

Case Studies in Software Engineering – SE3070

Critical Reflection Report

Case Study 02

SE3070_WE_59

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1 Introduction

This design documentation consists of software solution to difficulties faced with the procurement procedures within the construction industry because of its inherently distributed environment. In this process there are many users interacted with each other and they share many useful information that shared among them. So, Manual system have many disadvantages and may cause “Lost of translation” among staff members and other users. Because of these problems there was a requirement of automated software solution to manage all the tasks in Procurement for construction industry. This software solution will help to provide solutions for most of the problems raised during the manual environment. One of the main advantages is handling of documents. In this proposed system users do not need give/receive document manually to other users. System automatically sends documents to correct users based on the correct procedure.

In this system there are four main users. Those are Site Manager, Procurement Staff, Management and Supplier. Site manager, Procurement staff and Management staff is inside the organization and Supplier is the users that will be on outside of the organization. Site Managers responsibility is raising orders based on the requirements of the organization from the suppliers. This solution allows Site Manager to raise order from a mobile phone. Procurement department responsibility is to management of raised order. They decide whether order need to approve or not based on some conditions and procurement staff can partially accept the order by editing the order details. Management staff makes the high-level decisions about the organization. They select supplier according to organizational standards. There can be many suppliers registered with the organization and their responsibility is to provide ordered items to the organization based on pre agreed prices.

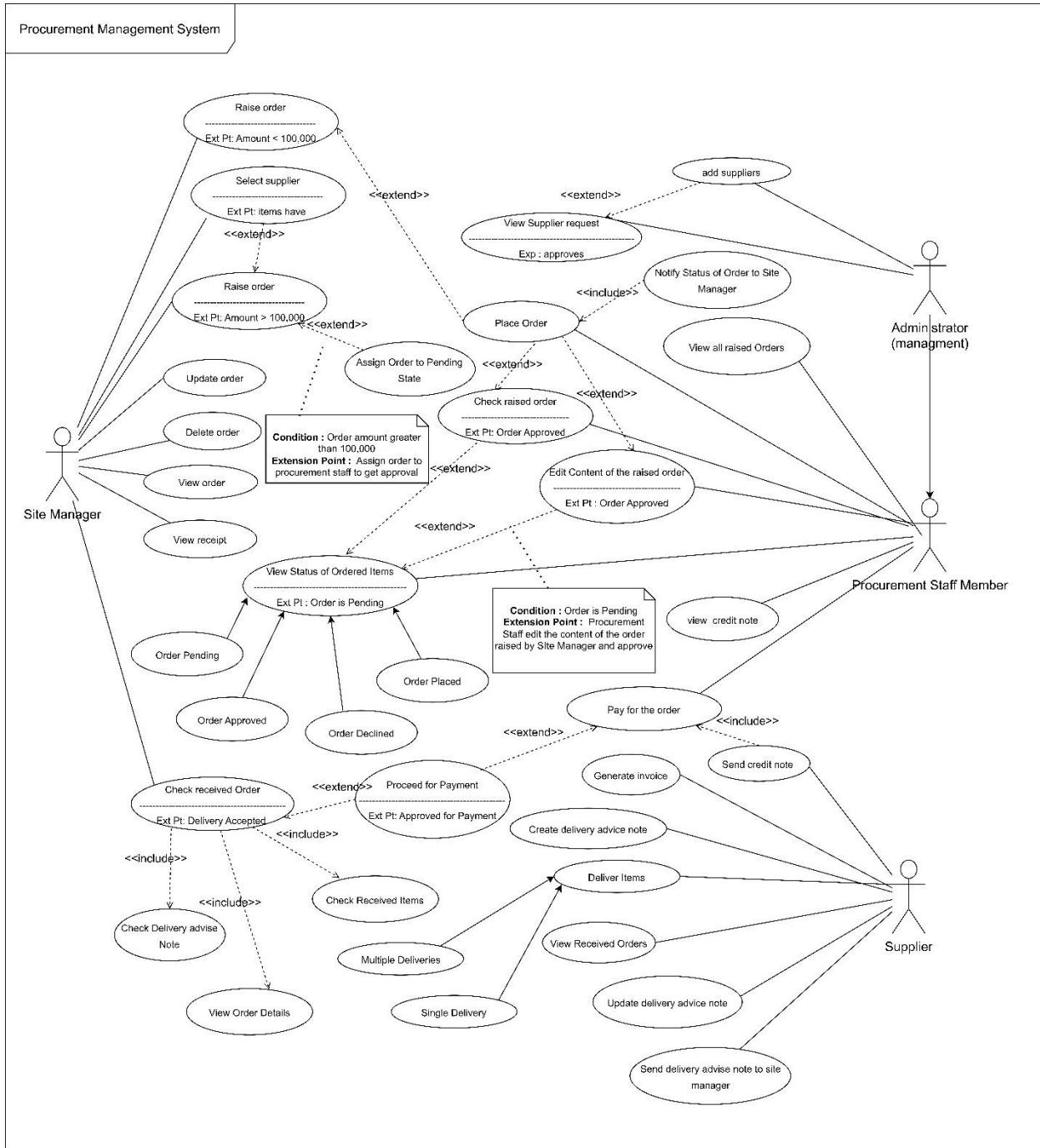
This proposed procurement management system eases all these processes by providing automated environment for the users. This detailed document contains software functional design with UML diagrams and user interactions for the software.

2 Use Case Diagram

2.1 Purposed:



2.2 Reflected:

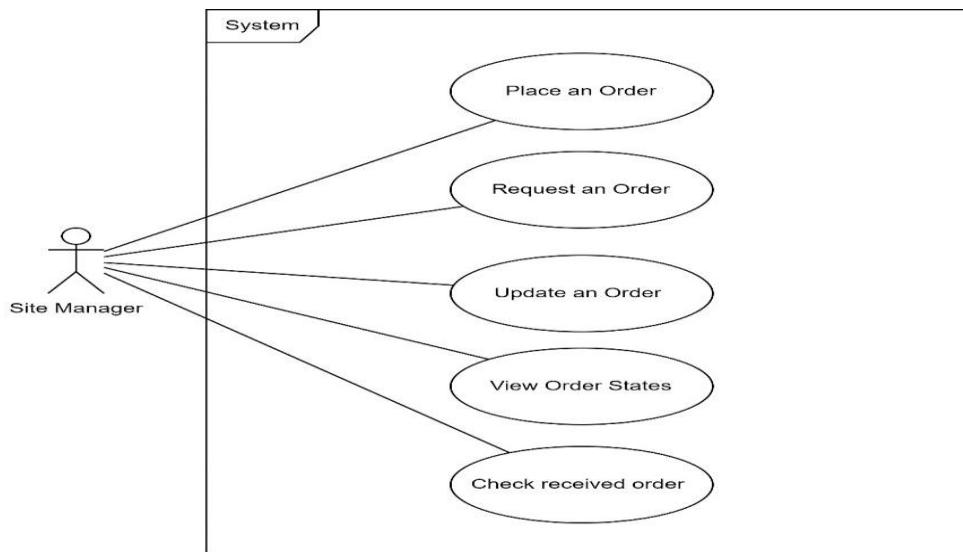
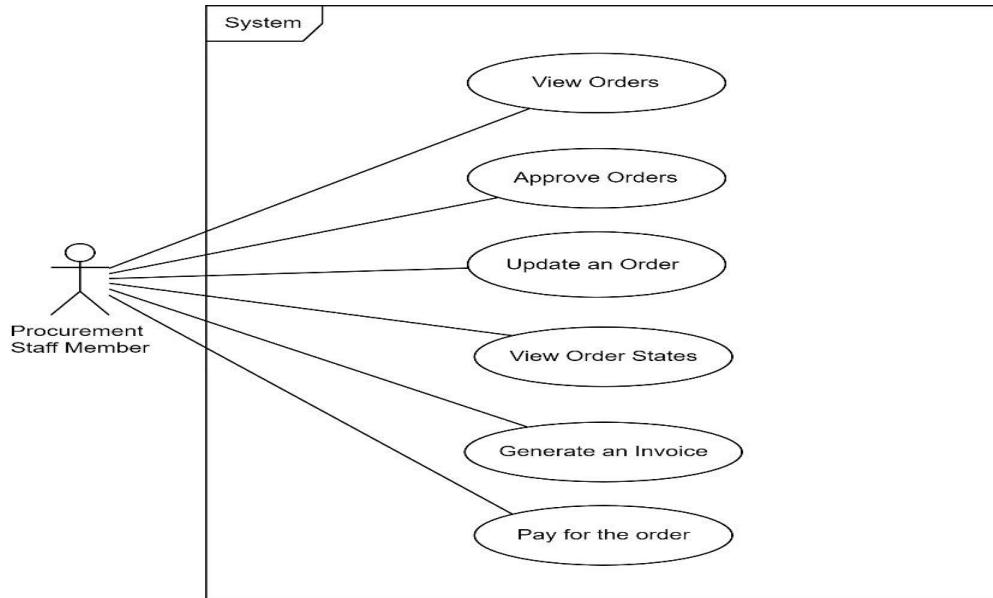


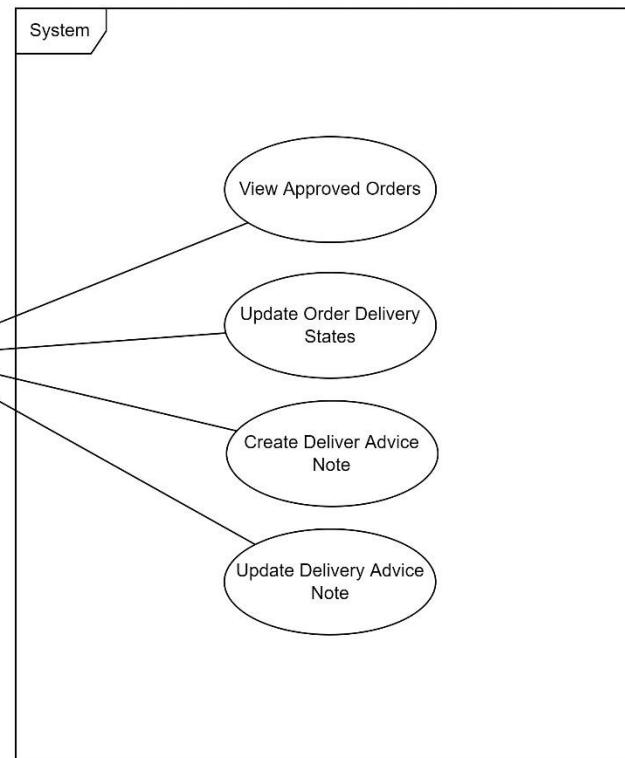
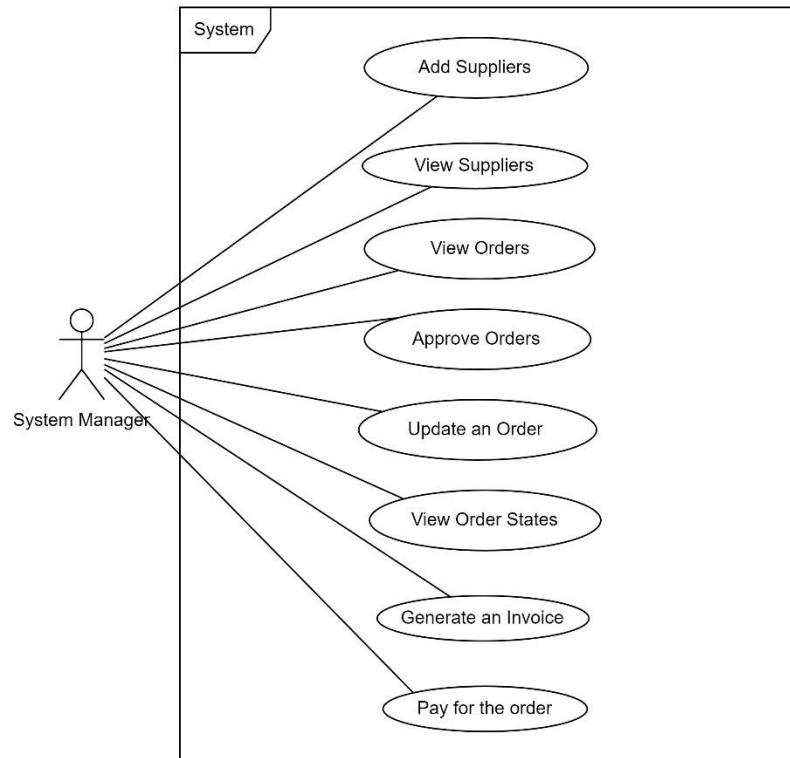
Changes:

Previously, Supplier is selected by the admin. But we change it as Supplier is selected by Site Manager. If Supplier has the Ordered Items then Order will be created.

2.3 Purposed: Use Cases associated with each user

This diagram gives clear understanding about use cases associated with each user of this procurement management system.





3 Use Case Scenarios

3.1 Proposed: Site Manager Raise an Order

Number	CS2_001	
Name	Place an Order by Site Manager	
Summary	Place an Order of items that required for the site.	
Priority	5	
Pre-Condition	Site Manager raised the order and total amount of the order is less than Rs 100,000.	
Post-Condition	Order invoice has to be matched exactly to the final receipt.	
Primary Actor(s)	Site Member	
Secondary Actor(s)	Supplier	
Main Scenario	Step	Action
	1	User (Site Manager) logged into the system (Mobile Application)
	2	Navigate to Order Placement UI.
	3	. System Display the Order Placement UI
	4	Fill the required fields in the UI
	5	Then select the items from the pre given list.
	6	Then fill the more items.
	7	Then click “next” button
	8	System will display the summary of the order.
	9	Then place the order via system by clicking “place order” button
	10	System will generate a invoice.
	11	Finally, System will notify the order has been placed by sending an email confirmation with attached invoice.
Extensions	Step	
	6a	If pre given list items doesn't include the required items give more items field.
	6b	System will insert these external items to the system.
	11a	Display a notification via system, that email has been sent
Open Issues		Should the system give a option to download the invoice, since it is a mobile application?

3.2 Reflected: Site Manager Raise an Order

Number	CS2_001	
Name	Place an Order by Site Manager	
Summary	Place an Order of items that required for the site.	
Priority	5	
Pre-Condition	Site Manager raised the order and total amount of the order is less than Rs 100,000.	
Post-Condition	Order invoice has to be matched exactly to the final receipt.	
Primary Actor(s)	Site Member	
Secondary Actor(s)	Supplier	
Main Scenario	Step	Action
	1	User (Site Manager) logged into the system (Mobile Application)
	2	Navigate to Order Placement UI.
	3	. System Display the Order Placement UI
	4	Find the best supplier in all system have suppliers
	5	Then select the items from the pre given list.
	6	Then fill the all required details and click ok
	7	System will display the summary of the order.
	8	Then place the order via system by clicking “place order” button
	9	System will generate an invoice.
	10	Finally, System will notify the order has been placed by sending an email confirmation with attached invoice.
Extensions	Step	
	10a	Display a notification via system, that email has been sent
Open Issues		Should the system give an option to download the invoice, since it is a mobile application?

Changes:

Previously, Admin is the one who select the supplier. But we change it as the Site Manager can see all suppliers list in the system and Site Manager can place order to correct Supplier.

3.3 Proposed: Handling Order by Procurement Staff

Number	CS2_002	
Name	Handling order by procurement staff member.	
Summary	Procurement staff handle the order received from Site manager.	
Priority	5	
Pre-Condition	Site Manager raised the order and total amount of the order is greater than Rs 100,000.	
Post-Condition	Order gets approved or rejected.	
Primary Actor(s)	Procurement Staff Member	
Secondary Actor(s)	Site Manager Supplier	
Main Scenario	Step	Action
	1	User (Procurement Staff member) logged into the system
	2	View procurement staff dashboard.
	3	Select view raised orders menu.
	4	System displays all the raised orders from the site manager as a list.
	5	Select an order from the list
	6	System displays all the details related to selected order.
	7	Procurement Staff Member checks the order.
	8	Procurement Staff Member assign suppliers for order if necessary.
	9	Procurement Staff Member approve the raised order.
	10	Send order status to Site Manager
	11	Display message to Procurement Staff Member that order is approved.
	12	Display raised orders list to Procurement Staff Member.
Extensions	Step	
	7a	Procurement staff member edit order details.
	9a	Send order into rejected orders list.
	9b	Display message to Procurement Staff Member that order is rejected.
	9c	Display raised orders list to Procurement Staff member
	9d	Send notification to Site Manager that order is rejected.
Open Issues		Should the system send a notification to the Procurement Staff member when a order is rejected?

3.4 Reflected: Handling Order by Procurement Staff

Number	CS2_002	
Name	Handling order by procurement staff member.	
Summary	Procurement staff handle the order received from Site manager.	
Priority	5	
Pre-Condition	Site Manager raised the order and total amount of the order is greater than Rs 100,000.	
Post-Condition	Order gets approved or rejected.	
Primary Actor(s)	Procurement Staff Member	
Secondary Actor(s)	Site Manager Supplier	
Main Scenario	Step	Action
	1	User (Procurement Staff member) logged into the system
	2	View procurement staff dashboard.
	3	Select view raised orders menu.
	4	System displays all the raised orders from the site manager as a list.
	5	Select an order from the list
	6	System displays all the details related to selected order.
	7	Procurement Staff Member checks the order.
	8	Procurement Staff Member approve the raised order.
	10	Send order status to Site Manager and also supplier
	11	Display message to Procurement Staff Member that order is approved.
	12	Procurement Staff Member can download order list via pdf
	13	Display raised orders list to Procurement Staff Member.
Extensions	Step	
	7a	Procurement staff member edit order details.
	8a	Send order into rejected orders list.
	8b	Display message to Procurement Staff Member that order is rejected.
	8c	Display raised orders list to Procurement Staff member
	8d	Send notification to Site Manager that order is rejected.
Open Issues		Should the system send a notification to the Procurement Staff member when a order is rejected?

Changes:

In the purposed one the Procurement Staff Member can select the supplier and send the order to supplier. But as shown in the reflected one we changed it as that Site Manager can directly Order to relevant Supplier and if the order amount is greater than 100000, then automatically order will be Approved or Pending. After that, all order details will be sent to the Staff Members. Staff Member and Site Manager can download all order details as PDF.

