application titled "Ambrosia Final Salary". The left sidebar has a green background with the "UVA" logo and a navigation menu including "Home", "Factory Worker Details", "Staff Details", "Attendance", "Funds", "Allowance", and "Salary". The main content area has a white background with a header bar containing links for "Calculating salary", "Final Salary View", "Employee Salary Report", "EPF view", and "ETF view". Below the header is a search bar with fields for "Search Year" and "Search Month", and a "Search" button. The main form displays salary components and a calculation table:

Allowance ID	Allowance by Price	Incentive_1	Incentive_2
1	30.0	105.0	100.0

Below the table are individual salary components:

- Basic Salary: 2250.0
- ETF of the month: 67.5
- EPF of employee: 180.0
- EPF of the employer: 270.0
- Year: 2020
- Month: 09

At the bottom is a table for calculating overtime and advances:

Allowance ID	Over Time hours	Loan	Advance	Ted Advance

Below the table is a "calculate" button.

Figure 2.2.4-24/Calculate Final Salary i

The screenshot shows a web-based application interface for calculating employee salaries. On the left, a green sidebar menu lists navigation options: Home, Factory Worker Details, Staff Details, Attendance, Funds, Allowance, and Salary. The main content area has a header 'Employee Salary Single View' and a URL '127.0.0.1:8000/Home/Factory/EmployeeHome/emp\_final\_salary\_single\_view'. It contains several input fields for salary components like Allowance ID, Over Time hours, Loan, Advance, and Tea Advance, each with a 'calculate' button. Below these are fields for Allowance by price, incentive 1, incentive 2, Employee Over Time Hours, Over Time Rate, Employee Loan, Employee Advance, Employee Tea Advance, Total Deduction, and Total Salary, all with their respective input boxes. A 'Add calculated Salary Details' button is at the bottom.

Figure 2.2.4-25/Calculate Final Salary ii

The screenshot shows a web-based application interface for generating EPF reports. The left sidebar menu is identical to the previous screenshot. The main content area has a header 'Employee EPF Tables' and a URL '127.0.0.1:8000/Home/Factory/EmployeeHome/emp\_epf\_view'. It features a title 'Ambrosia Final EPF Report' and a sub-header 'Calculating salary Final Salary View Employee Salary Report EPF view ETF view'. Below this is a search section for generating EPF reports by date, with fields for 'Search Year' and 'Search Month' and a 'Generate' button. Another search section for 'Search Employee EPF Report By Date' follows, with similar fields. To the right is a table titled 'Name' showing employee details and total earnings:

Name	NIC	EPF No	Employer	Employee	Total Earnings
Vidura Perera	972931853V	11	270.0	180.0	None
Vidura Perera	972931853V	11	270.0	180.0	None
Tharuka Siriwardana	983452643V	12	270.0	180.0	None
Tharuka Siriwardana	983452643V	12	297.0	198.0	None
malika mudannayaka	973482732V	13	270.0	180.0	None
malika mudannayaka	973482732V	13	216.0	144.0	None
Sandun Lakshitha	983472641V	15	270.0	180.0	None
Sandun Lakshitha	983472641V	15	216.0	144.0	None

Figure 2.2.4-26/Employee Final EPF Report

The screenshot shows a web application window titled "Employee ETF Tables". The URL is 127.0.0.1:8000/Home/Factory/EmployeeHome/emp\_etf\_view. The left sidebar is green and contains the Ambrosia logo, navigation links for Home, Factory Worker Details, Staff Details, Attendance, Funds, Allowance, and Salary. The main content area has a dark header with links for Calculating salary, Final Salary View, Employee Salary Report, EPF view, and ETF view. Below is a table with columns: Name, EPF No, NIC, Total Earnings, and Contribution. The data includes several entries for employees like Vidura Perera, Thoruka Siriwardana, and Sandun Lakshitha.

Name	EPF No	NIC	Total Earnings	Contribution
Vidura Perera	11	972931853V	None	67.5
Vidura Perera	11	972931853V	None	67.5
Thoruka Siriwardana	12	983452643V	None	67.5
Thoruka Siriwardana	12	983452643V	None	74.25
malika mudannayaka	13	973482732V	None	67.5
malika mudannayaka	13	973482732V	None	54.0
Sandun Lakshitha	15	983472641V	None	67.5
Sandun Lakshitha	15	983472641V	None	54.0

Figure 2.2.4-27/Employee ETF View

The screenshot shows a web application window. The left sidebar is green and contains the Ambrosia logo, navigation links for Home, Vehicle Driving Records (which is highlighted), Maintenance, and Analysis. The main content area has a dark header with links for Add Driver, Add Vehicle, Vehicle Driving Records, and Driving Records Table. Below is a form titled "Add Driver" with fields for Licence No and EPF No, and an ADD button. Below is a table titled "Driver Details" showing five entries with columns for ID, Licence No, EPF No, Delete, and Edit buttons.

## Transportation Management

### Add Driver Details

ID	Licence No	EPF No	Delete	Edit
1	B3456	1	<button>Delete</button>	<button>Update</button>
2	B7890	2	<button>Delete</button>	<button>Update</button>
3	B6745	3	<button>Delete</button>	<button>Update</button>
4	B2345	4	<button>Delete</button>	<button>Update</button>
5	B1254	5	<button>Delete</button>	<button>Update</button>

Figure 2.2.4-28/Add Driver Details and View Driver Details

The screenshot shows a web-based application interface for Transportation Management. On the left, there is a vertical green sidebar with the 'UVA' logo at the top. Below the logo, the word 'Ambrosia' is written. Under 'Ambrosia', there is a navigation menu with links: 'Home', 'Vehicle Driving Records' (which is highlighted in blue), 'Maintenance', and 'Analysis'. The main content area has a light gray background. At the top, there is a dark header bar with four buttons: 'Add Driver' (highlighted in blue), 'Add Vehicle', 'Vehicle Driving Records', and 'Driving Records Table'. Below the header, the title 'Transportation Management' is displayed in large black font, followed by the sub-section 'Update Driver Details' in red font. The central part of the screen contains a form titled 'Update Driver'. It has two input fields: 'Licence No.' containing 'B1254' and 'EPF No.' containing '5'. To the right of these fields is a green 'Update' button. The entire 'Update Driver' section is set against a light green background.

Figure 2.2.4-29/Update Driver Details

The screenshot shows a web-based application interface for Transportation Management. On the left, there is a vertical green sidebar with the 'UVA' logo at the top. Below the logo, the word 'Ambrosia' is written. Under 'Ambrosia', there is a navigation menu with links: 'Home', 'Vehicle Driving Records' (which is highlighted in blue), 'Maintenance', and 'Analysis'. The main content area has a light gray background. At the top, there is a dark header bar with four buttons: 'Add Driver' (highlighted in blue), 'Add Vehicle' (highlighted in blue), 'Vehicle Driving Records', and 'Driving Records Table'. Below the header, the title 'Transportation Management' is displayed in large black font, followed by the sub-section 'Add Vehicle Details' in red font. The central part of the screen contains a form titled 'Add Vehicle'. It has two input fields: 'Vehicle No.' with an empty input field and 'Driver ID' with a dropdown menu showing a placeholder '-----'. To the right of these fields is a blue 'ADD' button. Below this form, there is a section titled 'Vehicle Details' which contains a table. The table has a purple header row with columns: 'Vehicle No.', 'Driver ID', and 'Delete'. There are five rows of data in the table, each with a 'Delete' button in the last column. The data in the table is as follows:

Vehicle No.	Driver ID	Delete
LH-2345	B3456	<button style="background-color: #0070C0; color: white;">Delete</button>
LH-5678	B7890	<button style="background-color: #0070C0; color: white;">Delete</button>
LH-4673	B6745	<button style="background-color: #0070C0; color: white;">Delete</button>
LH-1930	B2345	<button style="background-color: #0070C0; color: white;">Delete</button>
LH-3897	B1254	<button style="background-color: #0070C0; color: white;">Delete</button>

Figure 2.2.4-30/Add Vehicle Details and View Vehicle Details

**Ambrosia**

Home  
Vehicle Driving Records

Maintenance  
Analysis

**Transportation Management**  
**Vehicle Records**

Add Driver   Add Vehicle   **Vehicle Driving Records**   Driving Records Table

**Add Driving Records**

Date: 2020-10-18

Start Reading:

End Reading:

Vehicle No: -----

**ADD**

Figure 2.2.4-32/Add Vehicle Driving Record

**Ambrosia**

Home  
Vehicle Driving Records

Maintenance  
Analysis

**Transportation Management**  
**Vehicle Records Table**

Add Driver   Add Vehicle   Vehicle Driving Records   **Driving Records Table**

**Search Vehicle Records**

Vehicle Number   Input Month   Input Year   **Search**

**Driving Records**

ID	Vehicle No	Date	Start Readings	End Readings	Meter Difference	Delete
1	LH-2345	Oct. 11, 2020	29	35	6	<b>Delete</b>
2	LH-5678	Oct. 11, 2020	46	56	10	<b>Delete</b>
6	LH-3897	Oct. 11, 2020	67	89	22	<b>Delete</b>
7	LH-3897	Oct. 11, 2020	57	78	21	<b>Delete</b>
8	LH-3897	Oct. 11, 2020	84	99	15	<b>Delete</b>
9	LH-3897	Oct. 11, 2020	26	67	41	<b>Delete</b>

Figure 2.2.4-31/View Driving Records

The screenshot shows the Ambrosia Transportation Management system interface. On the left, a green sidebar menu includes 'Home', 'Vehicle Driving Records', 'Maintenance' (which is selected), and 'Analysis'. The main content area has a title 'Transportation Management' and a subtitle 'Vehicle Repairs'. A sub-navigation bar at the top of the content area has 'Vehicle Repairs' (selected) and 'Repair Table'. Below this, a form titled 'Add Repair Details' is displayed. It contains fields for 'Bill No.' (with a text input field), 'Vehicle No.' (with a dropdown menu), 'Description' (with a large text area), 'Service Date' (set to '2020-10-18'), and 'Amount' (with a text input field). A blue 'ADD' button is located at the bottom right of the form.

Figure 2.2.4-33/Add Vehicle Repair Details

The screenshot shows the Ambrosia Transportation Management system interface. On the left, a green sidebar menu includes 'Home', 'Vehicle Driving Records', 'Maintenance' (selected), and 'Analysis'. The main content area has a title 'Transportation Management' and a subtitle 'Repair Table'. A sub-navigation bar at the top of the content area has 'Vehicle Repairs' (selected) and 'Repair Table'. Below this, a table titled 'Vehicle Repair Details' is displayed. The table has columns for ID, Bill No., Vehicle No., Description, Service Date, Amount, Update, and Delete. The table lists 20 rows of repair details, such as 'Renew Tires' for vehicle LH-2345 on Oct. 11, 2020, costing 22500.0. Each row includes a red 'Update' button and a green 'Delete' button.

ID	Bill No.	Vehicle No.	Description	Service Date	Amount	Update	Delete
1	6705	LH-2345	Service Vehicles	Oct. 11, 2020	7670.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
2	2114	LH-2345	Renew Tires	Oct. 11, 2020	22500.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
3	1622	LH-5678	Amount spent for diesel	Oct. 11, 2020	4500.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
4	1705	LH-2345	To register vehicles	Oct. 11, 2020	24500.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
5	1832	LH-4673	To get license	Oct. 11, 2020	5500.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
6	5700	LH-2345	To fix boards for vehicles	Oct. 11, 2020	54500.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
7	3764	LH-2345	To service vehicles	Oct. 11, 2020	8790.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
8	7890	LH-2345	To fix tires	Oct. 11, 2020	2000.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
9	3294	LH-2345	For paint	Oct. 11, 2020	14000.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
10	6357	LH-2345	Service Vehicles	Oct. 11, 2020	15348.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
11	2745	LH-2345	To register vehicles	Oct. 11, 2020	6348.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
17	54756	LH-4673	Renew tyres	Oct. 18, 2020	15000.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
18	23435	LH-4673	Service vehicles	Oct. 18, 2020	23000.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
19	5395	LH-4673	Paint vehicles	Oct. 18, 2020	15679.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>
20	55465	LH-4673	Amount spent for diesel	Oct. 18, 2020	5000.0	<span style="color: red;">Update</span>	<span style="color: green;">Delete</span>

Figure 2.2.4-34/View Vehicle Repair Details

Ambrosia

Home  
Vehicle Driving Records  
**Maintenance**  
Analysis

# Transportation Management

## Update Repairs

Vehicle Repairs Repair Table

### Update Repair Details

Bill No:	6785
Vehicle No:	LH-2345
Service Vehicles	
Description:	
Service Date:	2020-10-11
Amount:	7670.0
<b>Update</b>	

Figure 2.2.4-35/Update Vehicle Repair Details

Ambrosia

Home  
Vehicle Driving Records  
Maintenance  
**Analysis**

# Transportation Management

## Analysis & Reports

### Meter Readings Report

Vehicle No	Month	Year	
Vehicle Number	Input Month	Input Year	<b>Generate</b>

### Vehicle Maintenance Report

Vehicle No	Month	Year	
Vehicle Number	Input Month	Input Year	<b>Generate</b>

Figure 2.2.4-36/View Transportation Management Reports



# Ambrosia

[Home](#)

[Profiles](#)

[Registration](#)

[Stock](#)

[Payments](#)

## Supplier Management

### Registered Suppliers

[+ Add New Supplier](#)

Supplier ID	ProPic	NIC	Supplier Name	Contact No	Action
1		981000340V	Tharuka Siriwardana	0719270247	<a href="#">View</a> <a href="#">Delete</a>
3		972303456V	Vidura Perera	0771234563	<a href="#">View</a> <a href="#">Delete</a>

Figure 2.2.4-37/View Registered Suppliers



# Ambrosia

[Home](#)

[Profiles](#)

[Registration](#)

[Stock](#)

[Payments](#)

## Supplier Registration

Insert a Photo	<input type="file"/> Choose File No file chosen
Name	Sasmitha Athige
NIC No	999903456V
Address	Peradeniya, Panideniya
Contact No	0702179196
Email Address	piyasith@gmail.com
Date of Birth	1999-04-11
Date Commenced	2020-10-12
Estate Name	Welimada Wattा
Route	HG
Supply Scale	Small-Scale
Payment Type	Cash
Bank	BOC
Account No	2004329171

[Submit](#)

Figure 2.2.4-38/Add Supplier Details



Ambrosia

[Home](#) [Profiles](#) [Registration](#) [Stock](#) [Payments](#)

Name	Malka J Mudannayake
NIC No	975000356V
Address	Welimada Road, Bandar...
Contact No	0767015245
Email Address	malkajayalee1234@gmai...
Date of Birth	1997-08-02
Date Commenced	2020-10-12
Estate Name	Bandarawatta
Route	AT
Supplier Scale	Small-Scale
PayType	Cash
Bank	BOC
Account No	3487561230

[Update](#) [Cancel](#)

Figure 2.2.4-39/View Supplier Details



Ambrosia

[Home](#) [Profiles](#) [Registration](#) [Stock](#) [Payments](#)

## Leaf Stock Details

[+ Add New Stock](#)

Supplier NIC	Stock ID	Weight	Date	Time	Action
981000340V	1	120.0	Oct. 11, 2020	11:37 p.m.	<a href="#">Delete</a>
972303456V	3	190.0	Oct. 11, 2020	11:55 p.m.	<a href="#">Delete</a>
999903456V	4	68.0	Oct. 11, 2020	11:55 p.m.	<a href="#">Delete</a>
976103312V	5	112.0	Oct. 11, 2020	11:55 p.m.	<a href="#">Delete</a>
995513812V	9	67.0	Oct. 12, 2020	11:45 a.m.	<a href="#">Delete</a>
976103312V	10	120.0	Oct. 12, 2020	12:20 p.m.	<a href="#">Delete</a>

Figure 2.2.4-40/View Leaf Stock

The screenshot shows the Ambrosia Supplier Management system's interface. On the left, a green sidebar menu lists 'Home', 'Profiles', 'Registration', 'Stock', and 'Payments'. The main content area has a light blue header with the 'UVA' logo and the title 'Supplier Management'. Below the header is a green box containing a form titled 'Add Leaf Stock'. The form includes fields for 'Supplier NIC' (a dropdown menu), 'Total Weight' (an input field with a cursor), 'Received Date' (a date input field showing '2020-10-12'), and 'Received Time' (a time input field showing '15:52:42'). At the bottom right of the form are 'Submit' and 'Cancel' buttons.