3.5 Purposed: Supplier Deliver Items

Number	CS2_004	
Name	Supplier Hand Over Items	
Summary	Supplier Hand Over the Complete Order to the site manager.	
Priority	5	
Pre-Condition	Orders have to be approved by procurement staff or site manager.	
Post-Condition	Delivery advice note must be matched to purchase order.	
Primary Actor(s)	Supplier	
Secondary Actor(s)	Site Manager Procumbent Staff member	
Main Scenario	Step	Action
	1	User (Supplier) logged into the system (Web Application)
	2	Navigate to Supplier Orders View.
	3	System Display the Orders that have been ordered by procurement staff or site manager
	4	Suppliers click “view order” to view the order.
	5	Then generate a purchase order by clicking the “generate purchase order” button according to the order.
	6	The system will generate a purchase order.
	7	Supplier clicks the proceed button.
	8	The system will notify the supplier the order is in delivering process.
	9	Then supplier will enter the purchase order into the system.
	10	The system will check the purchase order against the good, received note.
	11	Then System will notify the order has been successfully delivered by the supplier.
	12	Finally, the system will proceed to payment.
Extensions	Step	

	1a	The supplier can view orders if the order has been approved.
	1b	The system will notify the supplier, that an order is approved and pending supply.
	8a	The system will notify the states of the order among relevant users
	11a	The system will proceed to pay only if the purchase order validates according to the good, received note
Open Issues		Should the system give an option to notify the users along the supplier route?

3.6 Reflected: Supplier Deliver Items

Number	CS2_004	
Name	Supplier Hand Over Items	
Summary	Supplier Hand Over the Complete Order to the site manager.	
Priority	5	
Pre-Condition	Orders have to be approved by procurement staff or site manager.	
Post-Condition	Delivery advice note must be matched to purchase order.	
Primary Actor(s)	Supplier	
Secondary Actor(s)	Site Manager Procurement Staff member	
Main Scenario	Step	Action
	1	User (Supplier) logged into the system (Web Application)
	2	Navigate to Supplier Orders View.
	3	System Display the Orders that have been ordered by procurement staff or site manager
	4	Suppliers click “view order” to view the order.
	5	Then generate a purchase order by clicking the “generate purchase order” button according to the order.
	6	The system will generate a purchase order.
	7	Supplier clicks the proceed button.
	8	The system will notify the supplier the order is in delivering process.
	9	Then supplier will enter the purchase order and delivery details into the system.
	10	The system will check the delivery order against the good, received note.

	11	Then System will notify the order has been successfully delivered by the supplier.
	12	System sends a message to site manager when order delivery status
	13	Finally, the system will proceed to payment.
	14	System sends a payment success message site manager and supplier
Extensions	Step	
	1a	The supplier can view orders if the order has been approved.
	1b	The system will notify the supplier, that an order is approved and pending supply.
	8a	The system will notify the states of the order among relevant users
	11a	The system will proceed to pay only if the purchase order validates according to the good, received note
Open Issues		Should the system give an option to notify the users along the supplier route?

Changes:

In purposed system, after receiving the successful delivery message to the supplier Site Manager did not received the order delivery status. But we changed it as Site Manager received message with Order delivery status. And also, in purposed system, Site Manager and Supplier did not received a payment success message after Payment Process. But we changed it as both should receive payment success message after the process.

3.7 Proposed: Managers add Suppliers to the System

Number	CS2_003	
Name	Registering the suppliers to the system.	
Summary	Registering the suppliers and getting it approved by the manager.	
Priority	5	
Pre-Condition	Supplier logging to the system.	
Post-Condition	Get approved from manager.	
Primary Actor(s)	Supplier	
Secondary Actor(s)	Manager	
Main Scenario	Step	Action
	1	User (Supplier) logged into the system.
	2	Then go to the supplier registration and clicked it.
	3	. Suppliers need to fill the registration form.
	4	Then Submit the all details.
	5	Then manager get all the registered supplier details.
	6	Then analyze the registered suppliers.
	7	Then click the approved button.
	8	Finally gives the approved to suppliers.
Extensions	Step	
	3a	Suppliers need to fill the details correctly.
	3b	Fill the required fields in the registration form.
	6a	Assessing the goods quality of suppliers.
Open Issues		Cannot correctly find the quality of the goods in mobile application.

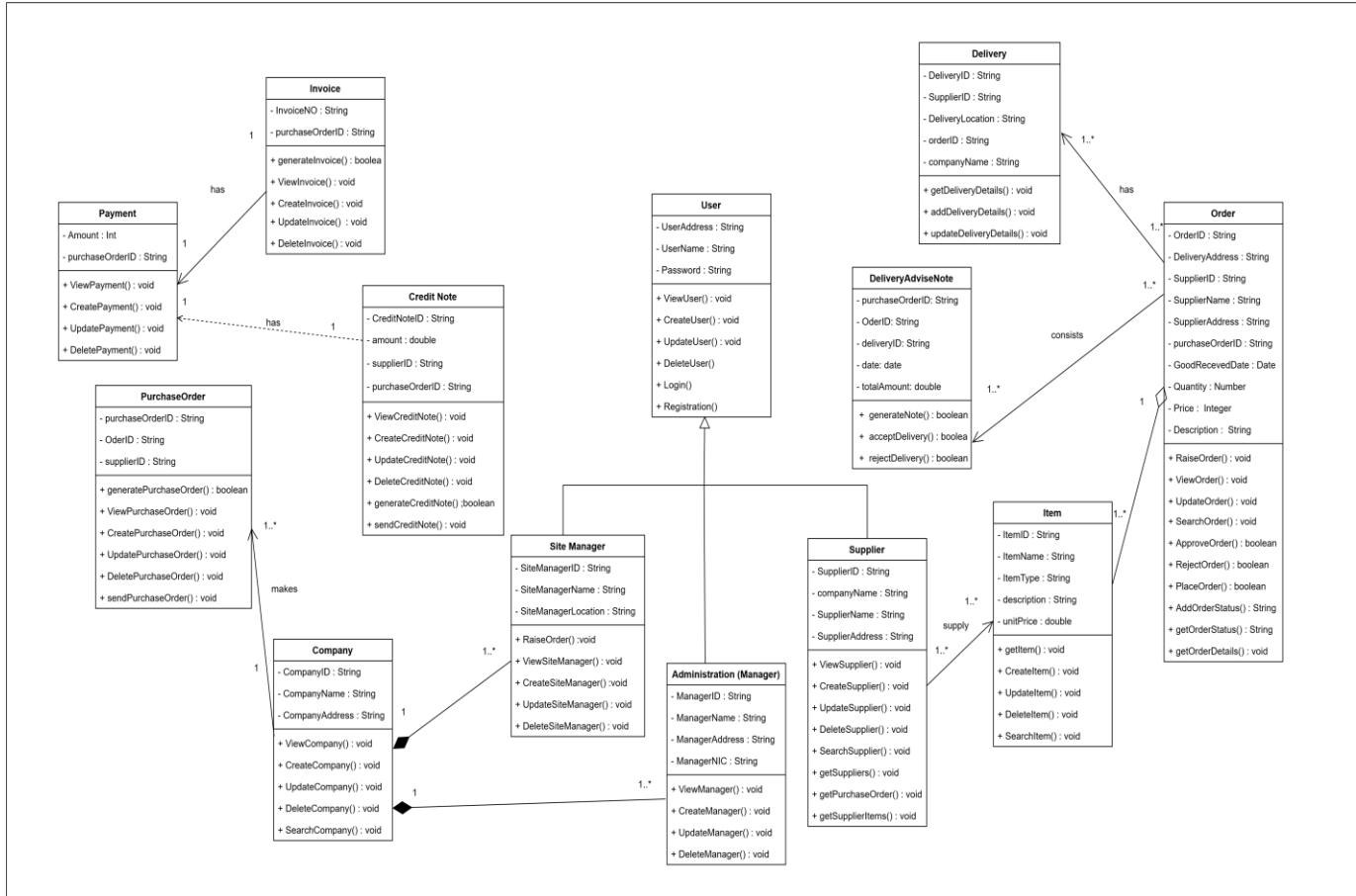
3.8 Reflected: Managers add Suppliers to the System

Number	CS2_003	
Name	Registering the suppliers to the system.	
Summary	Registering the suppliers and getting it approved by the manager.	
Priority	5	
Pre-Condition	Supplier logging to the system.	
Post-Condition	Get add from manager.	
Primary Actor(s)	Supplier	
Secondary Actor(s)	Manager	
Main Scenario	Step	Action
	1	User (Supplier) logged into the system.
	2	Then go to the supplier registration and clicked it.
	3	. Supplier need to fill the registration form.
	4	Then Submit the all details.
	5	Then manager can see all suppliers request
	6	Then manager can add to the system via register form
	7	Then click the add button.
	8	Finally gives the approved to suppliers
Extensions	Step	
	3a	Supplier need to fill the details correctly.
	3b	Fill the required fields in the registration form.
	5a	Assessing the goods quality of suppliers.
Open Issues		Cannot correctly find the quality of the goods in mobile application.

Changes:

Previous System Supplier need to request to the Admin in order to Register to the System. And then Admin registered the relevant Supplier. But in our system, we changed it as first Supplier needs to register to the system by filling the Google form. It will be sent to the Admin, he/she can add Supplier to the System by entering those details.

4 Class Diagram

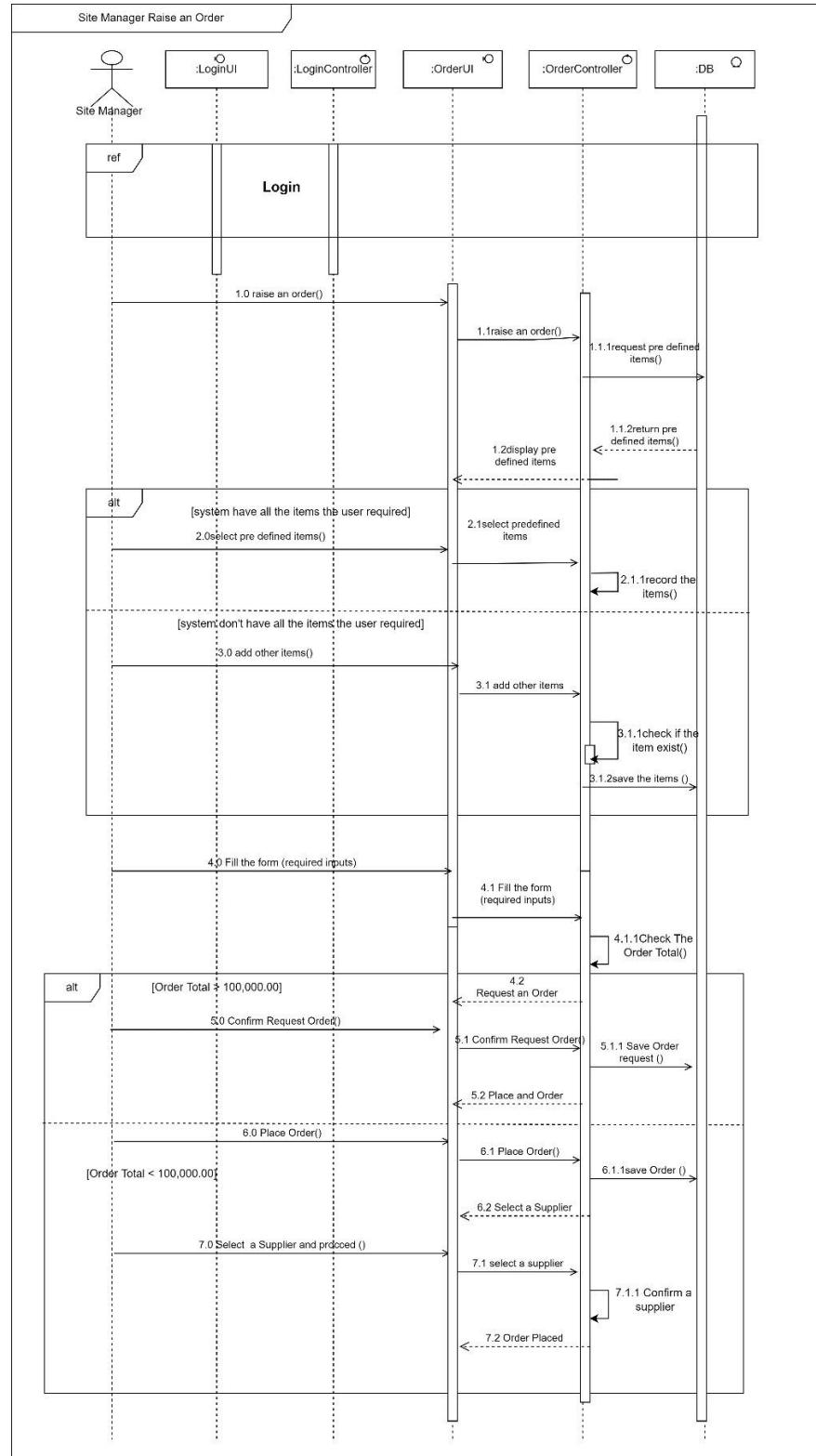


Changes:

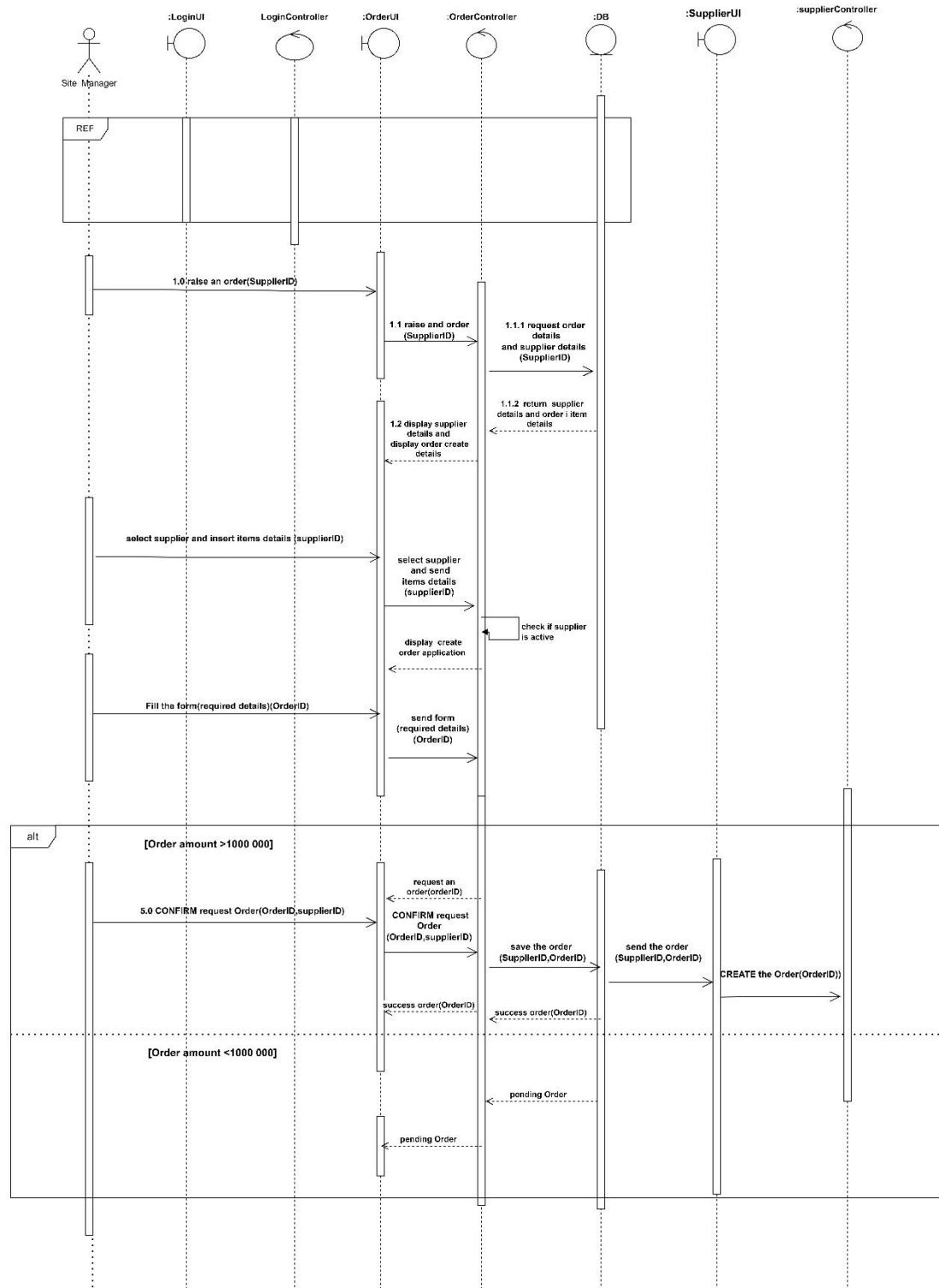
No Changes

5 Sequence Diagrams

5.1 Purposed: Site Manager Raise an Order



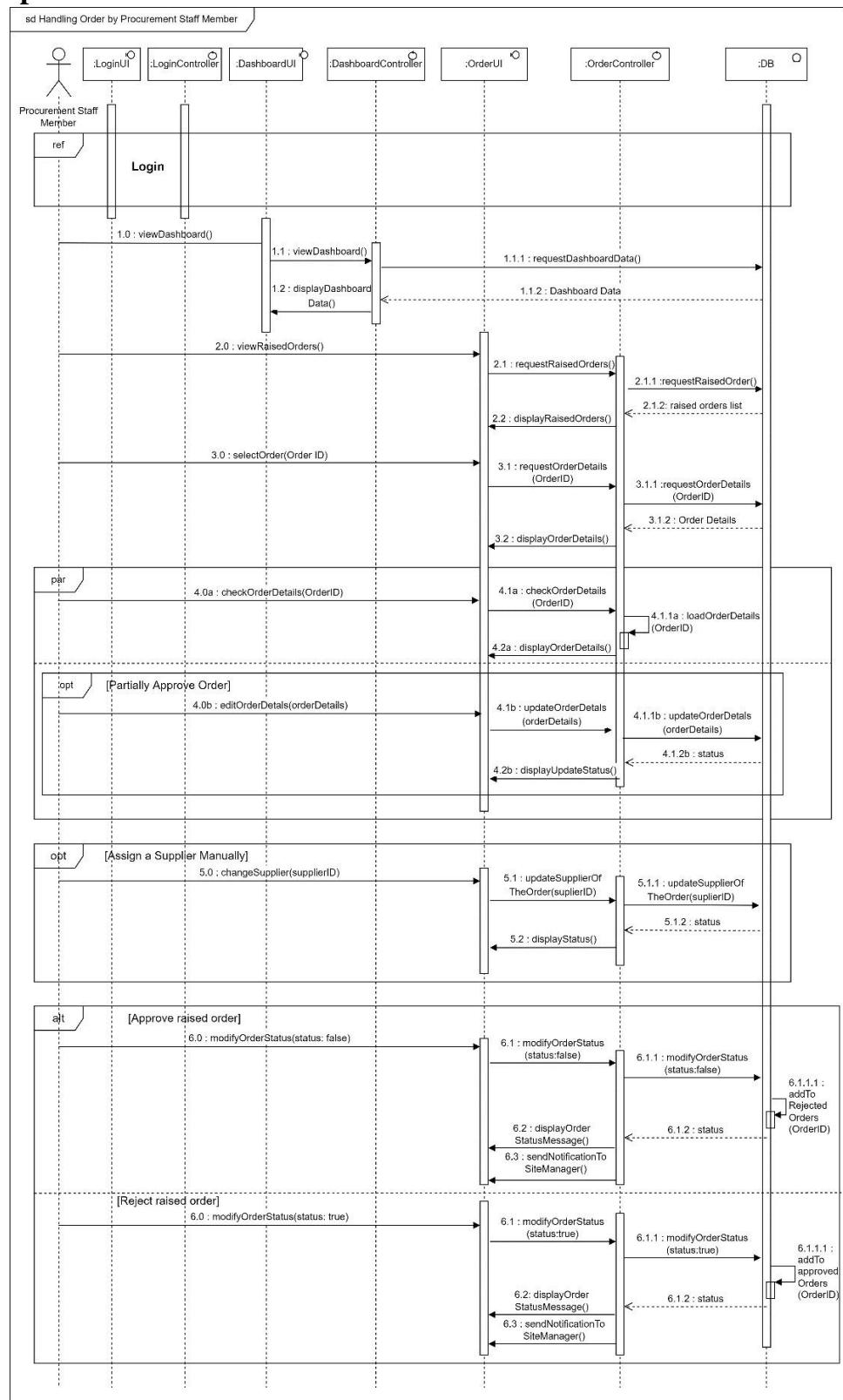
5.2 Reflected: Site Manager Raise an Order