## Supplier Management

### Add Leaf Stock

Supplier NIC

Total Weight

Received Date

Received Time

Figure 2.2.4-41/Add Leaf Stock Details

The screenshot shows the Ambrosia Supplier Management system's interface. On the left, a green sidebar menu lists 'Home', 'Profiles', 'Registration', 'Stock', and 'Payments'. The main content area has a light blue header with the 'UVA' logo and the title 'Supplier Management'. Below the header is a green box containing a section titled 'Payments Details'. It features a green button labeled '+ Make New Payment' and a search bar with 'NIC No.' and 'Search' buttons. Below the search bar is a table titled 'Action' with columns for 'Supplier NIC', 'Payment ID', 'Weight', 'Payment', 'Date', and 'Time'. The table contains five rows of payment data, each with 'Delete' and 'Print Pay Slip' buttons.

Supplier NIC	Payment ID	Weight	Payment	Date	Time	Action
981000340V	3	120.0	14720.0	Oct. 11, 2020	11:57 p.m.	<input type="button" value="Delete"/> <input type="button" value="Print Pay Slip"/>
972303456V	5	190.0	24800.0	Oct. 12, 2020	2:08 p.m.	<input type="button" value="Delete"/> <input type="button" value="Print Pay Slip"/>
999903456V	6	68.0	12140.0	Oct. 12, 2020	2:10 p.m.	<input type="button" value="Delete"/> <input type="button" value="Print Pay Slip"/>
976103312V	7	112.0	15508.0	Oct. 12, 2020	2:11 p.m.	<input type="button" value="Delete"/> <input type="button" value="Print Pay Slip"/>

Figure 2.2.4-42/View Supplier Payment Details



Ambrosia

- Home
- Profiles
- Registration
- Stock
- Payments

## Supplier Management

### Supplier Payment Details

Supplier ID	<input type="text" value="-----"/>	Date	<input type="text" value="2020-10-12"/>
Total Kilograms	<input type="text" value="1"/>	Time	<input type="text" value="15:53:34"/>
Price per Kilogram	<input type="text"/>	Additions (+)	<input type="text"/>
		Expenses (-)	<input type="text"/> Transport <input type="text"/> Advances <input type="text"/> Other Costs
<input type="button" value="Calculate"/>			

Figure 2.2.4-43/Add Supplier Payment Details



Ambrosia

- New Inventory
- Previous Inventories
- Factory Home

## Leaf Inventory

### Add Inventory.

Note : Dates must be in "yyyy-mm-dd" format

In Date:	<input type="text"/>
In time:	<input type="text"/>
Tray Id:	<input type="text"/>
Temparature:	<input type="text"/>
Stock weight (in kg):	<input type="text"/>
Out Date:	<input type="text"/>
Out time:	<input type="text"/>
<input type="button" value="Submit"/>	

Figure 2.2.4-44/Add Leaf Stock Inventory Details



## Leaf Inventory

### Previous Inventory.

ID	In Date	In Time	Out Date	Out Time	Action
1	Oct. 10, 2020	9.0	Oct. 10, 2020	14.0	<button>Update</button> <button>report</button> <button>Delete</button>
2	Sept. 11, 2020	13.0	Sept. 11, 2020	19.0	<button>Update</button> <button>report</button> <button>Delete</button>
3	March 8, 2020	12.0	March 9, 2020	1.0	<button>Update</button> <button>report</button> <button>Delete</button>
5	Aug. 18, 2020	18.0	Aug. 20, 2020	13.0	<button>Update</button> <button>report</button> <button>Delete</button>

Figure 2.2.4-45/View Leaf Stock Inventory



## Leaf Inventory

### Previous Inventory.

Note : Dates must be in "yyyy-mm-dd" format

In Date:	<input type="text" value="2020-10-10"/>
In time:	<input type="text" value="9.0"/>
Tray Id:	<input type="text" value="2"/>
Temperature:	<input type="text" value="26.0"/>
Stock weight (in kg):	<input type="text" value="1200.0"/>
Out Date:	<input type="text" value="2020-10-10"/>
Out time:	<input type="text" value="14.0"/>

Update

Figure 2.2.4-46/Update Leaf Stock Inventory Details

The screenshot shows the Ambrosia Final Production Management interface. On the left, a sidebar has a logo at the top, followed by 'Ambrosia' and a menu with 'Daily Production' (highlighted in red), 'Auction Stock', 'Stock Sales', 'Analysis', and 'Factory Home'. The main content area has a title 'Final Production Management' and a subtitle 'Add Daily Production Details'. A navigation bar at the top includes 'Add daily Production' (highlighted in blue), 'Custom daily production', and 'Tea Grades'. Below this is a form titled 'Add Sub-Product' with fields for 'Sub Product ID' (6), 'Tea Grade' (dropdown), and 'Weight' (input field). A red 'Add Production' button is at the bottom right. Another section titled 'Daily Production Details' shows a table with columns 'Main ID', 'Sub ID', 'Tea Grade', 'Weight', and 'actions'. It includes a date input ('Date : 2020-10-18') and a green 'Done' button.

Figure 2.2.4-47/Add Daily Production Details And View Daily Production Details

The screenshot shows the Ambrosia Final Production Management interface. On the left, a sidebar has a logo at the top, followed by 'Ambrosia' and a menu with 'Daily Production' (highlighted in red), 'Auction Stock', 'Stock Sales', 'Analysis', and 'Factory Home'. The main content area has a title 'Final Production Management' and a subtitle 'Custom Daily Production Details'. A navigation bar at the top includes 'Add daily Production' (highlighted in blue), 'Custom daily production' (highlighted in white), and 'Tea Grades'. Below this is a table titled 'Main production details' with columns 'Daily prod. ID', 'Sub id', 'Date', 'Total Weight', and 'Action'. The table contains five rows of data:

Daily prod. ID	Sub id	Date	Total Weight	Action
1	1	Oct. 12, 2020	550.0	<button>View</button>
2	2	Oct. 11, 2020	1120.0	<button>View</button>
3	3	Oct. 12, 2020	500.0	<button>View</button>
4	4	Oct. 10, 2020	220.0	<button>View</button>
5	5	Oct. 12, 2020	240.0	<button>View</button>

Figure 2.2.4-48/View All Daily Production Details

The screenshot shows a web-based application interface for tea production management. On the left, there is a sidebar with a logo (UVA stylized leaf) and navigation links: Ambrosia, Daily Production (highlighted in red), Auction Stock, Stock Sales, Analysis, and Factory Home.

The main content area has a title "Final Production Management" and a subtitle "Custom Daily Production Details". Below the subtitle is a navigation bar with three tabs: "Add daily Production" (disabled), "Custom daily production" (selected and highlighted in blue), and "Tea Grades".

A section titled "Sub production details" contains a table with two rows of data:

Daily prod. ID	Sub id	Date	Tea grade	Weight	Action
2	1	Oct. 12, 2020	BOPF	300.0	<button>Delete</button>
3	1	Oct. 12, 2020	OP	250.0	<button>Delete</button>

Figure 2.2.4-49/View Daily Production Details

The screenshot shows the "Tea Grades" page of the application. The sidebar and top navigation are identical to the previous screenshot.

The main content area has a title "Final Production Management" and a subtitle "Tea Grades". Below the subtitle is a navigation bar with three tabs: "Add daily Production" (disabled), "Custom daily production" (disabled), and "Tea Grades" (selected and highlighted in blue).

A section titled "Add Tea Grades" contains a form with a text input field "Add new tea category:" and a "Add" button.

A table titled "Tea Grades" lists seven categories with their corresponding actions:

ID	Tea Category	Action
2	BOP	<button>Delete</button>
1	BOPF	<button>Delete</button>
4	DUST-1	<button>Delete</button>
5	DUST-2	<button>Delete</button>
3	OP	<button>Delete</button>
7	OP-1	<button>Delete</button>

Figure 2.2.4-50/Add Tea Grades and View Tea Grades



Ambrosia

- [Daily Production](#)
- [Auction Stock](#)
- [Stock Sales](#)
- [Analysis](#)
- [Factory Home](#)

## Final Production Management

### Auction Stock | Prepare Catalog

[Prepare A Catalog](#) [Catalog Details](#) [Brokers](#) [Buyers](#)

**Sub Stock Form**

Sub Stock ID	7
Invoice No	<input type="text"/>
Tea Category	<input type="text"/>
Net Weight(kg)	<input type="text"/>
Total Weight(kg)	<input type="text"/>
No of Packages	<input type="text"/>
Packet Type	<input type="text"/>
Date Prepared	<input type="text" value="2020-10-20"/>

[Add Sub Stock ✓](#)

MainID	SubStockId	Invoice	No of Packets	Net Weight(kg)	Total Weight(kg)	Grade	Packet Type	Date Prepared	Update
18	7	<input type="text" value="100"/>	<input type="text" value="10"/>	<input type="text" value="100.0"/>	<input type="text" value="103.5"/>	BOPF	DPBS	Oct. 20, 2020	<a href="#" style="color: red;">Delete</a>

**Add MainStock Stock**

No of Sub Stocks: 1  
 Total Net Weight: 100.0 kg  
 Total Gross Weight: 103.5 kg  
 Total No of Packets: 10

Sub Stock ID : 7  
 Broker :   
 Date :

[Confirm Catalog ✓](#)

**Add Not-Sold Stock to Catalog**

MainID	SubID	Grade	pkt.Type	Invoice	Date Prepared	Net.W	Total.W	No.of.Pkts	Choise
7	3	FF1	DPBS	<input type="text" value="110"/>	<input type="text" value="Oct. 12, 2020"/>	<input type="text" value="100.0"/>	<input type="text" value="103.5"/>	<input type="text" value="20"/>	<a href="#" style="background-color: #ff6347; color: white; padding: 2px 10px;">Add To Cat</a>
2	1	FF1	DPBS	<input type="text" value="115"/>	<input type="text" value="Oct. 11, 2019"/>	<input type="text" value="200.0"/>	<input type="text" value="203.5"/>	<input type="text" value="20"/>	<a href="#" style="background-color: #ff6347; color: white; padding: 2px 10px;">Add To Cat</a>
5	2	OPA	DPBS	<input type="text" value="215"/>	<input type="text" value="Oct. 12, 2020"/>	<input type="text" value="400.0"/>	<input type="text" value="403.5"/>	<input type="text" value="20"/>	<a href="#" style="background-color: #ff6347; color: white; padding: 2px 10px;">Add To Cat</a>

[Close SubStocks Table](#)

Figure 2.2.4-51/Add Auction Stock Details

**Auction Stock | All Catalogs**

Catalog ID	Total Net Weight	Total Gross Weight	Total No of Packages	Date	Broker	View
1	453.0	460.0	60	Oct. 12, 2019	Lanka Brokers PVT	<button>View</button>
2	800.0	812.5	50	Oct. 12, 2020	Lanka Brokers PVT	<button>View</button>
3	250.0	256.5	30	Oct. 12, 2020	Lanka Brokers PVT	<button>View</button>
4	740.0	749.0	70	Oct. 12, 2020	Ceyloan Brokers PVT	<button>View</button>
5	247.0	253.0	109	Oct. 12, 2020	Lanka Brokers PVT	<button>View</button>

Figure 2.2.4-52/View Catalog(Collection of Sub stocks) Details

**Auction Stock | View Catalogs**

MainID	SubStockID	Invoice	No of Packets	Net Weight	Total Weight	Grade	Packet Type	Date Prepared	Status	Edit
4	2	410	10	100.0	103.5	BOPF	DPBS	Oct. 12, 2020	Sold	<button>Sold</button>
5	2	215	20	400.0	403.5	OPA	DPBS	Oct. 12, 2020	Not Sold	<button>Not Sold</button>
6	2	463	20	300.0	305.5	FF1	DPBS	Oct. 12, 2020	Pending	<button>Edit</button> <button>Delete</button>

**Add Sub Stock**

Figure 2.2.4-53/View Sub Stock Details

The screenshot shows the Final Production Management interface. On the left, there's a sidebar with a logo and navigation links: Ambrosia, Daily Production, Auction Stock (which is highlighted in red), Stock Sales, Analysis, and Factory Home.

The main content area has a title "Final Production Management" and a subtitle "Auction Stock | View Sub Stock". Below this is a navigation bar with tabs: Prepare A Catalog, Catalog Details, Brokers, and Buyers. The "Catalog Details" tab is active.

A section titled "Current Sub Stock Details" displays a table with one row of data:

MainId	SubStockId	Invoice	No of Packets	Net Weight(kg)	Total Weight(kg)	Grade	Packet Type	Date Prepared
6	2	463	20	300.0	305.5	FF1	DPBS	Oct. 12, 2020

Below this is a modal dialog titled "Update Sub Stock" containing form fields for Sub Stock Main ID (6), Invoice No (463), Tea Category (FF1), Net Weight(kg) (300.0), Total Weight(kg) (305.5), No of Packages (20), Packet Type (DPBS), and Date Prepared (2020-10-12). A pink "Update Sub Stock" button is at the bottom.

Figure 2.2.4-54/Update Sub Stock Details

This screenshot shows the Final Production Management interface with a similar sidebar and navigation as the previous one.

The main content area has a title "Final Production Management" and a subtitle "Auction Stock | View Catalogs". Below this is a navigation bar with tabs: Prepare A Catalog, Catalog Details, Brokers, and Buyers. The "Catalog Details" tab is active.

A section titled "Sub Catalog Details" displays a table with three rows of data:

MainId	SubStockId	Invoice	No of Packets	Net Weight	Total Weight	Grade	Packet Type	Date Prepared	Status	Edit
4	2	410	10	100.0	103.5	BOFF	DPBS	Oct. 12, 2020	Sold	<span style="color: red;">Sold</span>
5	2	215	20	400.0	403.5	OPA	DPBS	Oct. 12, 2020	Not Sold	<span style="color: green;">Edit</span>
6	2	463	20	300.0	305.5	FF1	DPBS	Oct. 12, 2020	Pending	<span style="color: red;">Delete</span>

Below this is a modal dialog titled "Add Sub Stock" containing form fields for Sub Stock ID (2), Invoice No (463), Tea Category (FF1), Net Weight(kg) (300.0), Total Weight(kg) (305.5), No of Packages (20), Packet Type (DPBS), and Date Prepared (2020-10-20). A pink "Submit Substock" button is at the bottom, and a "Close" button is in the bottom-left corner.

Figure 2.2.4-55/Re-add Sub Stock to Catalog

Broker Name	Address	Phonenumber	Var.Reg Number	Update
Lanka Brokers PVT	Colombo	0111231231	1223856-7646756	<button>Edit ✎</button> <button>Delete 🗑</button>
Ceyloan Brokers PVT	Matara	0331231231	None	<button>Edit ✎</button> <button>Delete 🗑</button>
Boker Sample	Malabe	0711231231	9234567-2343221	<button>Edit ✎</button> <button>Delete 🗑</button>

Figure 2.2.4-56/View All Brokers

Figure 2.2.4-57/Add Broker Details

The screenshot shows the Ambrosia Final Production Management application. The left sidebar has a green header with the logo 'UVA' and the word 'Ambrosia'. Below the header, there are menu items: Daily Production, Auction Stock (which is highlighted in red), Stock Sales, Analysis, and Factory Home. The main content area has a title 'Final Production Management' and a subtitle 'Auction Stock | Update Broker'. A navigation bar at the top includes 'Prepare A Catalog', 'Catalog Details', 'Brokers' (which is highlighted in blue), and 'Buyers'. The central part of the screen is titled 'Update Broker' with a gear icon. It contains fields for 'Broker Company Name' (Lanka Brokers PVT), 'Address' (Colombo), 'Phone' (0111231231), and 'Vat Reg. Number' (123856-7646756). A purple 'Update' button is at the bottom.

Figure 2.2.4-58/Update Broker Details

The screenshot shows the Ambrosia Final Production Management application. The left sidebar has a green header with the logo 'UVA' and the word 'Ambrosia'. Below the header, there are menu items: Daily Production, Auction Stock (which is highlighted in red), Stock Sales, Analysis, and Factory Home. The main content area has a title 'Final Production Management' and a subtitle 'Auction Stock | Buyers'. A navigation bar at the top includes 'Prepare A Catalog', 'Catalog Details', 'Brokers', and 'Buyers' (which is highlighted in blue). The central part of the screen is titled 'Buyer Details'. It shows a table with four rows of buyer information:

Buyer Name	Vat Reg No	Update
A.D Brothers PVT	1223856-7646756	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Uni World Teas PVT	1255555-5555555	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Regency TEAS PVT	None	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
ZAID Tea Ceylon PVT	None	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

An 'Add New Buyer' button is located at the top right of the 'Buyer Details' section.