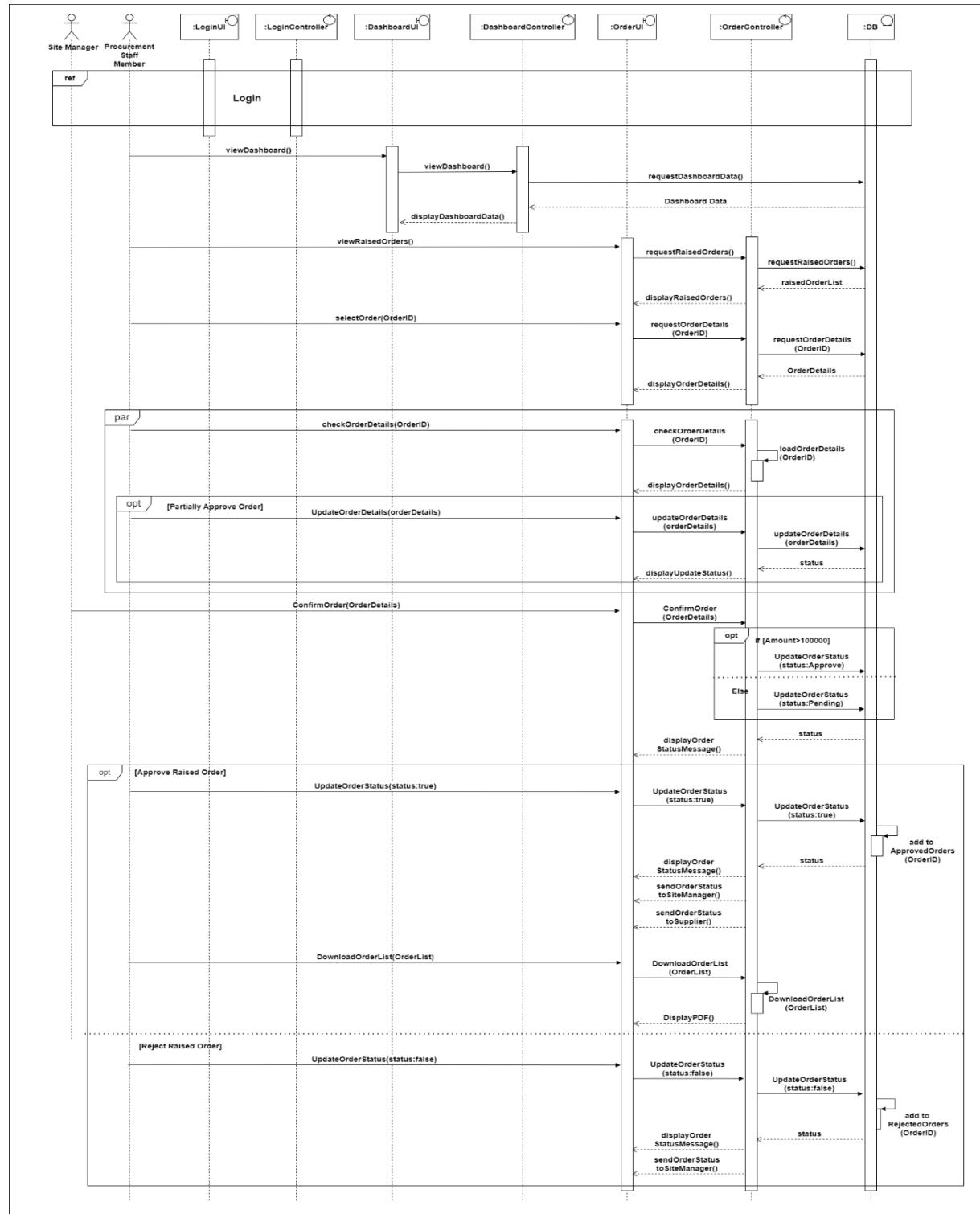
Changes:

We did the change as; Site Manager can select the relevant supplier and create the order. After that if order amount is greater than 100000 it should be Pending order and it display to Admin. If it is not then it will be sent to relevant Supplier that order status will be changed as Approved.

5.3 Purposed: Procurement Staff handle Order



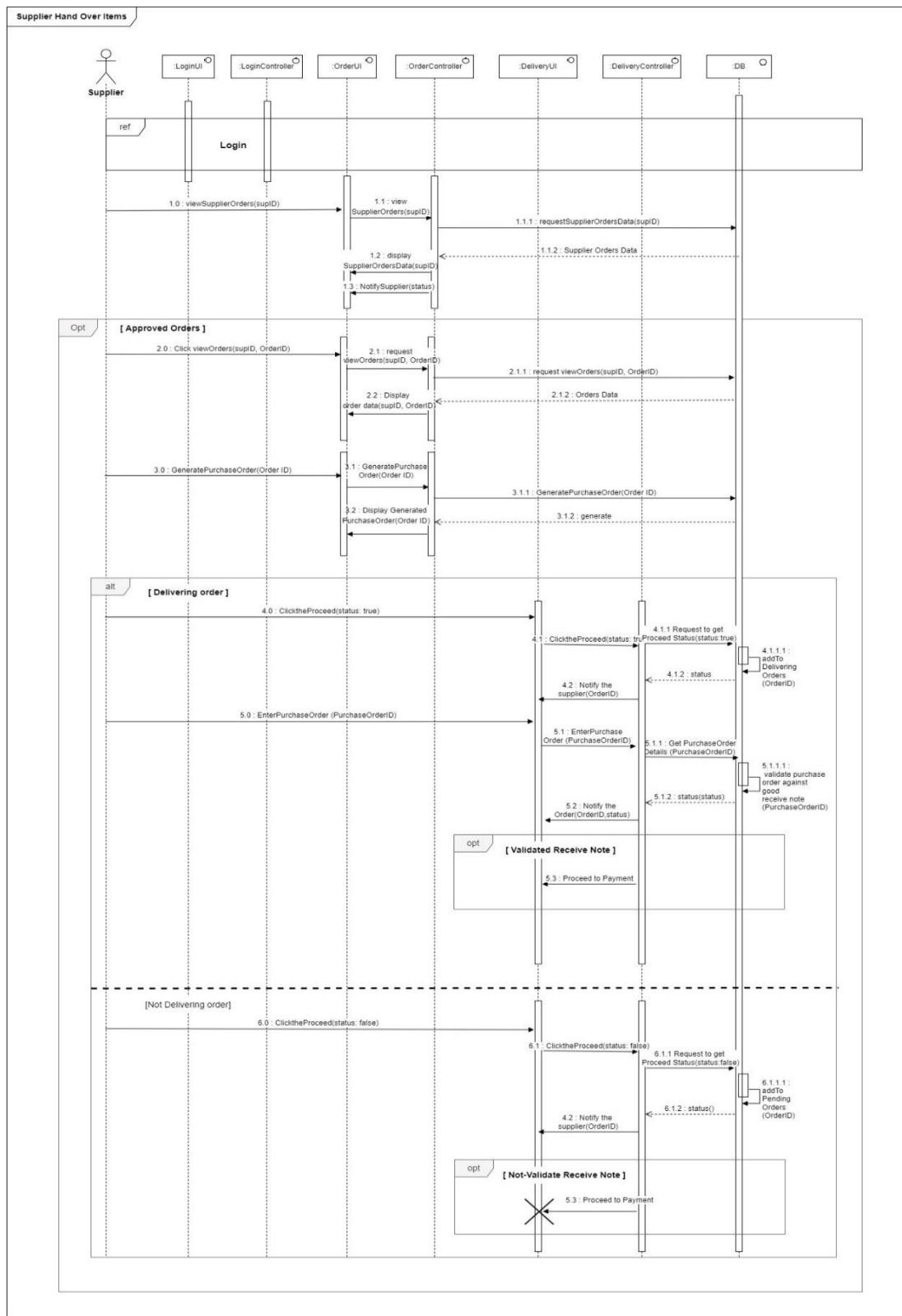
5.4 Reflected: Procurement Staff handle Order



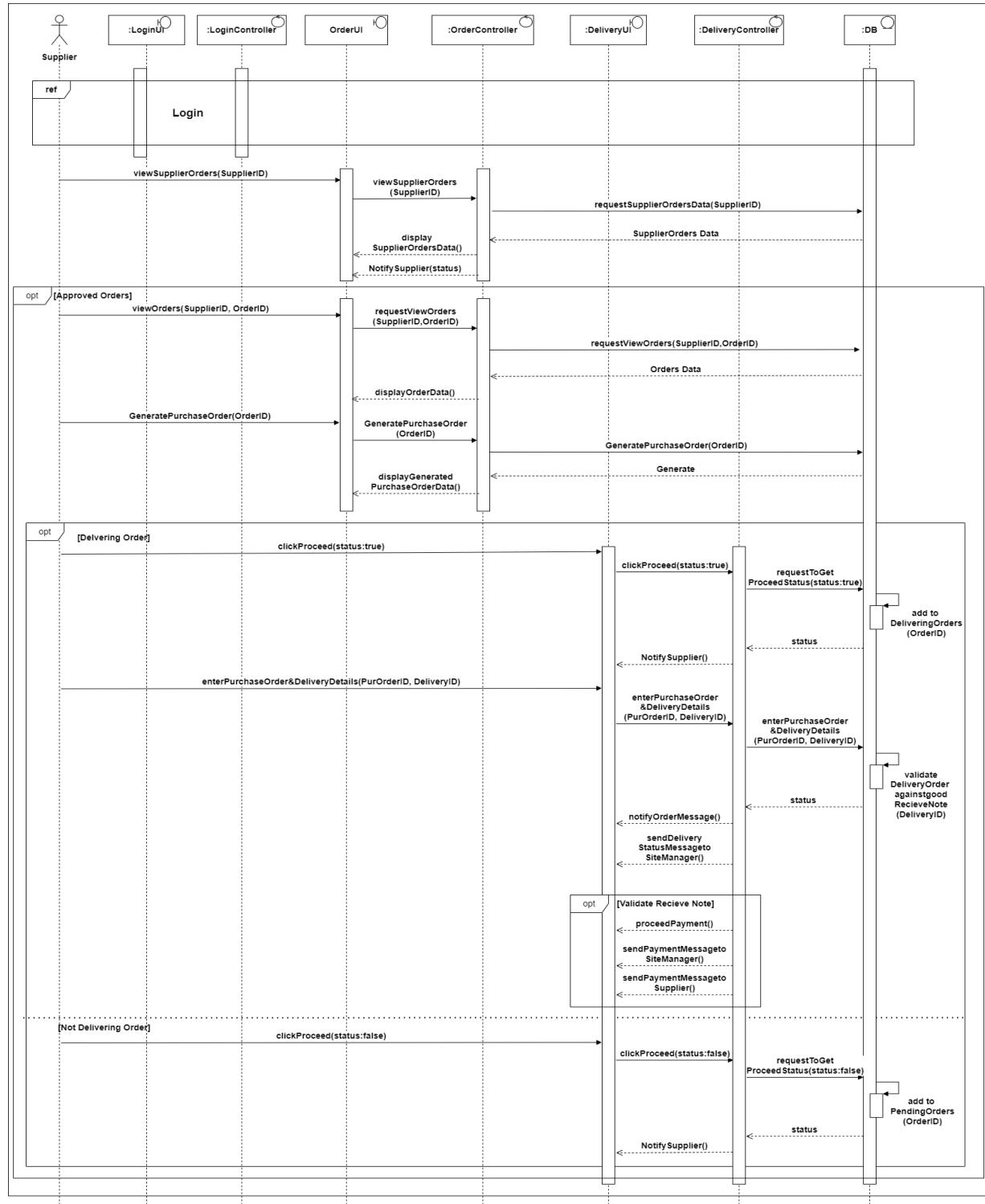
Changes:

In the purposed one the Procurement Staff Member can select the supplier and send the order to supplier. But as shown in the reflected one we changed it as that Site Manager can directly Order to relevant Supplier and if the order amount is greater than 100000, then automatically order will be Approved or else it will be Pending. After that, all order details will be sent to the Staff Members. Staff Member and Site Manager can download all order details as PDF.

5.5 Purposed: Suppliers hand over Items



5.6 Reflected: Suppliers hand over Items



Changes:

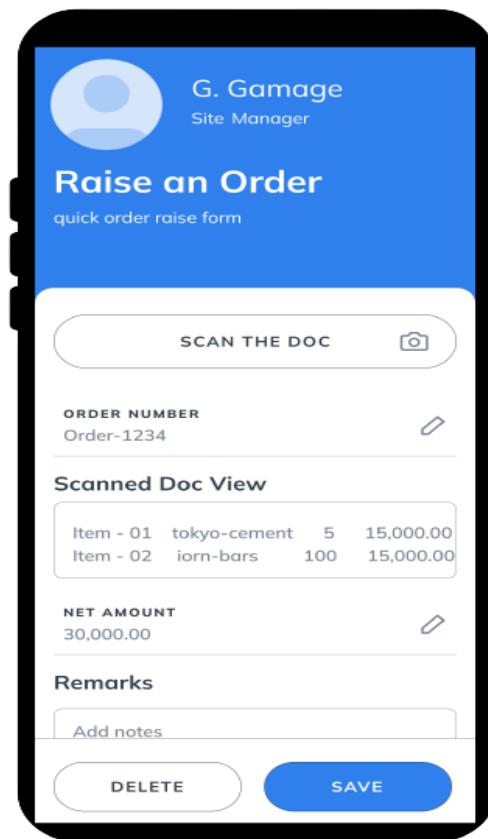
In purposed system, after receiving the successful delivery message to the supplier Site Manager did not received the order delivery status. But we changed it as Site Manager received message with Order delivery status. And also, in purposed system, Site Manager and Supplier did not received a payment success message after Payment Process. But we changed it as both should receive payment success message after the process.