Figure 2.2.4-59/View All Buyers



## Final Production Management

Auction Stock | Add Buyer

Prepare A Catalog Catalog Details Brokers Buyers

### Add New Buyer

Buyer Company Name

Vat Reg.No

Add Buyer

Figure 2.2.4-60/Add New Buyer



## Final Production Management

Auction Stock | Update Buyer

Prepare A Catalog Catalog Details Brokers Buyers

### Update Buyer

Buyer Company Name

Vat Reg.No

Update

Figure 2.2.4-61/Update Buyer Details

**Ambrosia**

**Daily Production**

**Auction Stock**

**Stock Sales**

**Analysis**

**Factory Home**

**Final Production Management**

**Stock Sales | Current Stock**

**Current Stock**   **Sold Stocks**   **Not Sold Stock**   **Not Sold Stock Log**

Search Current Sub Stock

Search Current Sub Stock:  Search

\*Search by Date : Date Format: YYYY-MM-DD || Search by Month : Date Format: YYYY-MM

**Current Stock Details**

Sub Stock ID	Catalog ID	Invoice	No of Packeges	Net Weight	Total Weight	Grade	Packet Type	Date Prepared	Current Status	Edit
6	2	463	20	300.0	305.5	FF1	DPBS	Oct. 12, 2020	Pending	<span style="background-color: green; color: white;">Sold</span>
9	4	165	25	250.0	253.0	BOPF	DPBS	Oct. 12, 2020	Pending	<span style="background-color: green; color: white;">Sold</span>
10	4	100	30	350.0	353.0	OPA	DPBS	Oct. 12, 2020	Pending	<span style="background-color: green; color: white;">Sold</span>
14	6	200	10	50.0	63.5	BOPF	DPBS	Oct. 12, 2020	Pending	<span style="background-color: green; color: white;">Sold</span>
										<span style="background-color: orange; color: white;">Not Sold</span>

Figure 2.2.4-62/View All Current Sub Stocks

**Ambrosia**

**Daily Production**

**Auction Stock**

**Stock Sales**

**Analysis**

**Factory Home**

**Final Production Management**

**Stock Sales | Add Sold Stock**

**Current Stock**   **Sold Stocks**   **Not Sold Stock**   **Not Sold Stock Log**

**Stock Details**

MainID	SubID	Invoice	No of Packeges	Net Weight	Total Weight	Grade	Packet Type	Date Prepared	Current Status
6	2	463	20	300.0	305.5	FF1	DPBS	Oct. 12, 2020	Pending

**Details Form**

SubStock MainID	6
SubStock SubID	2
Price(lkg)	<input type="text"/>
Buyer	<input type="text"/>
Sold Date	<input type="text"/>

**Add Sold Stock**

Figure 2.2.4-63/Add Sold Sub Stock Details

**Ambrosia**

**Daily Production**

**Auction Stock**

**Stock Sales**  

**Analysis**

**Factory Home**

**Current Stock** **Sold Stocks** **Not Sold Stock** **Not Sold Stock Log**

**Search Sold Stocks**

Search Sold Stocks  Search

\*Search by Date : Date Format: YYYY-MM-DD || Search by Month : Date Format: YYYY-MM

**Sold Stock Details**

SubStock ID	Catalog ID	Grade	Date Pre.	Status	Net.W(kg)	Tot.W(kg)	No.Pkts	Price(1kg)	Tot.Price	Buyer	S.Date	Edit
1	1	BOPF	Oct. 11, 2019	Sold	100.0	103.0	20	450.0	45000.0	A.D Brothers PVT	Dec. 12, 2019	<button>Edit</button>
3	1	OP	Oct. 11, 2019	Sold	153.0	153.5	20	600.0	91800.0	Uni World Teas PVT	Dec. 12, 2019	<button>Edit</button>
12	5	BOPF	Oct. 12, 2020	Sold	147.0	150.0	9	500.0	73500.0	Uni World Teas PVT	Oct. 12, 2020	<button>Edit</button>
13	5	OP	Oct. 12, 2020	Sold	100.0	103.0	100	450.0	45000.0	Uni World Teas PVT	Oct. 12, 2020	<button>Edit</button>
11	4	OP	Oct. 12, 2020	Sold	140.0	143.0	15	500.0	70000.0	Regency TEAS PVT	Sept. 12, 2020	<button>Edit</button>
4	2	BOPF	Oct. 12, 2020	Sold	100.0	103.5	10	200.0	20000.0	A.D Brothers PVT	Dec. 12, 2019	<button>Edit</button>

Figure 2.2.4-64/View All Sold Sub Stocks

**Ambrosia**

**Daily Production**

**Auction Stock**

**Stock Sales**  

**Analysis**

**Factory Home**

**Current Stock** **Sold Stocks** **Not Sold Stock** **Not Sold Stock Log**

**Sold Stock Details**

MainID	SubId	Invoice	No of Packages	Net Weight	Total Weight	Grade	Packet Type	Date Prepared	Current Status
1	1	100	20	100.0	103.0	BOPF	DPBS	Oct. 11, 2019	Sold

**Move Stock to Not Sold**

**Update Details Form**

Sold-Stock MainID	1
Sub-Stock MainID	1
Sub-Stock SubID	1
Price	450.0
Total Price	45000.0
Buyer	A.D Brothers PVT
Sold Date	2019-12-12

**Update Sold Stock**

Figure 2.2.4-65/Update Sold Stock Details



## Final Production Management

### Stock Sales | Not Sold Stock

Current Stock   Sold Stocks   Not Sold Stock   Not Sold Stock Log

#### Not Sold Stocks (Active)

Not-Sold.St.Id	St.MainID	St.SubID	Invoice	Grade	Date Pre.	Status	Net.W(kg)	Tot.W(kg)	No.Pkts	Edit
2	7	3	110	FF1	Oct. 12, 2020	Not Sold	100.0	103.5	20	<button>Delete</button>
3	2	1	115	FF1	Oct. 11, 2019	Not Sold	200.0	203.5	20	<button>Delete</button>
4	5	2	215	OPA	Oct. 12, 2020	Not Sold	400.0	403.5	20	<button>Delete</button>

#### Previous Not Sold Stocks

Not-Sold.St.Id	St.MainID	St.SubID	Invoice	Grade	Date Pre.	Status	Net.W(kg)	Tot.W(kg)	No.Pkts
1	8	3	141	BOPF	Oct. 12, 2020	Not Sold	150.0	153.0	10

Figure 2.2.4-66/View All Not Sold Stock Details

## Final Production Management

### Stock Sales | Not Sold Stock Log

Current Stock   Sold Stocks   Not Sold Stock   Not Sold Stock Log

#### Not Sold Stocks Re-Added Details

Prev Not Sold Stock ID	Prev Sub Stock Main ID	New Sub Stock Main ID	Date Re-Added To New Sub Stock
1	8	12	Oct. 12, 2020, 2:48 p.m.

#### Search Not SoldStock Details

Search Not Sold Stock

#### First Sub Stock(old Stock)

MainId	SubStockId	Invoice	No of Packets	Net Weight(kg)	Total Weight(kg)	Grade	Packet Type	Date Prepared
8	3	141	10	150.0	153.0	BOPF	DPBS	Oct. 12, 2020

#### New Sub Stock

MainId	SubStockId	Invoice	No of Packets	Net Weight(kg)	Total Weight(kg)	Grade	Packet Type	Date Prepared
12	5	140	9	147.0	150.0	BOPF	DPBS	Oct. 12, 2020

Total Gross Weight Loss: 3.0 kg

Total Net Weight Loss: 3.0 kg

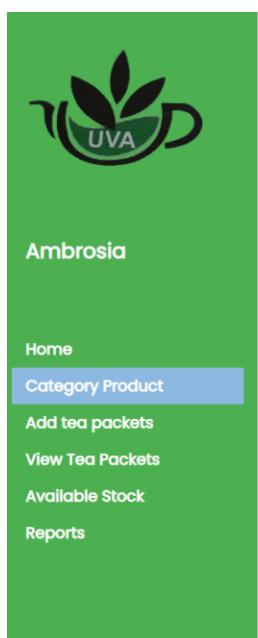
[View all not sold Log](#)

Figure 2.2.4-67/View Not Sold Stock Log Details



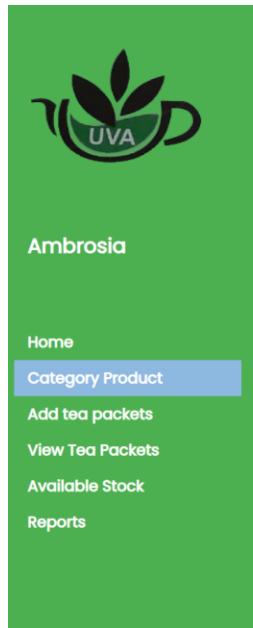
The screenshot shows a green-themed web application for Ambrosia's Final Production Management. The header features the Ambrosia logo and the title "Final Production Management Reports & Analysis". On the left sidebar, there are several menu items: "Daily Production", "Auction Stock", "Stock Sales", "Analysis" (which is highlighted in red), and "Factory Home". The main content area is titled "Generate Reports" and contains two report selection tables. The first table has rows for "Sold Stock Report" and "Catalog Preparation Report", each with a dropdown for "Type" and a "Search Details" input field, followed by a "Generate" button. A note at the bottom states: "\*Search by Date : Date Format: YYYY-MM-DD || Search by Month : Date Format: YYYY-MM".

Figure 2.2.4-68/Final Production Auction Stock Reports



The screenshot shows the Ambrosia Sales Inventory Management system. The title is "Sales Inventory Management Category product". The left sidebar includes "Home", "Category Product" (which is selected and highlighted in blue), "Add tea packets", "View Tea Packets", "Available Stock", and "Reports". The main form has fields for "Category Product Name" (with a placeholder box), "Tea Category" (with a placeholder box), and "Category Weight" (with a placeholder box). Below these is an "ADD" button. A table displays category product details with columns: "Category Product Name", "Category", "Weight", "Edit", and "Delete". The table contains three rows: "BOPF 1Kg" (Category: BOPF, Weight: 1Kg), "DUST1 500g" (Category: DUST1, Weight: 500g), and "DUST2 1Kg" (Category: DUST2, Weight: 1Kg). Each row has "EDIT" and "DELETE" buttons.

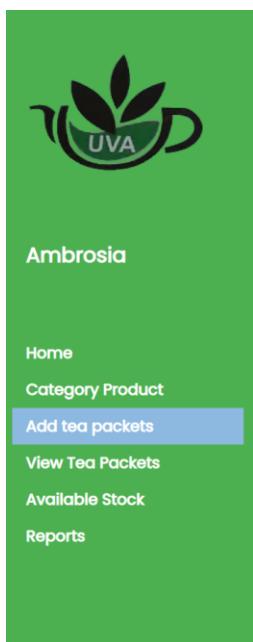
Figure 2.2.4-69/View Category-Product Details and Add Category-Product Details



## Sales Inventory Management

### Edit Category Product

Figure 2.2.4-70/Edit Category Product Details



## Sales Inventory Management

### Add Tea Packets

Figure 2.2.4-71/Add Tea Packet Details



Ambrosia

- [Home](#)
- [Category Product](#)
- [Add tea packets](#)
- [View Tea Packets](#)
- [Available Stock](#)
- [Reports](#)

# Sales Inventory Management

## View Tea Packets

Date	Category	Weight	Number of Packets	Edit	Delete
Oct. 11, 2020	BOPF	1Kg	13	<a href="#">EDIT</a>	<a href="#">DELETE</a>
Oct. 11, 2020	DUST2	1Kg	3	<a href="#">EDIT</a>	<a href="#">DELETE</a>
Oct. 11, 2020	DUST1	500g	22	<a href="#">EDIT</a>	<a href="#">DELETE</a>
Sept. 16, 2020	DUST1	500g	9	<a href="#">EDIT</a>	<a href="#">DELETE</a>
Oct. 11, 2020	DUST2	500g	20	<a href="#">EDIT</a>	<a href="#">DELETE</a>
Oct. 11, 2020	DUST 1	1Kg	12	<a href="#">EDIT</a>	<a href="#">DELETE</a>

Figure 2.2.4-72/View Tea Packets



Ambrosia

- [Home](#)
- [Category Product](#)
- [Add tea packets](#)
- [View Tea Packets](#)
- [Available Stock](#)
- [Reports](#)

# Sales Inventory Management

## Edit Tea Pakctes

Date: Oct. 11, 2020

Tea Category: BOPF

Category Weight: 1Kg

Number of packets:

[Update](#)

Figure 2.2.4-73/Edit Tea Packet Details

The screenshot shows the Ambrosia Sales Inventory Management system. The header features the Ambrosia logo and the text "Sales Inventory Management". On the left, a sidebar menu lists "Ambrosia", "Home", "Category Product", "Add tea packets", "View Tea Packets", "Available Stock" (which is highlighted in blue), and "Reports". The main content area displays the title "Available Stock" and a table showing stock details:

Category	Weight	Available Stock
BOPF	1Kg	8
DUST2	1Kg	3
DUST1	500g	31
DUST 1	1Kg	12
DUST2	500g	20

Figure 2.2.4-74/View Available Packet Stock Details

The screenshot shows the Ambrosia Sales Inventory Management system. The header features the Ambrosia logo and the text "Sales Inventory Management". On the left, a sidebar menu lists "Ambrosia", "Home", "Category Product", "Add tea packets", "View Tea Packets", "Available Stock", and "Reports" (which is highlighted in blue). The main content area displays the title "Reports" and two sections: "Monthly Report" and "Annual Report".

**Monthly Report**

Input Month  Input Year  Monthly Report

**Annual Report**

Input Year  Annual Report

Figure 2.2.4-75/Sales Inventory Reports

The screenshot shows the Ambrosia Tea Factory Outlet Management system interface. On the left, a green sidebar menu includes 'Home', 'Create Invoice' (which is highlighted in blue), 'Transactions', 'Income', and 'Price Table'. The main content area has a header 'Add Items'.

**Add Items Form Fields:**

- Category:
- Weight:
- Quantity:
- Date :
- Invoice Id:
- Add Item** button

**Transaction History Table:**

Invoice Id	Date	Category	Weight	Quantity	Item Price	Price	Delete
9	Oct. 18, 2020, 7:09 p.m.	BOPF	1Kg	2	Rs.1000.0	Rs.2000.0	<b>Delete</b>

**Calculate Bill** button

Figure 2.2.4-76/Add Invoice Details and Transaction(Collection of Invoices) Details

The screenshot shows the Ambrosia Tea Factory Outlet Management system interface. On the left, a green sidebar menu includes 'Home', 'Create Invoice', 'Transactions' (which is highlighted in blue), 'Income', and 'Price Table'. The main content area features a large title 'Ambrosia Tea Factory Outlet Management' and a section titled 'Transactions'.

**Transactions Table:**

Transaction ID	Total	Date and Time	View	Print Bill
1	Rs.11000.0	Oct. 12, 2020, 9:06 a.m.	<b>View</b>	<b>Print Bill</b>
2	Rs.8500.0	Oct. 12, 2020, 12:11 p.m.	<b>View</b>	<b>Print Bill</b>
4	Rs.3000.0	Sept. 12, 2020, 12:11 p.m.	<b>View</b>	<b>Print Bill</b>
5	Rs.15000.0	Oct. 12, 2020, 1:49 p.m.	<b>View</b>	<b>Print Bill</b>
6	Rs.1000.0	Oct. 12, 2020, 1:52 p.m.	<b>View</b>	<b>Print Bill</b>
7	Rs.3200.0	Oct. 12, 2020, 2:03 p.m.	<b>View</b>	<b>Print Bill</b>
8	Rs.72800.0	Oct. 12, 2020, 4:16 p.m.	<b>View</b>	<b>Print Bill</b>

Figure 2.2.4-77/View Transactions (Bills)

The screenshot shows the Ambrosia Tea Factory Outlet Management system. On the left, a green sidebar menu includes: Home, Create Invoice, Transactions (which is selected and highlighted in blue), Income, and Price Table. The main content area has a title "Ambrosia Tea Factory Outlet Management" and a sub-section "View Bill". Below this, a table displays a bill with the following details:

Item Name	Weight	Quantity	Item Price	Price
FGS	1Kg	2	Rs.1000.0	Rs.2000.0
DUST 1	1Kg	9	Rs.1000.0	Rs.9000.0

At the top of the main content area, there is a header with transaction details: Transaction ID: 1, Date: Oct. 12, 2020, 9:06 a.m., Total Price: Rs.11000.0.