6 Story Board

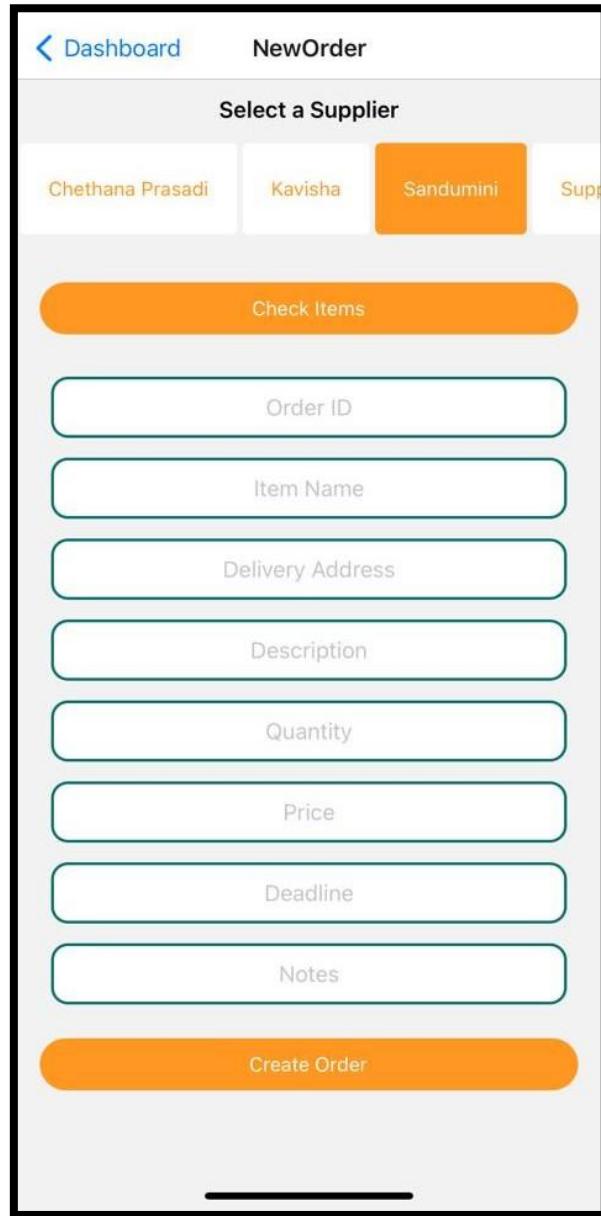


7 UI Wireframes

7.1 Proposed: Site Manager raise order from the Mobile Phone.



7.2 Reflected: Managers add Suppliers to the System

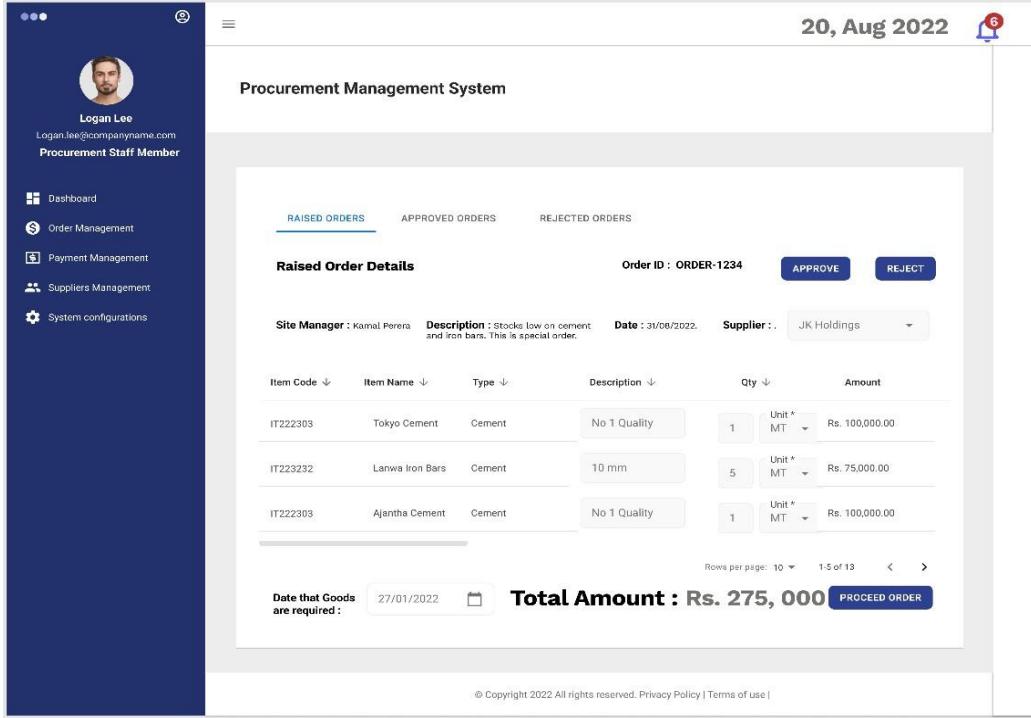


Changes:

In the proposed system, first we need to scan the document then it will be automatically catch the details and display it. The total amount will be calculated according to the details but it's not user friendly and there is no limit of what document types to be scanned. Therefore we changed it as Site Manager can see all the suppliers and the material details relevant to them then Site Manager can do the orders according to his/her requirements.

7.3 Proposed: Procurement Staff edit order received by Site Manager.

(Partially approve the order)

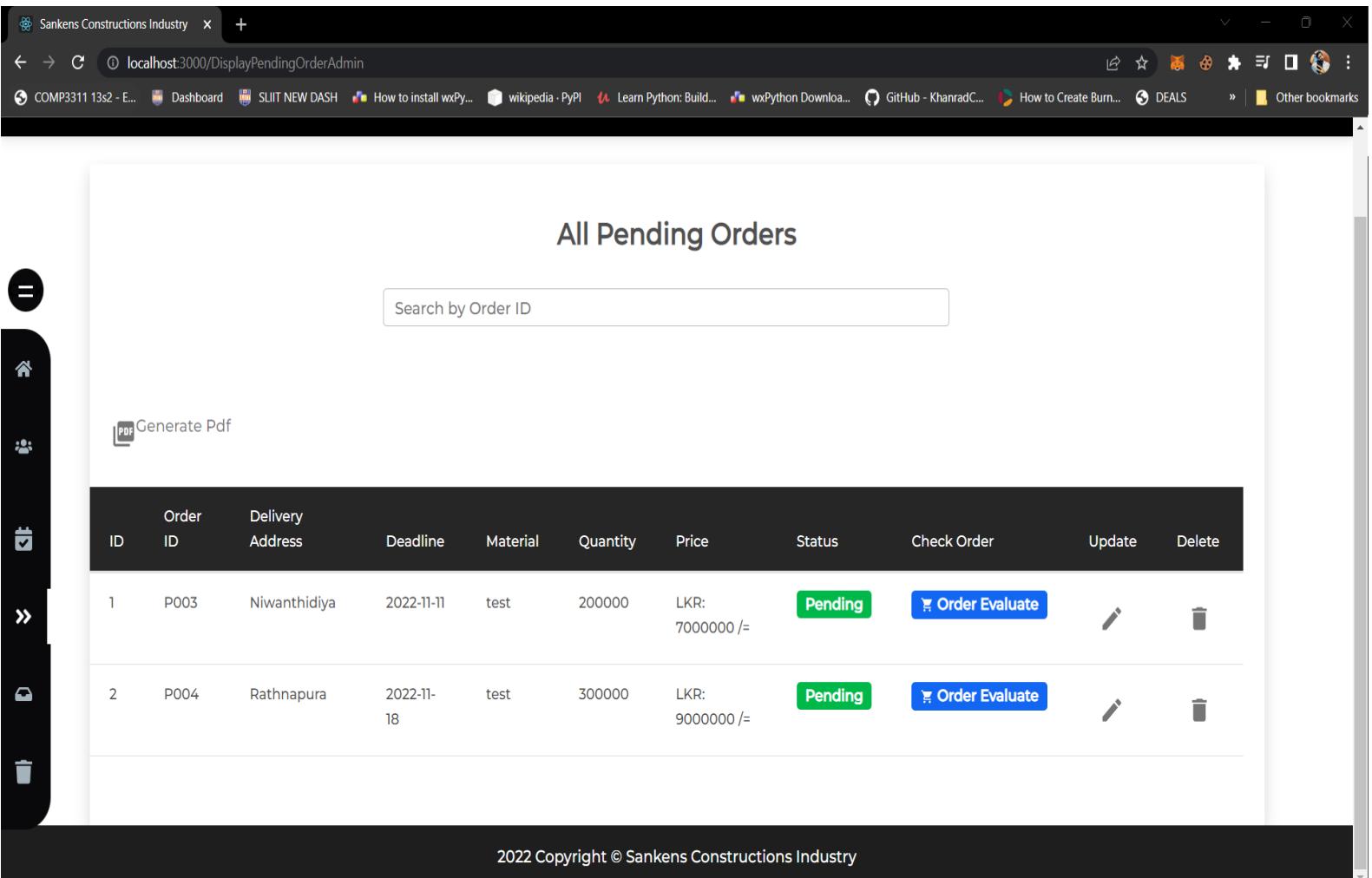


The screenshot shows the Procurement Management System interface. At the top right, it displays the date "20, Aug 2022" and a notification icon with the number "6". The main title "Procurement Management System" is centered above the order details. The order details section includes fields for "Site Manager" (Kamal Perera), "Description" (Stocks low on cement and iron bars. This is a special order.), "Date" (31/08/2022), and "Supplier" (JK Holdings). Below this, a table lists the order items:

Item Code	Item Name	Type	Description	Qty	Unit	Amount
IT222303	Tokyo Cement	Cement	No 1 Quality	1	MT	Rs. 100,000.00
IT222322	Lanwa Iron Bars	Cement	10 mm	5	MT	Rs. 75,000.00
IT222303	Ajantha Cement	Cement	No 1 Quality	1	MT	Rs. 100,000.00

At the bottom, there is a note "Date that Goods are required : 27/01/2022" and a total amount "Total Amount : Rs. 275, 000". There are "APPROVE" and "REJECT" buttons at the top right of the order details. The footer contains copyright information: "© Copyright 2022 All rights reserved. Privacy Policy | Terms of use |".

7.4 Reflected: Procurement Staff edit order received by Site Manager.



All Pending Orders

Search by Order ID

Generate Pdf

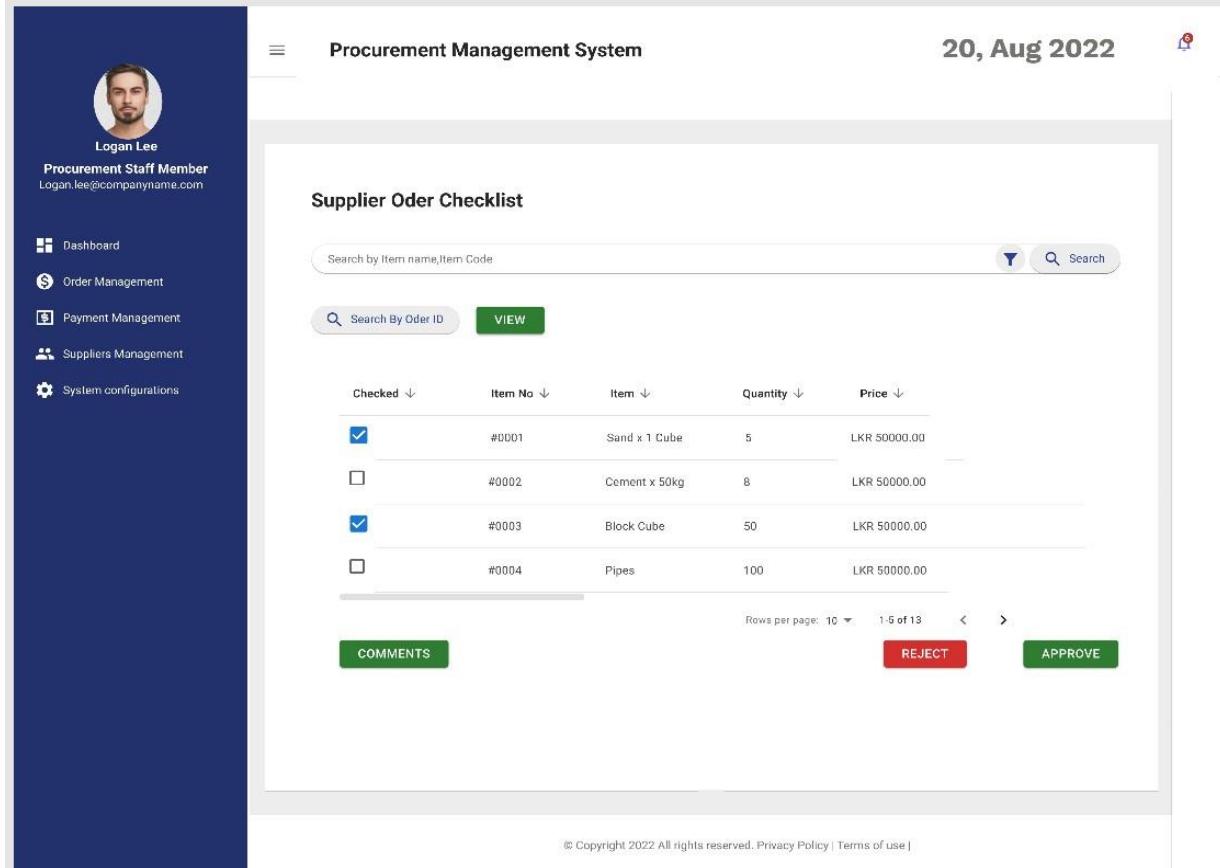
ID	Order ID	Delivery Address	Deadline	Material	Quantity	Price	Status	Check Order	Update	Delete
1	P003	Niwanthidiya	2022-11-11	test	200000	LKR: 7000000 /=	Pending	Order Evaluate		
2	P004	Rathnapura	2022-11-18	test	300000	LKR: 9000000 /=	Pending	Order Evaluate		

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Changes:

We are change the interface because the create order site manager can direct raise order relevant supplier and total amount is greater than 100 000 then automatically order going to pending list and admin can edit order details or can remove order.

7.5 Purposed: Supplier All Orders



The screenshot shows the Procurement Management System interface. On the left, there is a sidebar with a user profile for Logan Lee (Procurement Staff Member, logan.lee@companyname.com) and navigation links for Dashboard, Order Management, Payment Management, Suppliers Management, and System configurations.

The main content area is titled "Procurement Management System" and shows the date "20, Aug 2022". It features a "Supplier Order Checklist" section with a search bar and a "VIEW" button. The checklist table has columns: Checked, Item No, Item, Quantity, and Price. The data is as follows:

Checked	Item No	Item	Quantity	Price
<input checked="" type="checkbox"/>	#0001	Sand x 1 Cube	5	LKR 50000.00
<input type="checkbox"/>	#0002	Cement x 50kg	8	LKR 50000.00
<input checked="" type="checkbox"/>	#0003	Block Cube	50	LKR 50000.00
<input type="checkbox"/>	#0004	Pipes	100	LKR 50000.00

At the bottom of the checklist, there are "COMMENTS", "REJECT", and "APPROVE" buttons. A footer at the bottom of the page includes copyright information: "© Copyright 2022 All rights reserved. Privacy Policy | Terms of use |".

localhost:3000/AllOrdersAdmin

COMP3311 13s2 - E.. Dashboard SUIT NEW DASH How to install wxPy... wikipedia - PyPI Learn Python: Build... wxPython Download GitHub - KhanradC.. How to Create Burn... DEALS Other bookmarks

All Orders

Search by Order ID

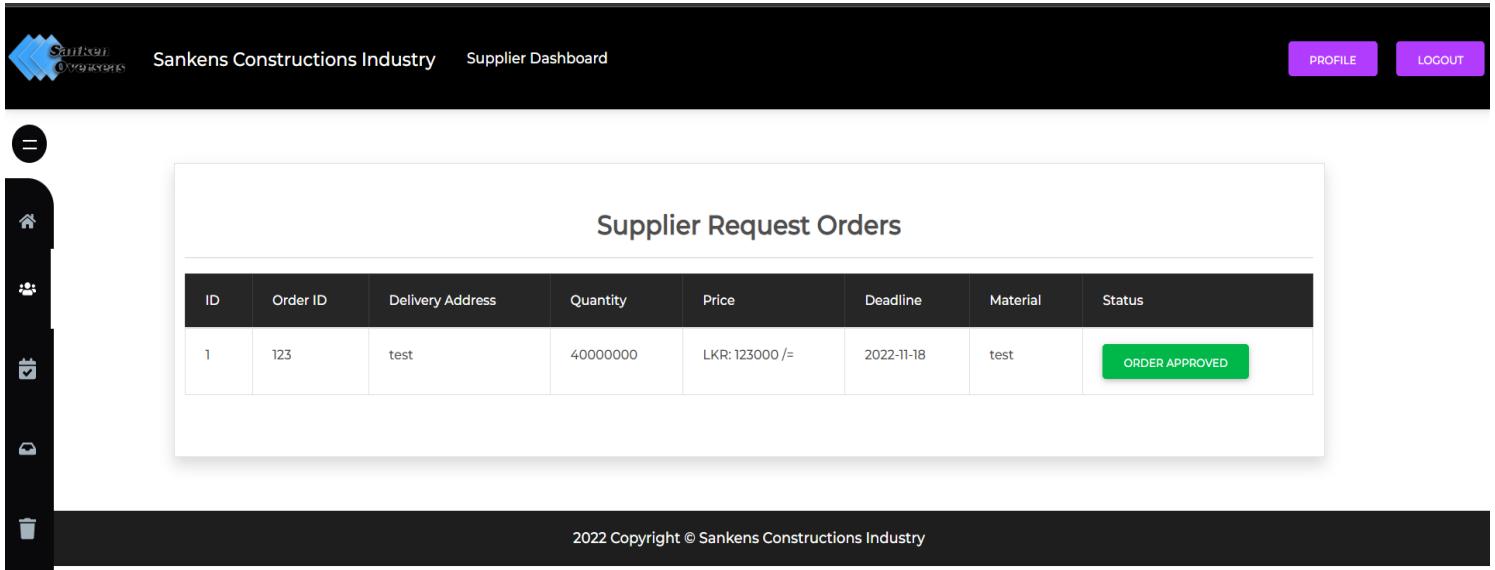
GENERATE PDF EXPORT AS EXCEL

ID	Order ID	Delivery Address	Date Created	Quantity	Price	Status	Action	Edit	Remove
1	P002	PIISDS	Fri Oct 28 2022	1000000	LKR: 2000000	OK	VIEW ORDER		
2	P001	Piliyandala	Fri Oct 28 2022	200	LKR: 5000000	OK	VIEW ORDER		
3	wewe	wewe	Tue Nov 01 2022	200000	LKR: 5000000	decline	VIEW ORDER		
4	123	test	Tue Nov 01 2022	4000000	LKR: 123000	OK	VIEW ORDER		
5	P003	Niwanthidiya	Wed Nov 02 2022	200000	LKR: 7000000	Pending	VIEW ORDER		

Changes:

We are change interface color and some components are small changed we are used both app and web application same color

7.6 Reflected: Supplier Request Orders

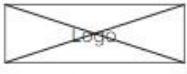


The screenshot shows the Supplier Dashboard interface for Sankens Constructions Industry. At the top, there is a navigation bar with the Sankens logo, the company name, and links for PROFILE and LOGOUT. On the left, a vertical sidebar contains icons for Home, User Management, Calendar, and Trash. The main content area is titled "Supplier Request Orders" and displays a single row in a table:

ID	Order ID	Delivery Address	Quantity	Price	Deadline	Material	Status
1	123	test	40000000	LKR: 123000 /=	2022-11-18	test	<button>ORDER APPROVED</button>

At the bottom of the page, a footer bar contains the copyright notice "2022 Copyright © Sankens Constructions Industry".