Figure 2.2.4-78/View Bill Details

The screenshot shows the Ambrosia Tea Factory Outlet Management system. On the left, a green sidebar menu includes: Home, Create Invoice, Transactions, Income (which is selected and highlighted in blue), and Price Table. The main content area has a title "Ambrosia Tea Factory Outlet Management" and a sub-section "Report". It contains two sections for generating income reports:

- Generate Income Report for a month**: Includes input fields for "Input Month" and "Input Year", and a "Monthly Report" button.
- Generate Income Report for a Year**: Includes an input field for "Input Year" and an "Annual Report" button.

Figure 2.2.4-79/Tea Factory Sales Reports

The screenshot shows the Ambrosia Tea Factory Outlet Management system interface. On the left, a green sidebar menu includes options like Home, Create Invoice, Transactions, Income, and Price Table, with Price Table currently selected. The main content area has a title "Price Table". Below it, there's a form titled "Add Items" with fields for Category (dropdown), Weight (dropdown), Price (text input "Rs."), and a "Add Item" button. To the right is a table titled "Price Table" with four rows of data:

<b>Id</b>	<b>Category</b>	<b>Weight</b>	<b>Price</b>	<b>Edit</b>
1	BOPF	1Kg	Rs.1000.0	<b>Update</b>
2	BOPF	500g	Rs.500.0	<b>Update</b>
3	BOPF	400g	Rs.400.0	<b>Update</b>
4	BOPF	250g	Rs.250.0	<b>Update</b>

Figure 2.2.4-80/Add Price Table Details and View Price Table Details

The screenshot shows the Ambrosia Tea Factory Outlet Management system interface. The sidebar menu is identical to the previous screenshot. The main content area features a large title "Ambrosia Tea Factory Outlet Management" and a subtitle "Price Table Update". Below this, there's a section titled "Price" with a form for updating item details. The form fields are: id (text input "1"), Category (dropdown "BOPF"), Weight (dropdown "1Kg"), Price (text input "Rs. 1000.0"), and a "Update" button.

Figure 2.2.4-81/Update Price Table Details

## 2.3 Implementation

- Programming Language : Python 3.8
- IDE : PyCharm Professional 2020.2
- Front End Development : HTML5, CSS, JavaScript
- Server-Side Web Application Framework (Back end) : Django
- Database Management System : MySQL Administration Tool for The Database  
phpMyAdmin
- MySQL Client : mysqlclient-1.4.6-cp38-cp38-win32.whl

This system was developed using Python programming language with Django web framework.

Python is an object-oriented programming language. It is easy to learn, more powerful, more secure and can be implemented easily compared to other programming languages. PhpMyAdmin was chosen as the database management system, because it can be connected with PyCharm IDE and easily host in web. Django is a free and open source web framework which has Model-View-Template architecture. Django Administration contains more built-in functionalities which can easily manage web applications.

The project package was divided into 3 main parts to separate Views, URLs and Common Calculations. They are “common\_utils”, “url\_mappings” and “view\_mappings”.

“view\_mappings” and “url\_mapping” in python package contains all the URLs and Views of each member’s main functions separately. “common\_utils” package contains all calculations and common functionalities used in the project which can be reuse. Each member in the group have their own function with unique name which can be identified easily.

Templates directory contain 11 sub directories and “Base.html”. “Base.html” is one of the re-usable files which include all the common attributes of interfaces (html files) as a common template file.

Most of the reports in the system are generated in pdf format. In the “common\_utils” package, “utils.py”( python file) contains a method called “render\_to\_pdf” to convert html view to pdf file. All the image uploads are stored in the media directory in main project directory. Static files like company logo images, external CSS and JavaScript files are in the special directory called “static”. After completing all the functionalities, the project was integrated using GitHub.

(Link: <https://github.com/viduraperera/Ambrosia.git> )

## **2.4 Testing**

As the functions of the systems were developed by different members in the team it is a must to test the system using testing techniques. First the unit testing was done for each function developed by each individual and later integration testing and system testing was done to confirm whether the system was working properly. Following are some tests done for the system,

### **2.4.1 Integration Testing**

- After completing the employee details management, it was integrated and tested with the attendance management function to mark the attendance of all the factory workers in the factory.
- Supplier details function was integrated and tested with supplier payment and leaf stock separately inside the function.
- In the transport management function, vehicle driving records and maintenance was integrated and tested separately.
- As the employee salary is based on the attendance of the workers, the attendance management and salary management were integrated and tested separately  
GitHub branch - “employee\_develop”
- The stock management in factory outlet was integrated with the sales management function, as the sales should be done using the stock produced in the outlet  
GitHub branch – “dev\_teashop”
- Leaf Inventory, daily production stock and the auction stock was integrated and tested to get the inventory details, tea grade details of the daily Production.  
GitHub branch – “dev\_finalProduction”
- The stock to the factory outlet was supplied by the final production, therefore the final production stock and factory outlet stock was integrated and tested  
GitHub branch – “develop\_2\_shop\_and\_finalprod”

### **2.4.2 System Testing**

This level of testing was done after fully integrating the system, All the branches were merged to the “develop\_branch1” and merged to the master branch, then the end-to-end system was tested smoothly and the doubts were resolved and finalized the product.

### 2.4.3 Test Cases

<u><b>Employee Details Management</b></u>				
<b>Testing Function:</b> Add employee details to the system <b>Pre-conditions (if there are any):</b> User should log into the system <b>Test Steps:</b> <ol style="list-style-type: none"> <li>1. Navigate to the employee management in factory page</li> <li>2. Click “Add employee” button</li> <li>3. Fill details of the employee</li> <li>4. Click “Add” button</li> </ol>				
Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)
<b>TFM_001</b>	Name: Malka Mudannayake EPF No:10 NIC No:896532147896 Address: No72, Kandy Road, Malabe Gender: Female Marital Status: Unmarried Date of Birth:1989-10-01 Date of Approval:2000-12-01 Employee Group: Staff Employee Type: Permanent Designation: Clerk Basic Salary: 20000	Show Message “Employee added Successfully”	Show Message “Employee added Successfully”	Pass
<b>TFM_002</b>	Name: Tharuka Siriwardana EPF No:10 NIC No: 5452 Address: Malabe Gender: Male Marital Status: Married Date of Birth:1954-11-04 Date of Approval:2001-02-01 Employee Group: factory worker Employee Type: permanent Designation: Basic Salary: 900	Show Message “Invalid Details” <ul style="list-style-type: none"> <li>• EPF No already existing</li> <li>• NIC should have at least 10 characters</li> </ul>	Show Message “Invalid Details” <ul style="list-style-type: none"> <li>• EPF No already existing</li> <li>• NIC should have at least 10 characters</li> </ul>	Pass

Table 2.4.3-1/Test Case -Employee Details Management

### **Supplier Details Management**

**Testing Function:** Register suppliers to the system

**Pre-conditions (if there are any):** User should be logged into the tea factory management system

**Test Steps:**

1. Navigate to the Supplier Management section from the tea factory page
2. Click “Add new Supplier” button
3. Fill supplier registration form with relevant details
4. Click “Submit” button

<b>Test ID</b>	<b>Test Inputs</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Result (Pass/Fail)</b>
<b>TFM_003</b>	Name: Sasmitha Athige NIC No: 999903456V Address: Bandarawela, Welimada Contact No: 0702456324 Email Address: Piyasith@gmail.com Date of Birth: 1989-01-04 Date Commenced: 2020-10-12 Estate Name: Welimadawatta Route: HG Supply Scale: Small-Scale Payment Type: Cash Bank: BOC Account No: 2004329171	Show Message “Supplier Added Successfully”	Show Message “Supplier Added Successfully”	Pass