7.7 Proposed: All Orders





Kamal Perera
Procurement Staff
kamal@gmail.com

- [!\[\]\(d09d5ba786eda48d77eb00e19fd6366b_img.jpg\) Dashboard](#)
- [!\[\]\(b1ea00f539f58b9ccee429dee091aabc_img.jpg\) Payment Management](#)
- [!\[\]\(9f932a8f74c52f71073cbf9d6ea85412_img.jpg\) Manage Orders](#)
- [!\[\]\(c1356e9d5fde470a076d12cd97e3f1ab_img.jpg\) Suppliers Management](#)
- [!\[\]\(6282a68f2a2127eb9e98ed7a5e74bb36_img.jpg\) System Configuration](#)

Procurement Management System

20, August 2022 
Kamal 

Raised Orders	Approved Orders	Rejected Orders		
Search By Order ID 	Sort By Date 	Ascending 		
Order ID	Site Manager	Amount	Description	Options
1. ORD0001	Kamal Perera	Rs. 175,000	Stocks low on cement and iron bars. This is spe...	  
2. ORD0002	Kamal Perera	Rs. 255,000	Need to order more sand from the suppliers.	  
3. ORD0005	Sameera	Rs. 156,000	Low on cement stocks on premises.	  
...				

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Sankens Constructions Industry Supplier Dashboard [PROFILE](#) [LOGOUT](#)

123 - Order Delivery Status

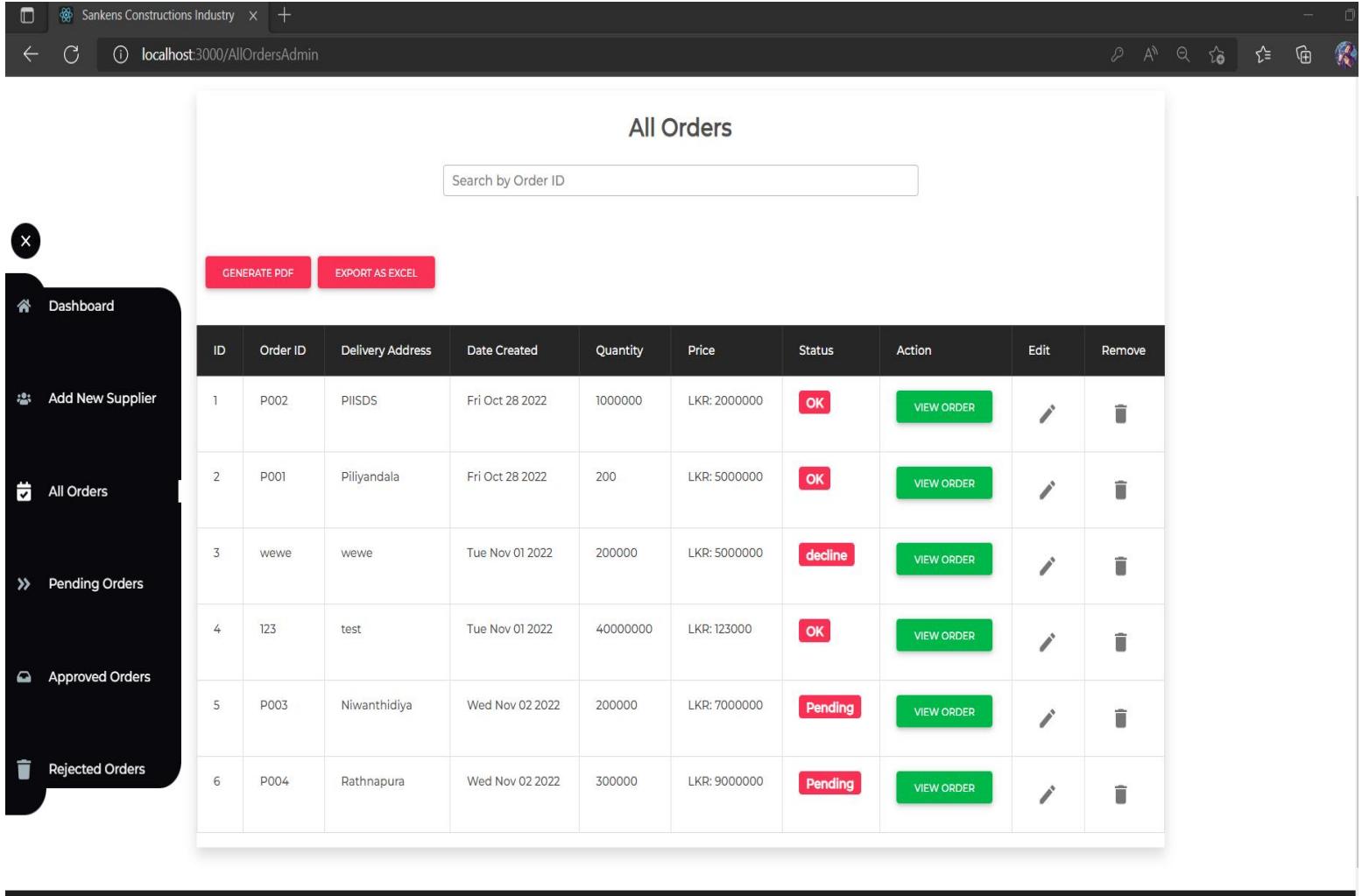
Order ID	Quantity	
123	40000000	
Total Price	Delivery Address	Order status
123000	test	OK
Description		
test		

Transport Order

Transport ID
Location
Vehicle Number
Transport Status

TRANSPORT ORDER

7.8 Reflected: All Orders



The screenshot shows the 'All Orders' page of the Sankens Constructions Industry application. The page title is 'All Orders'. It features a search bar labeled 'Search by Order ID'. Below the search bar are two buttons: 'GENERATE PDF' and 'EXPORT AS EXCEL'. The main content is a table with the following data:

ID	Order ID	Delivery Address	Date Created	Quantity	Price	Status	Action	Edit	Remove
1	P002	PIISDS	Fri Oct 28 2022	1000000	LKR: 2000000	OK	VIEW ORDER		
2	P001	Piliyandala	Fri Oct 28 2022	200	LKR: 5000000	OK	VIEW ORDER		
3	wewe	wewe	Tue Nov 01 2022	200000	LKR: 5000000	decline	VIEW ORDER		
4	123	test	Tue Nov 01 2022	4000000	LKR: 123000	OK	VIEW ORDER		
5	P003	Niwanthidiya	Wed Nov 02 2022	200000	LKR: 7000000	Pending	VIEW ORDER		
6	P004	Rathnapura	Wed Nov 02 2022	300000	LKR: 9000000	Pending	VIEW ORDER		

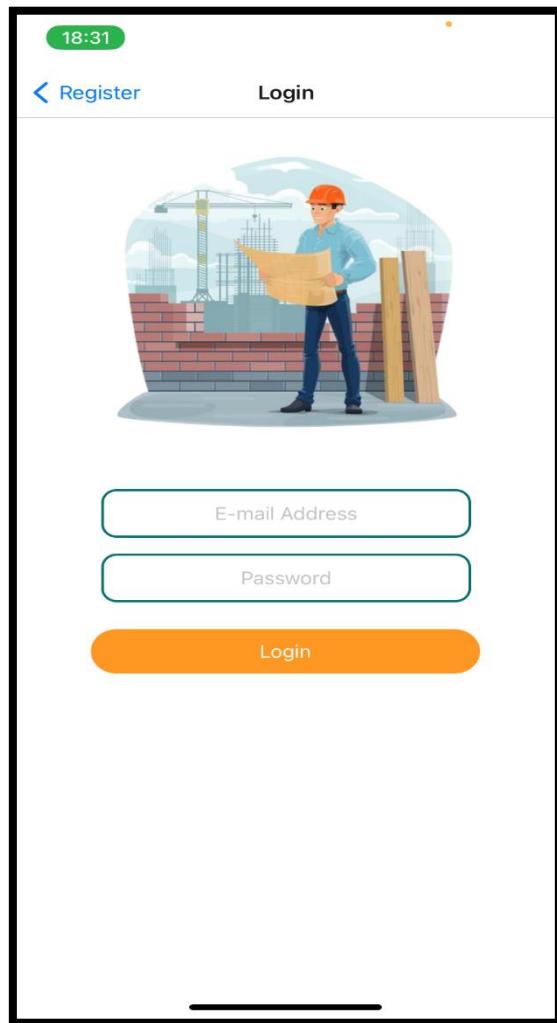
A sidebar on the left contains the following navigation links: Dashboard, Add New Supplier, All Orders, Pending Orders, Approved Orders, and Rejected Orders.

Changes:

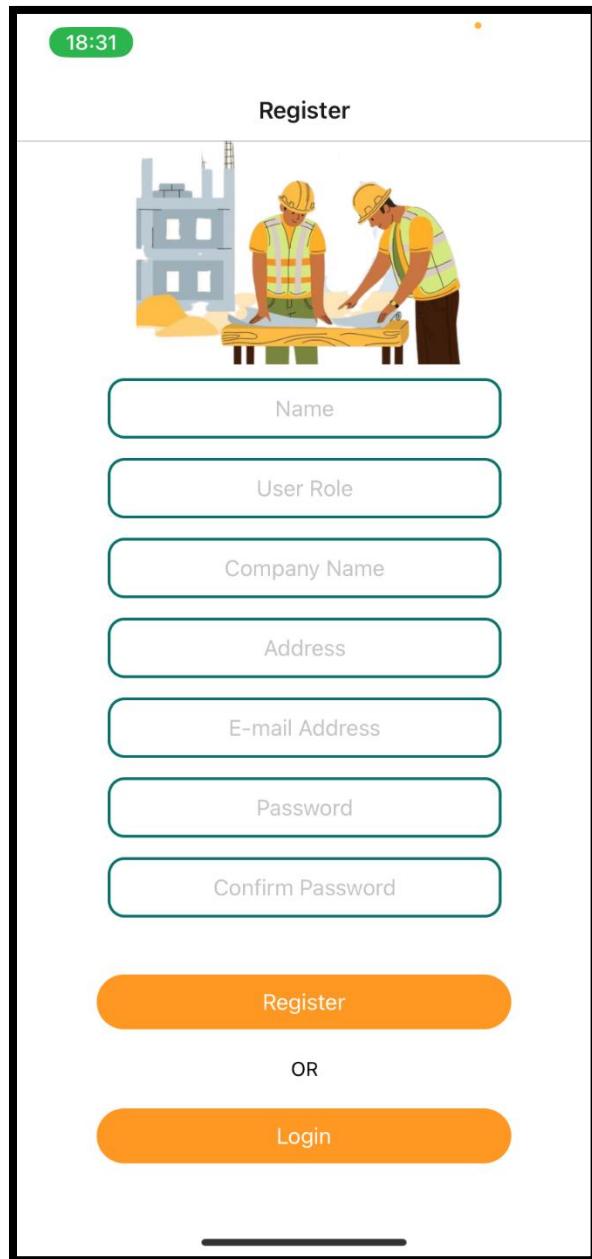
We are change the interface because when the Site Manager raises the order when order total amount is less than 100 000 when order status is automatically approved and send the details relevant supplier and he or she can provide the delivery details and create delivery note relevant order. We are change the interface design and additional add all order export via pdf and excel sheet.

8 Wireframes – Mobile

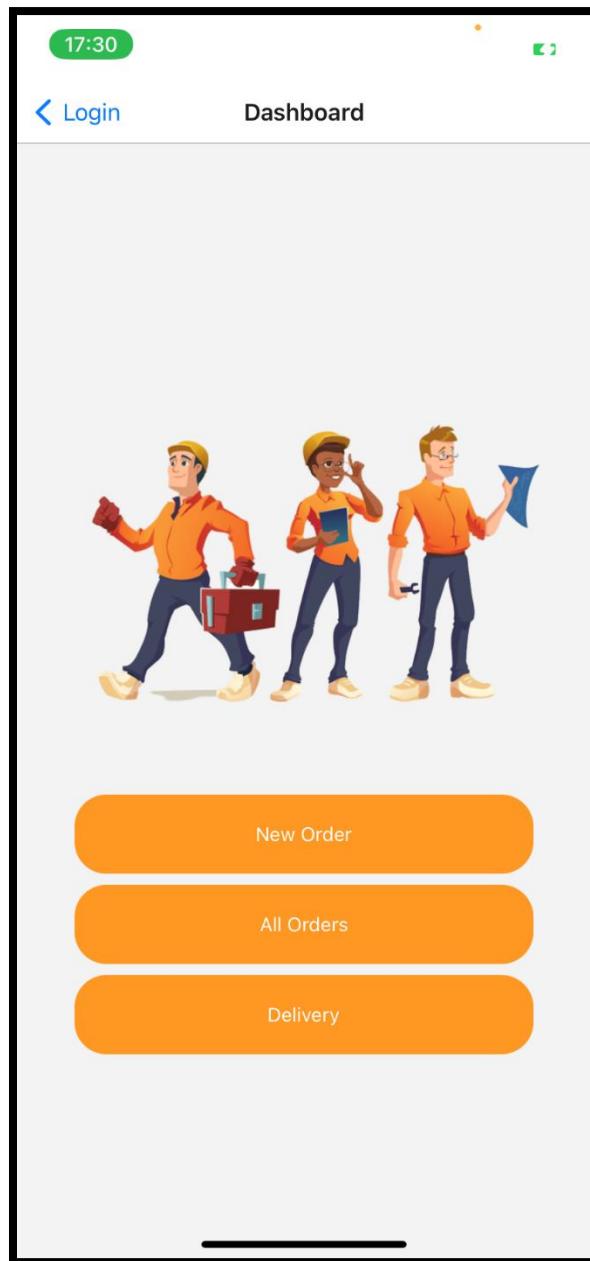
8.1 Login interface



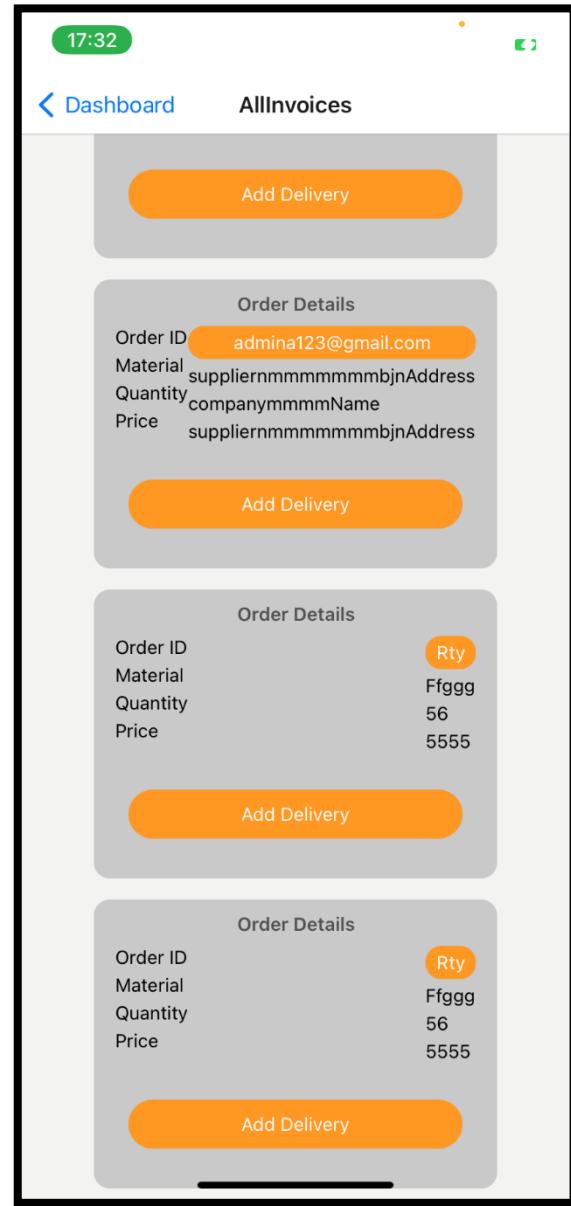
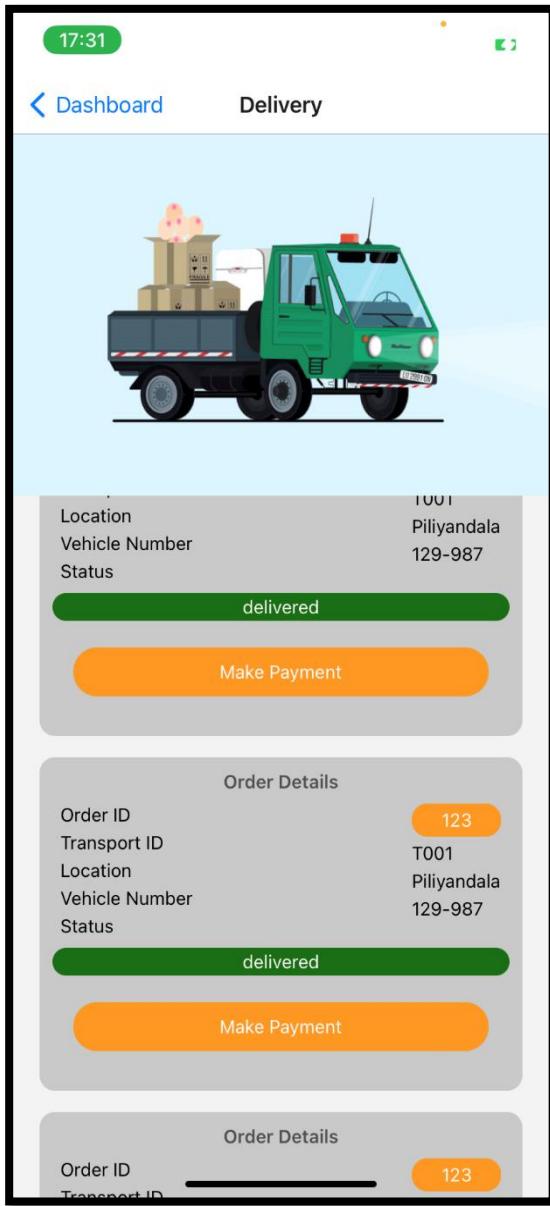
8.2 Register Interface



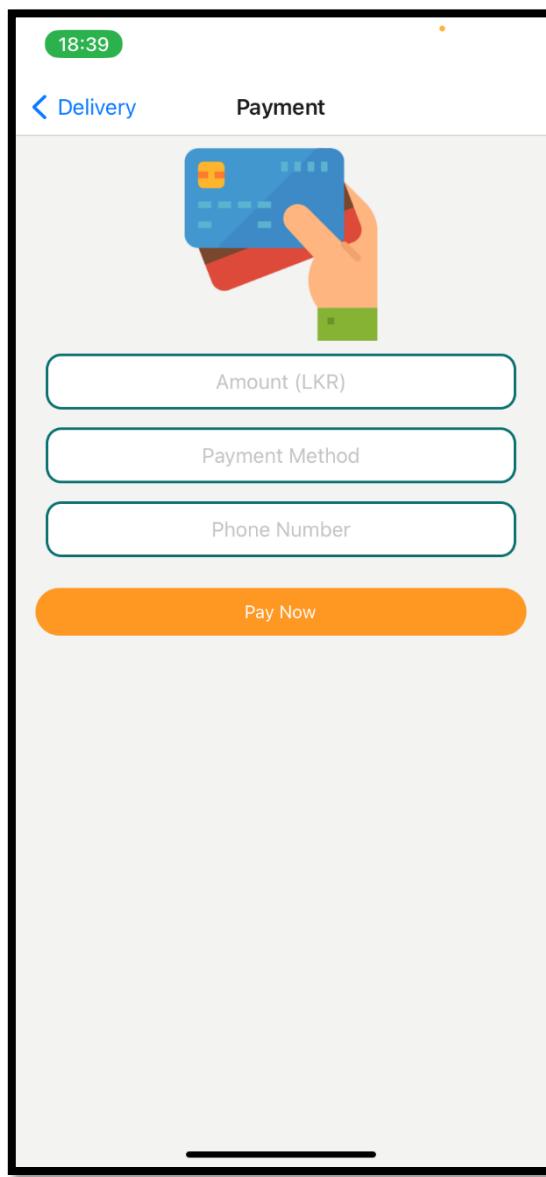
8.3 Site Manager Dashboard



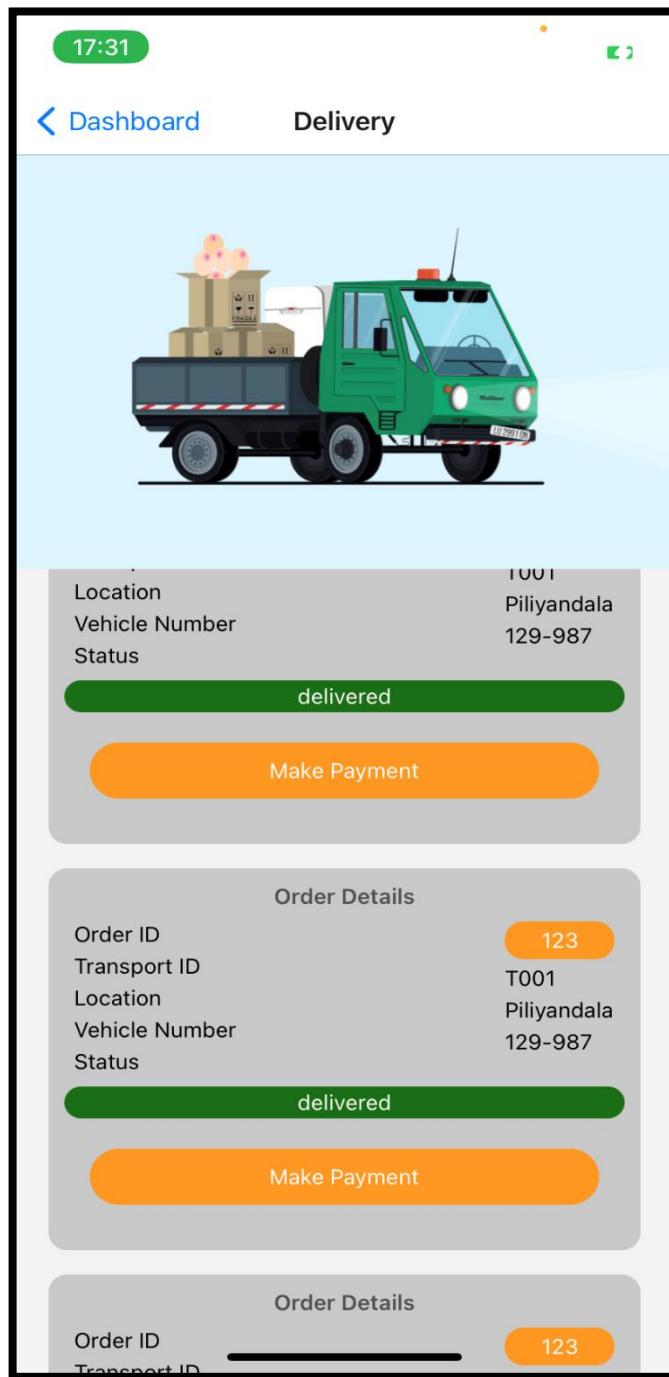
8.4 Delivery and Invoices Interface



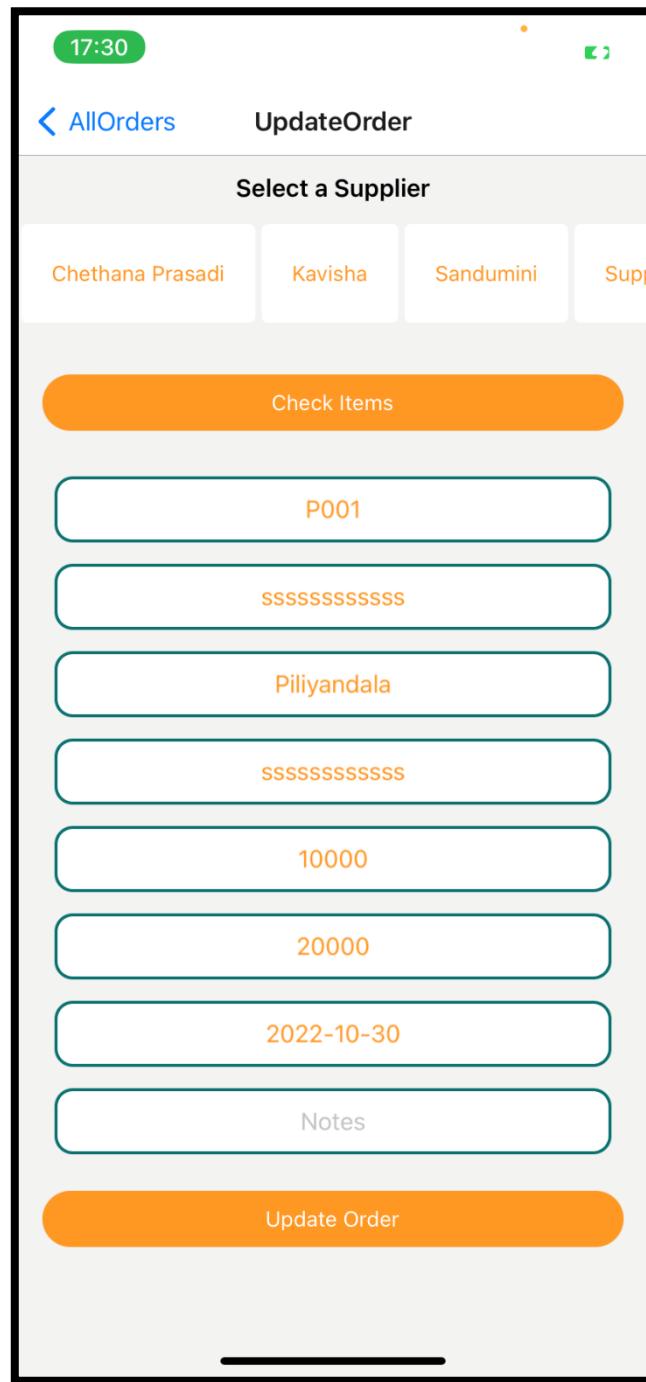
8.5 Payment Interface



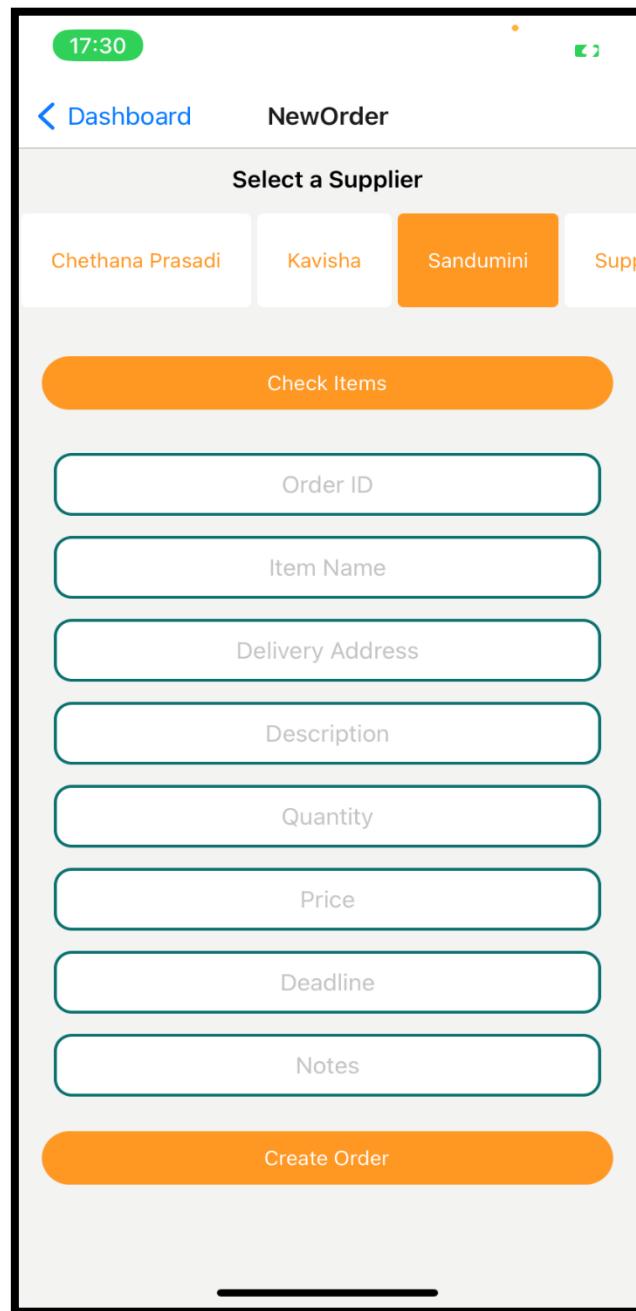
8.6 Delivery Interface



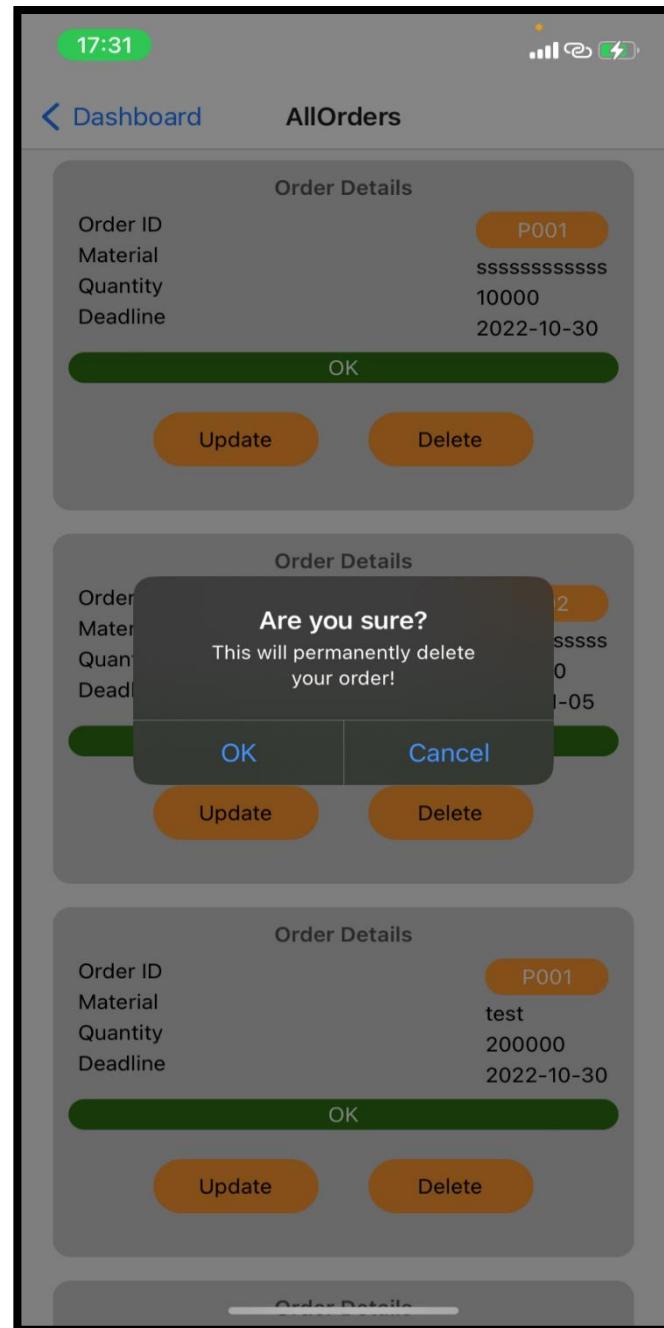
8.7 Update Orders Interface



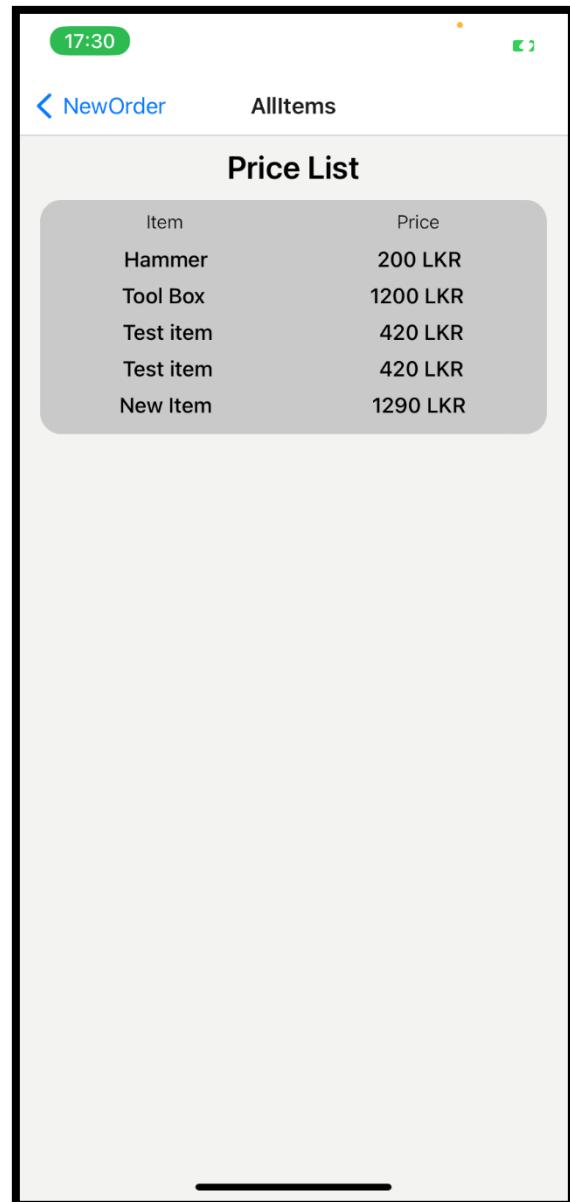
8.8 Create Order Interface



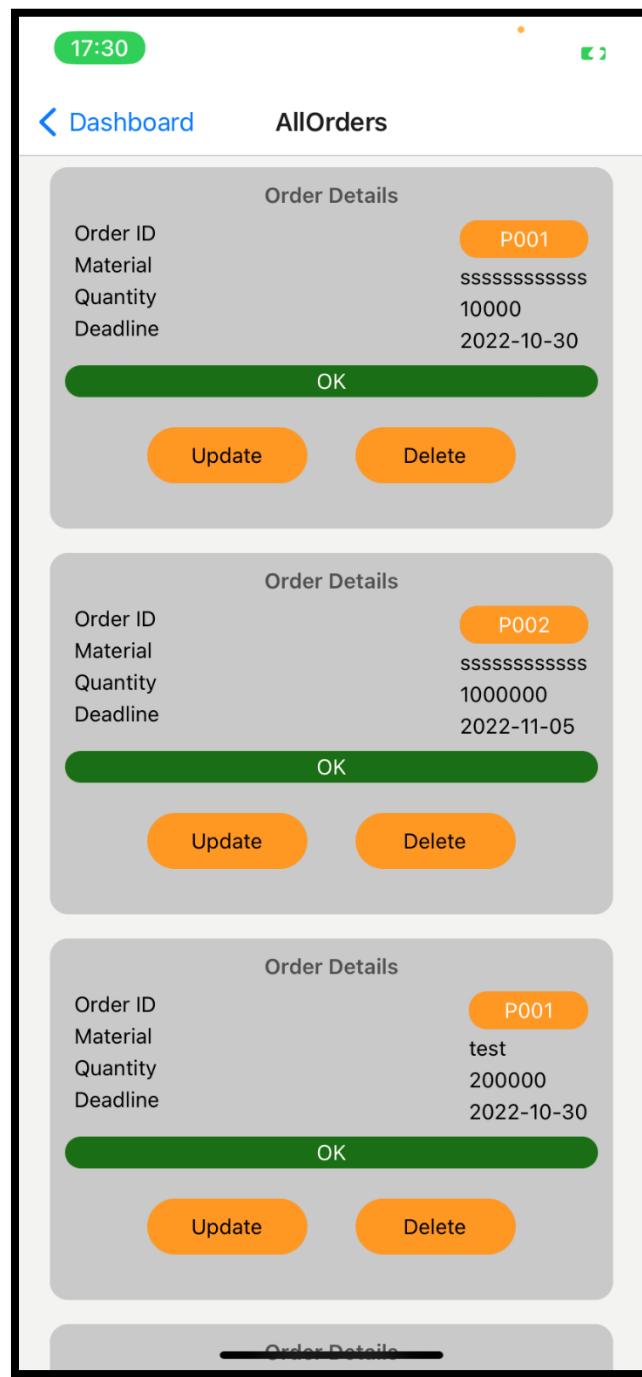
8.9 Remove order Site Manager Interface



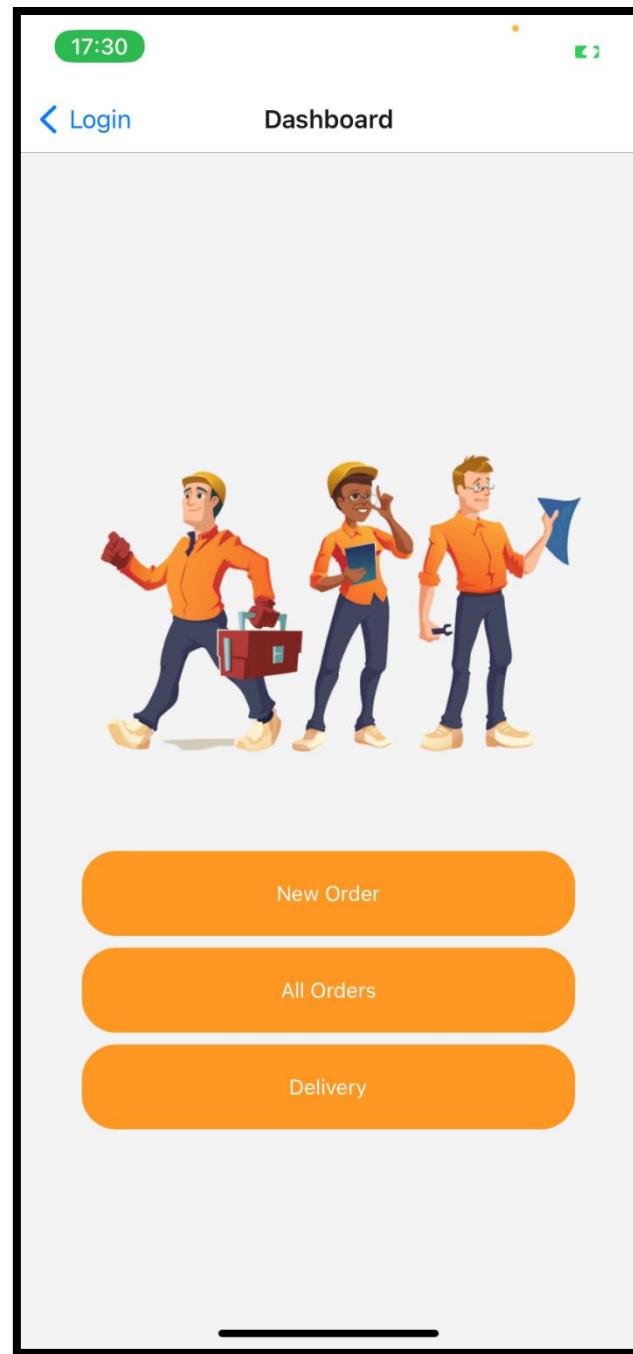
8.10 Each Supplier Items List Interface



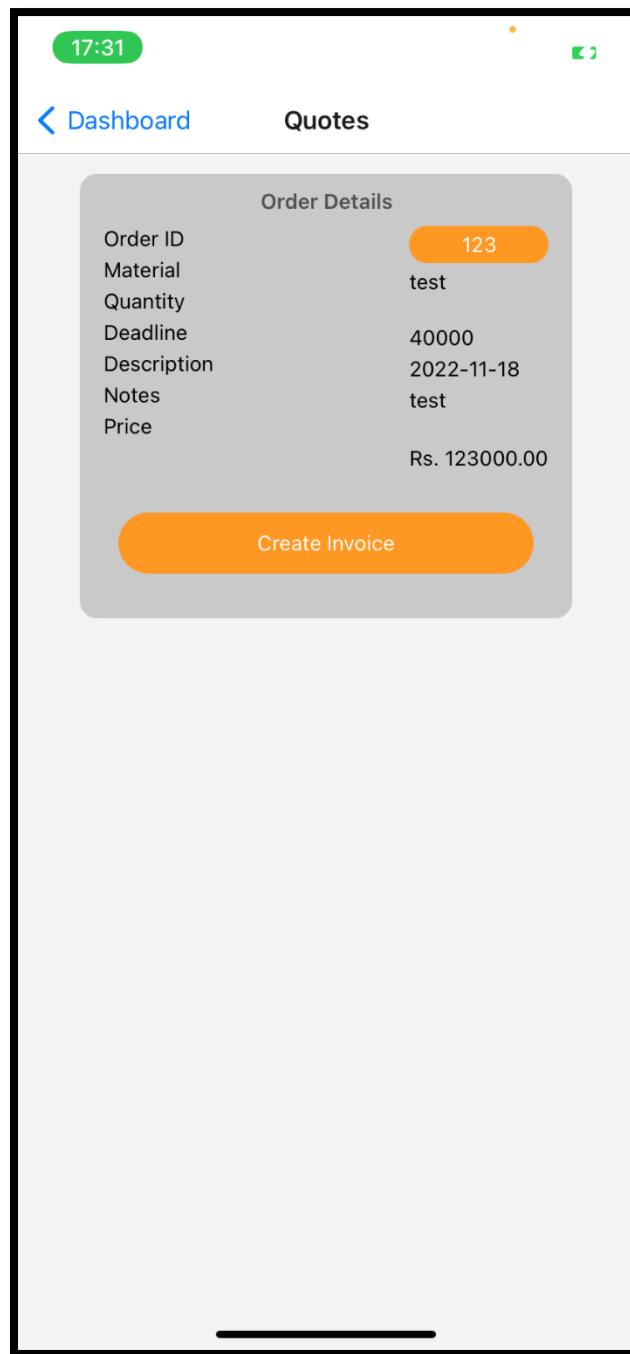
8.11 Site Manager All order Interface



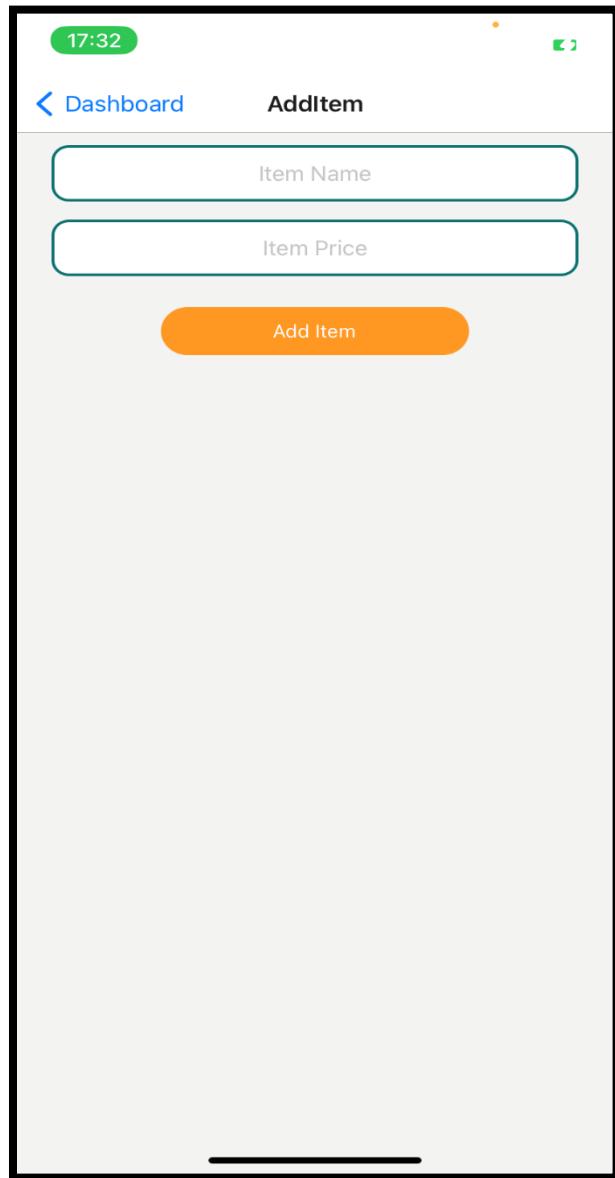
8.12 Site Manager Dashboard



8.13 Quotation Interface

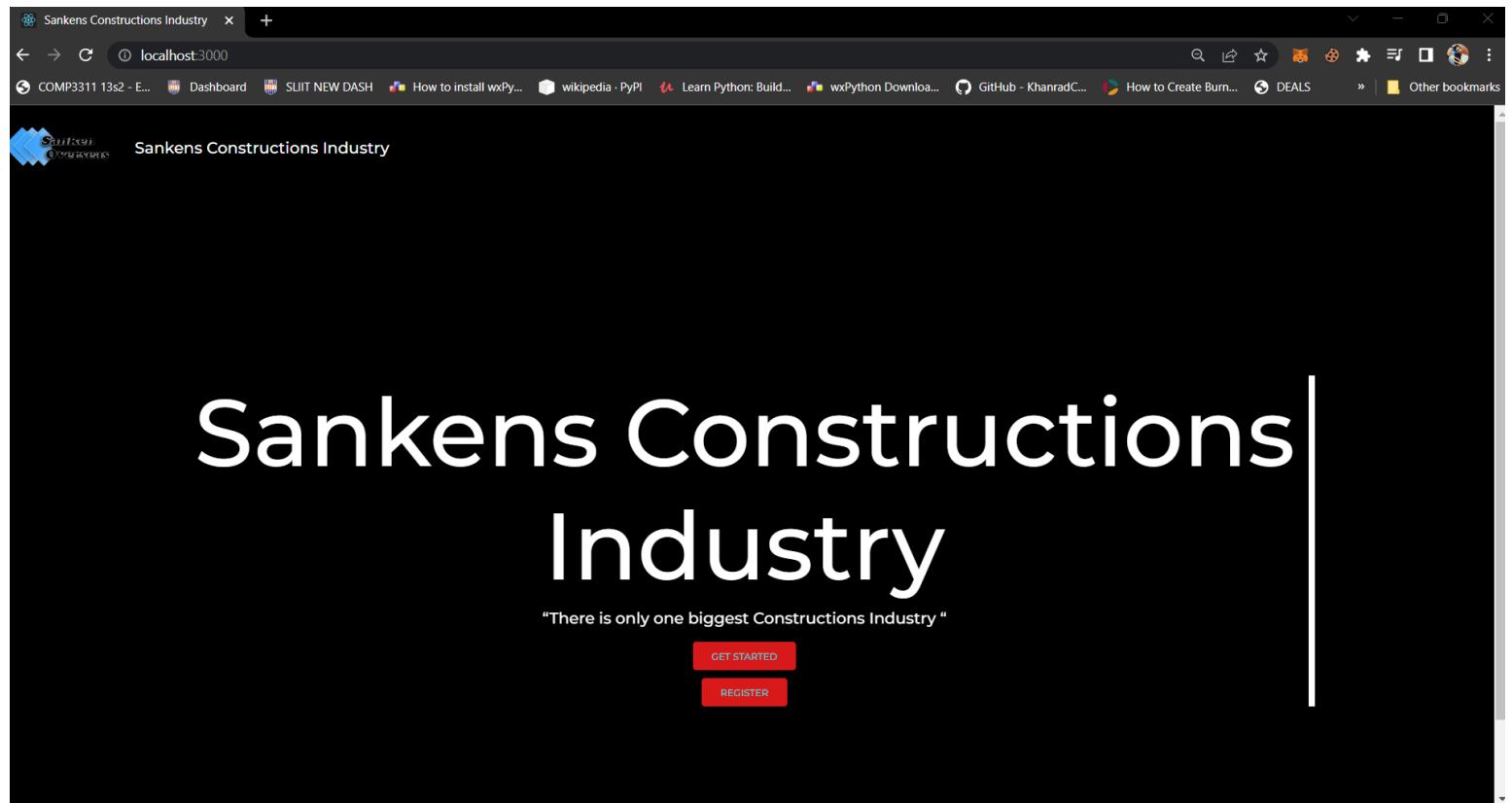


8.14 Add Material Interface (Supplier)

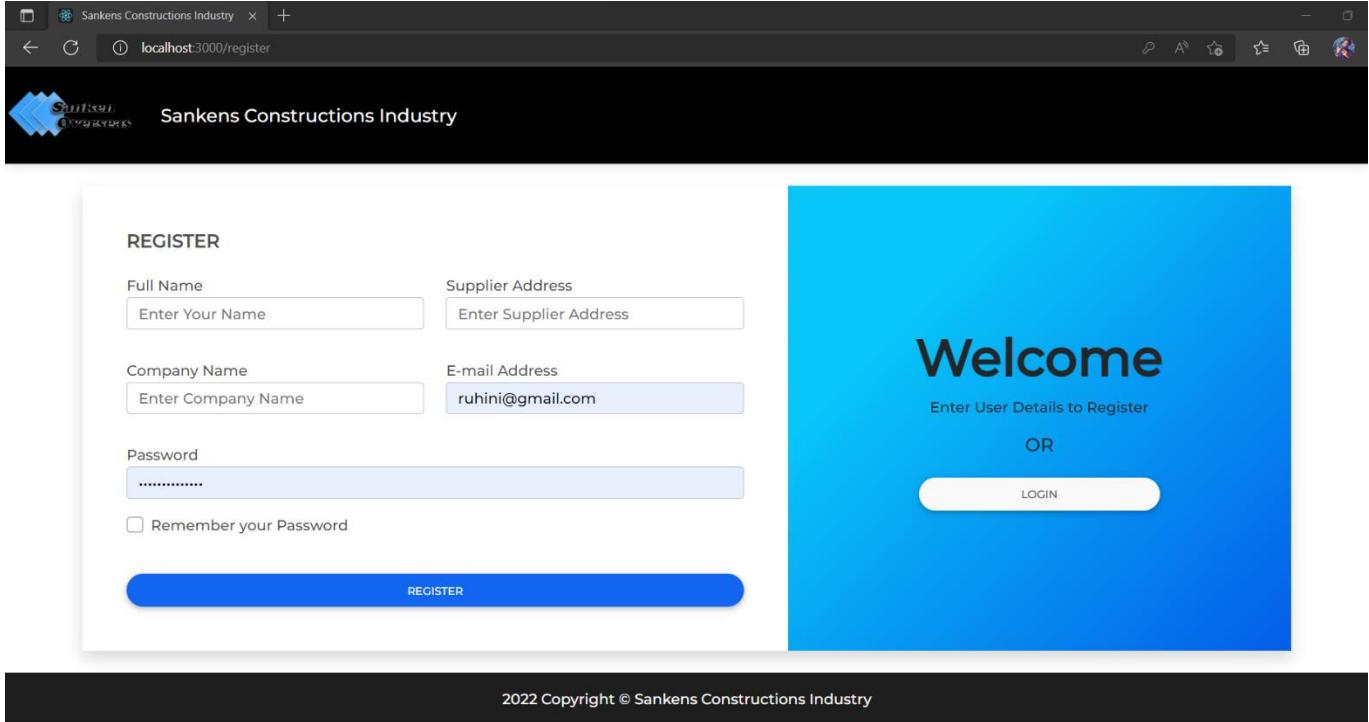


9 Some Web application UI interface

9.1 Dashboard



9.2 Register Interface