<b>TFM_004</b>	<p>Name: Sudharaka Medagedara NIC No: 98100 Address: Badulla road, Welimada Contact No: 071927 Email Address: sirius@gmail.com Date of Birth: 1988-04-09 Date Commenced: 2020-10-12 Estate Name: Lewwegodawatta Route: AT Supply Scale: Large-Scale Payment Type: Cash Bank: Sampath Bank Account No: 2032714182</p>	<p>Show Message “Invalid Supplier Details”</p> <ul style="list-style-type: none"> <li>• Invalid Contact Number</li> <li>• Invalid NIC Number</li> </ul>	<p>Show Message “Invalid Supplier Details”</p> <ul style="list-style-type: none"> <li>• Invalid Contact Number</li> <li>• Invalid NIC Number</li> </ul>	Pass
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Table 2.4.3-2/Test Case - Supplier Details Management

### Transport Management

**Testing Function:** Add vehicle Driving Records

**Pre-conditions (if there are any):** User should be logged into the tea factory management system

**Test Steps:**

1. Navigate to the Transportation management page in the tea factory home.
2. Add relevant data to the form
3. Click “Add” button

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)
<b>TFM_005</b>	Date :2020-10-18 Start Reading: 90 End Reading: 70  Vehicle No: LH-2345	Show Message “End reading number error”  “End reading must be greater than start reading”	Show Message “End reading number error”	Pass
<b>TFM_006</b>	Date :2020-10-18 Start Reading: 60 End Reading: 95  Vehicle No: LH-3675	Show Message “Successfully Added”	Show Message “Successfully Added”	Pass

*Table 2.4.3-3/Test Case - Transport Management*

### **Sales Management in factory Outlet**

**Testing Function:** Create Invoice

**Pre-conditions (if there are any):** User should be logged into the tea factory management system

**Test Steps:**

1. Navigate to the sales management in the tea shop System
2. Add relevant bill data to the bill form
3. Click “Calculate” button

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)
TFM_007	Item Name: BOPF Weight: 200g Quantity: 3 Item Price: Rs. 250 Items Total Price: Rs. 750 Item Name: DUST 1 Weight: 400g Quantity: 4 Item Price: Rs. 400 Items Total Price: Rs. 1600	Show Message “Added Successfully”	Show Message “Added Successfully”	Pass
TFM_008	Item Name: DUST 2 Weight: 250g Quantity: -1 Item Price: Rs. 250 Items Total Price: Rs. 250 Item Name: DUST 1 Weight: 1Kg Quantity: 1 Item Price: Rs. 900 Items Total Price: Rs. 900	Show Message “Quantity must be positive value”	Show Message “Quantity must be positive value”	Pass

*Table 2.4.3-4/Test Cases - Sales Management in Factory Outlet*

### Stock Management in Factory Outlet

**Testing Function:** Calculate available stock

**Pre-conditions (if there are any):** User should be logged into the tea factory management system

**Test Steps:**

1. Navigate to the stock management in the tea shop System
2. Add relevant data to the add tea packets form
3. Click “ADD” button

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)
<b>TFM_009</b>	Date:2020-10-11 Category product name: BOPF 1kg Number of packets:22 Date:2020-10-12 Category product name: BOPF 1kg Number of packets:20 (2020-10-11) Available Stock:22 <b>(2020-10-12)</b> <b>Available Stock:42</b>	Show Message “Successfully Added”	Show Message “Successfully Added”	Pass
<b>TFM_010</b>	Date:2020-10-11 Category product name: FGS1kg Number of packets:22 Date:2020-10-12 Category product name: FGS 1kg Number of packets:10 (2020-10-11) Available Stock:22 (2020-10-12) Available Stock:32	Show Message “Successfully Added”	Show Message “Successfully Added”	Pass

*Table 2.4.3-5/Test Cases - Stock Management in factory outlet*

## Inventory Management

**Testing Function:** Add Inventory Functionality

**Pre-conditions (if there are any):** User should be logged into the Admin account

**Test Steps:**

1. Navigate to the Add Inventory page in the System
2. Add relevant data to the form
3. Click “Submit” button

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)
<b>TFM_011</b>	In date: 2020-10-10 In time: 13.00 Tray Id: 2 Temperature: 23 Stock weight: 1200 Out date: 2020-10-10 Out time: 17.00	Show Message “Inventory Added Successfully”	Show Message “Inventory Added Successfully”	Pass
<b>TFM_012</b>	In date: 2020-04-12 In time: 1.00 Tray Id: 4 Temperature: 22 Stock weight: -200 Out date: 2020-04-12 Out time: 17.00	Show Message “weight • Ensure this value is greater than or equal to 0.”	Show Message “weight • Ensure this value is greater than or equal to 0.”	Pass

*Table 2.4.3-6/Test Cases - Inventory Management*

<b><u>Employee Salary Management</u></b>				
<b>Testing Function:</b> Salary Management <b>Pre-conditions (if there are any):</b> User should be logged into the tea factory management system, Attendance must be calculated of the employee <b>Testing Steps:</b> <ol style="list-style-type: none"> <li>1. Navigate to the Basic Salary single view page of an Employee in the System</li> <li>2.Add Relevant Data to the form</li> <li>3.Click Calculate Button</li> </ol>				
<b>Test ID</b>	<b>Test Inputs</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Result (Pass/Fail)</b>
<b>TFM_013</b>	Year: 2020 Month:09	Monthly Attendance: 5  Basic salary of the month: 2250.0  Monthly ETF: 67.5  EPF Employee: 180.0  EPF employer: 270.0	Monthly Attendance: 5  Basic salary of the month: 2250.0  Monthly ETF: 67.5  EPF Employee: 180.0  EPF employer: 270.0	pass
<b>TFM_014</b>	Year: 2020 Month:12	Monthly Attendance: 0.0  Basic salary of the month: 0.0  Monthly ETF: 0.0  EPF Employee: 0.0  EPF employer: 0.0	Monthly Attendance: 0.0  Basic salary of the month: 0.0  Monthly ETF: 0.0  EPF Employee: 0.0  EPF employer: 0.0	pass

Table 2.4.3-7/Test Case - Employee Salary Management

<b><u>Final Product Auction Stock Management</u></b>				
<b>Testing Function:</b> Prepare catalog function – add sub stock <b>Pre-conditions (if there are any):</b> User should be logged into the tea factory management system <b>Test Steps:</b> <ol style="list-style-type: none"> <li>1. Navigate to the auction stock in final production management home</li> <li>2. Add sub stock details to sub stock form</li> <li>3. Click “Add Sub Stock” button</li> </ol>				
<b>Test ID</b>	<b>Test Inputs</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Result (Pass/Fail)</b>
<b>TFM_015</b>	Invoice N0: 110  Tea Category: BOPF  Net Weight: 100  Total Weight: 103.5  No of packages: 10  Packet Type: MNBS  Date Prepared: 2020-10-15	Show Message “Record Added Successfully”	Show Message “Record Added Successfully”	Pass
<b>TFM_016</b>	Invoice N0: 110  Tea Category: BOPF  Net Weight: -10  Total Weight: -15  No of packages: 10  Packet Type: MNBS  Date Prepared: 2020-10-15	Show Message “Invalid Data Provided” <ul style="list-style-type: none"> <li>• Net weight must greater than 0</li> <li>• Total weight must greater than 0</li> </ul>	Show Message “Invalid Data Provided”	Pass

Table 2.4.3-8/Test Cases - Final Production Stock Management

### **3. Conclusion**

This project is based on a tea factory management system, through this system the client will be able to handle employee details, attendance and salary, supplier details, leaf stock and payments, vehicle details, recordings and services, inventory of the tea factory, final product auction stock, sales and stock in factory outlet.

The main functionalities of the system were divided among the 8 members of the group and by analyzing the requirements of the client the interfaces were designed in a user-friendly manner. The system was developed as a web-based application using Python language and Django framework. Reason for choosing web-based application over standalone system is that the client needed to access the application from anywhere in the world.

Currently, the factory and the outlet are using the book-keeping method not only to record all their details but also to calculate expenditures and save previous records of the factory. They face difficulties in maintaining all these processes manually. By using this automated system, the client will be able to manage all their sensitive data, calculations and generate reports effortlessly.

Since, this is a web-based system client can access the factory operations whenever needed through internet. The user friendly and simple interfaces are an additional advantage for the users. The client can manage main resources such as employees, suppliers, vehicles, sales, and stock efficiently. As the user can maintain their all manual works automatically through the system, the productivity of the factory will be increased, So the wastage of time can be minimized.

Therefore, by using this automated factory management system, the client can competitively work with the business world.

## **4. References**

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