The screenshot shows a web browser window for 'Sankens Constructions Industry' at 'localhost:3000/register'. The page has a dark header with the logo and title. The main content area is divided into two sections: a white 'REGISTER' form on the left and a blue 'Welcome' section on the right.

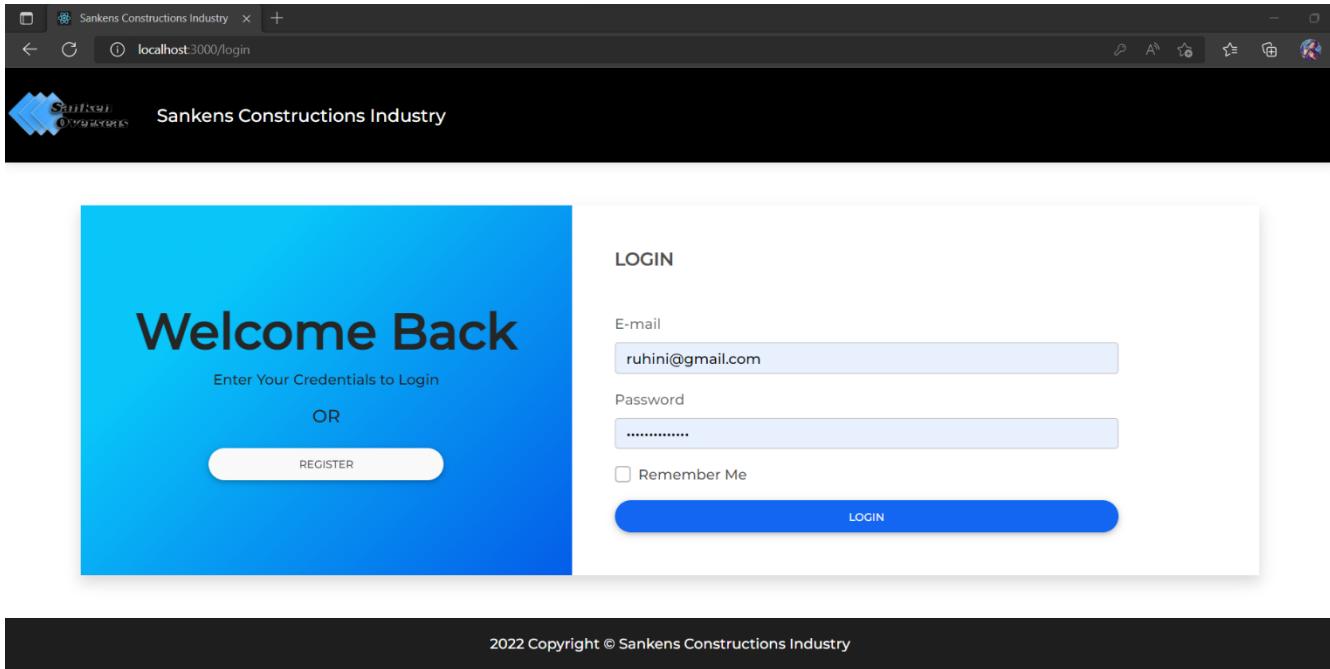
REGISTER

Full Name <input type="text" value="Enter Your Name"/>	Supplier Address <input type="text" value="Enter Supplier Address"/>
Company Name <input type="text" value="Enter Company Name"/>	E-mail Address <input type="text" value="ruhini@gmail.com"/>
Password <input type="password" value="....."/>	
<input type="checkbox"/> Remember your Password	
REGISTER	

Welcome
Enter User Details to Register
OR
LOGIN

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9.3 Login Interface



The screenshot shows a web browser window for 'Sankens Constructions Industry' at 'localhost:3000/login'. The page has a dark header with the logo and title. The main content area is divided into two sections: a blue 'Welcome Back' section on the left and a white 'LOGIN' form on the right.

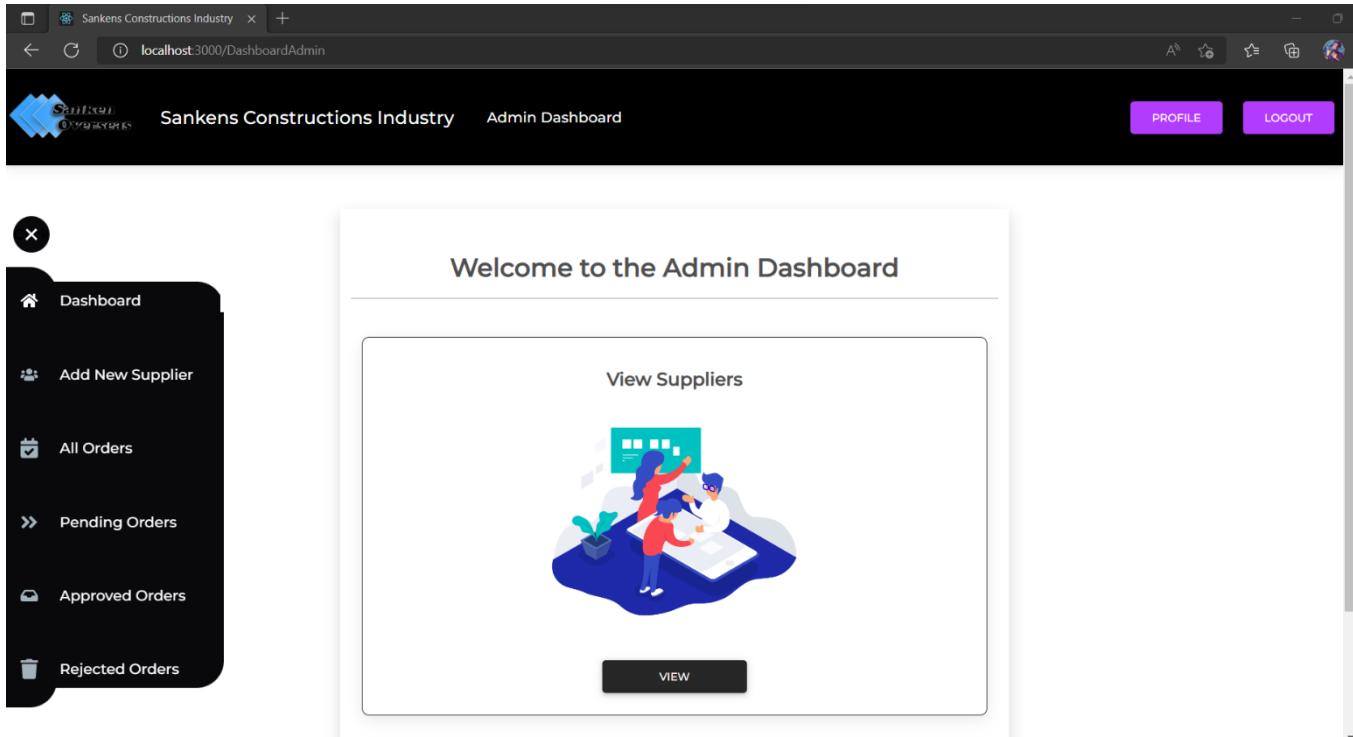
Welcome Back
Enter Your Credentials to Login
OR
REGISTER

LOGIN

E-mail <input type="text" value="ruhini@gmail.com"/>
Password <input type="password" value="....."/>
<input type="checkbox"/> Remember Me
LOGIN

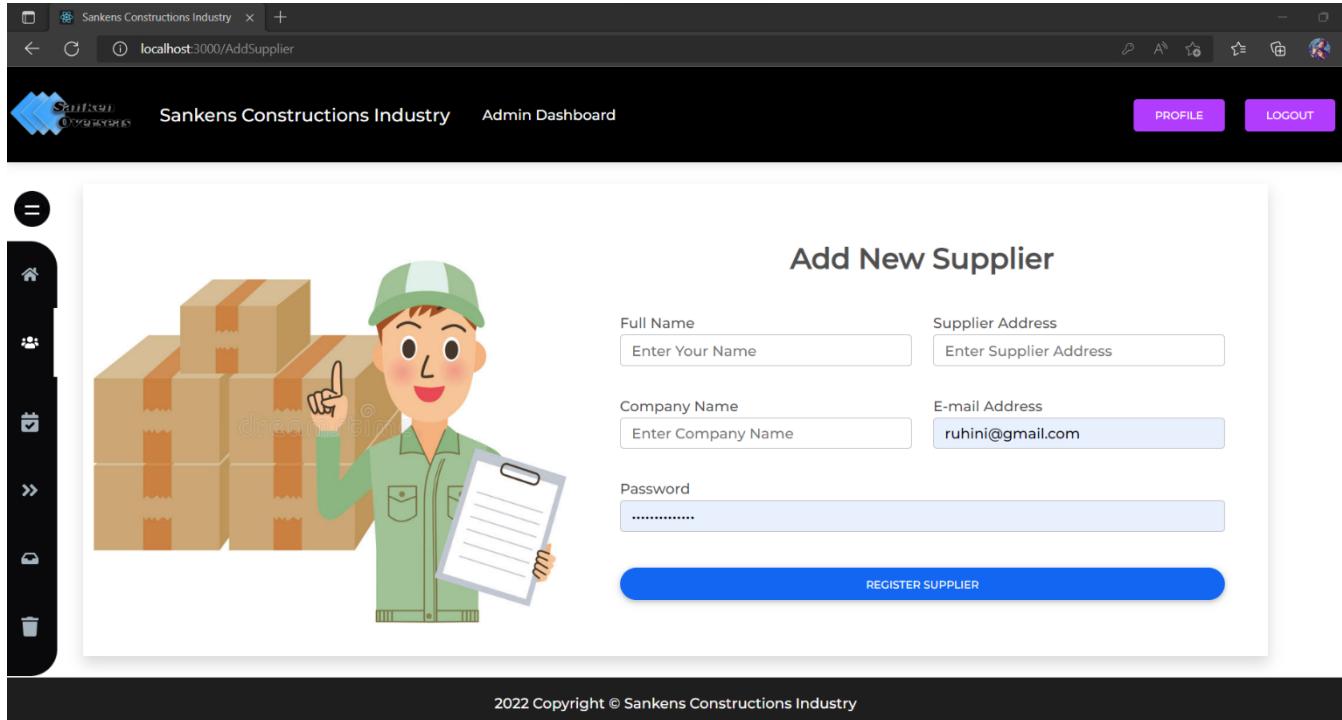
2022 Copyright © Sankens Constructions Industry

9.4 Admin Dashboard



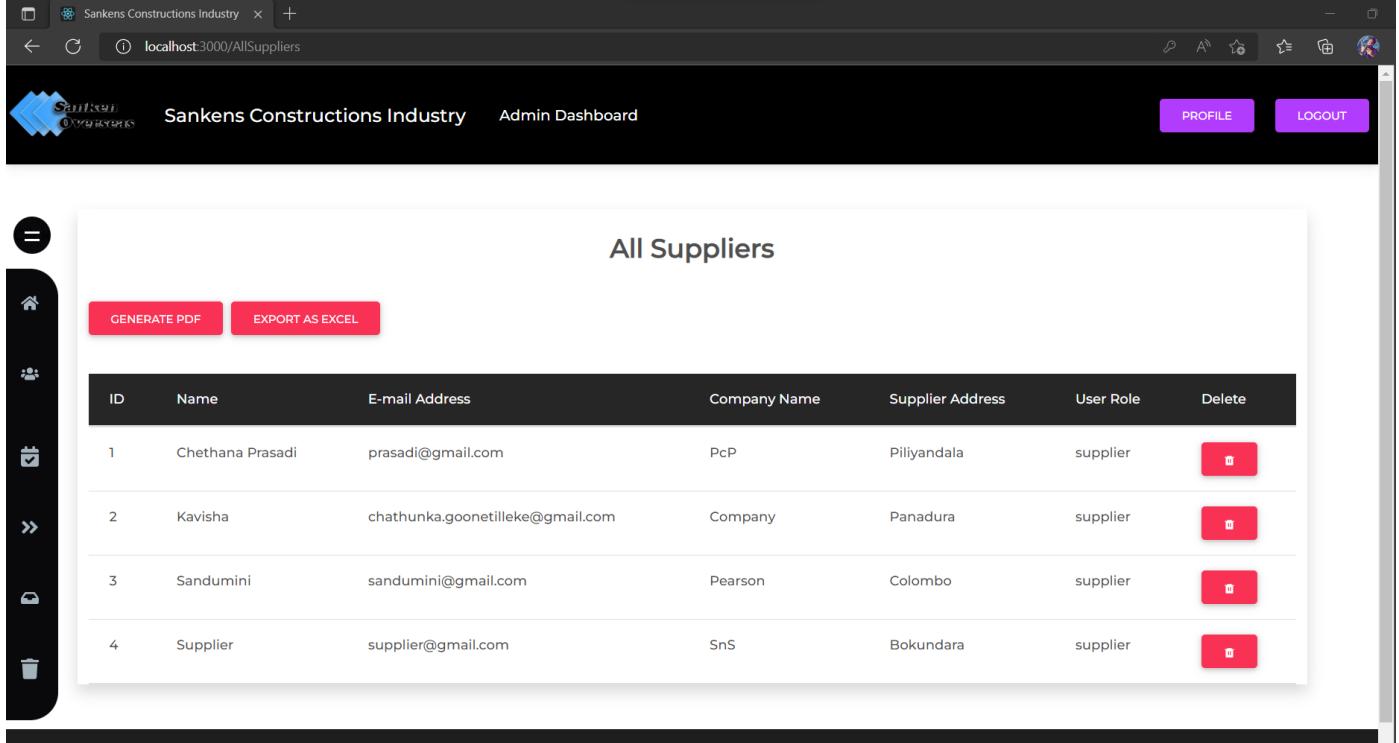
The screenshot shows the Admin Dashboard of the Sankens Constructions Industry application. At the top, there is a header bar with the logo, the company name "Sankens Constructions Industry", the page title "Admin Dashboard", and two buttons: "PROFILE" and "LOGOUT". On the left, a sidebar menu lists several options: "Dashboard", "Add New Supplier", "All Orders", "Pending Orders", "Approved Orders", and "Rejected Orders". The main content area features a section titled "Welcome to the Admin Dashboard" with a sub-section titled "View Suppliers" showing an illustration of two people working at a desk. A "VIEW" button is located below the illustration.

9.5 Add New Supplier



The screenshot shows the "Add New Supplier" page of the Sankens Constructions Industry application. At the top, it has the same header as the dashboard. The main content area features a large illustration of a construction worker holding a clipboard next to a stack of boxes. To the right, there are four input fields: "Full Name" (placeholder: Enter Your Name), "Supplier Address" (placeholder: Enter Supplier Address), "Company Name" (placeholder: Enter Company Name), and "E-mail Address" (placeholder: ruhini@gmail.com). Below these is a "Password" field with a redacted value. At the bottom right is a blue "REGISTER SUPPLIER" button. The footer contains the copyright notice "2022 Copyright © Sankens Constructions Industry".

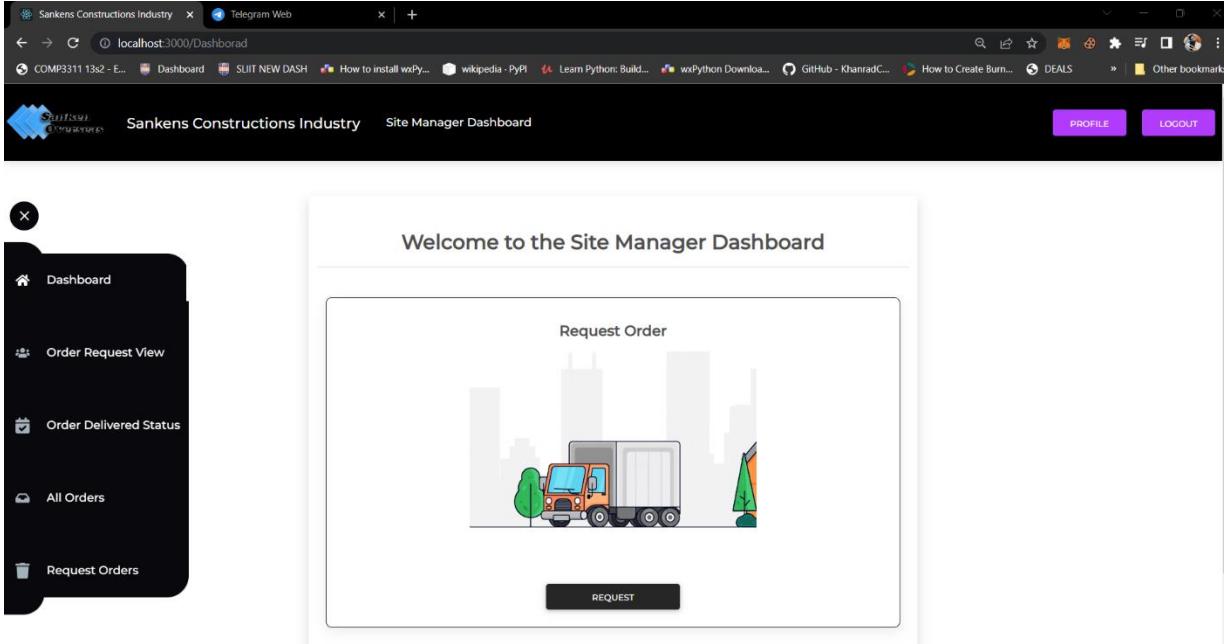
9.6 All Supplier Manager Interface



The screenshot shows a web browser window for 'Sankens Constructions Industry' at localhost:3000/AllSuppliers. The page title is 'All Suppliers'. On the left is a vertical sidebar with icons for home, user, calendar, double arrows, and trash. The main content area has two red buttons: 'GENERATE PDF' and 'EXPORT AS EXCEL'. Below is a table with columns: ID, Name, E-mail Address, Company Name, Supplier Address, User Role, and Delete. The data is as follows:

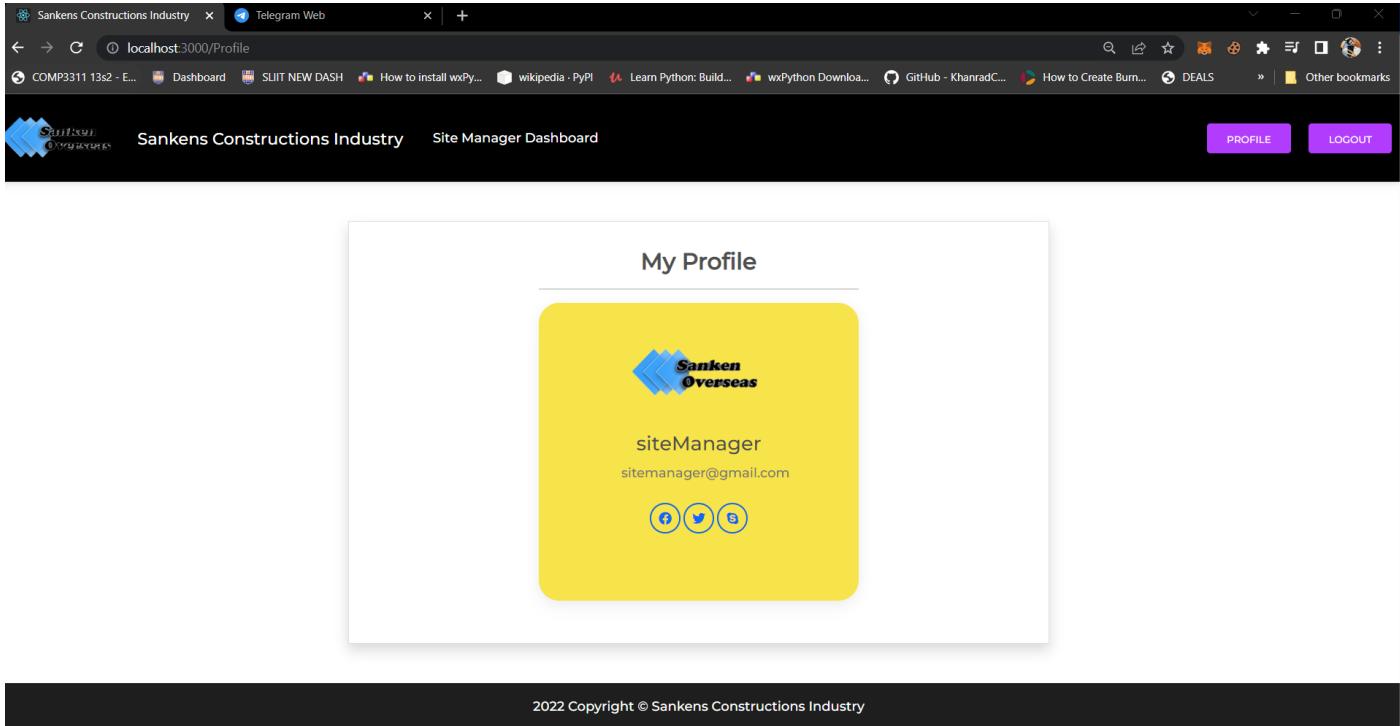
ID	Name	E-mail Address	Company Name	Supplier Address	User Role	Delete
1	Chethana Prasadi	prasadi@gmail.com	PcP	Piliyandala	supplier	
2	Kavisha	chathunka.goonetilleke@gmail.com	Company	Panadura	supplier	
3	Sandumini	sandumini@gmail.com	Pearson	Colombo	supplier	
4	Supplier	supplier@gmail.com	Sns	Bokundara	supplier	

9.7 Site Manager Dashboard



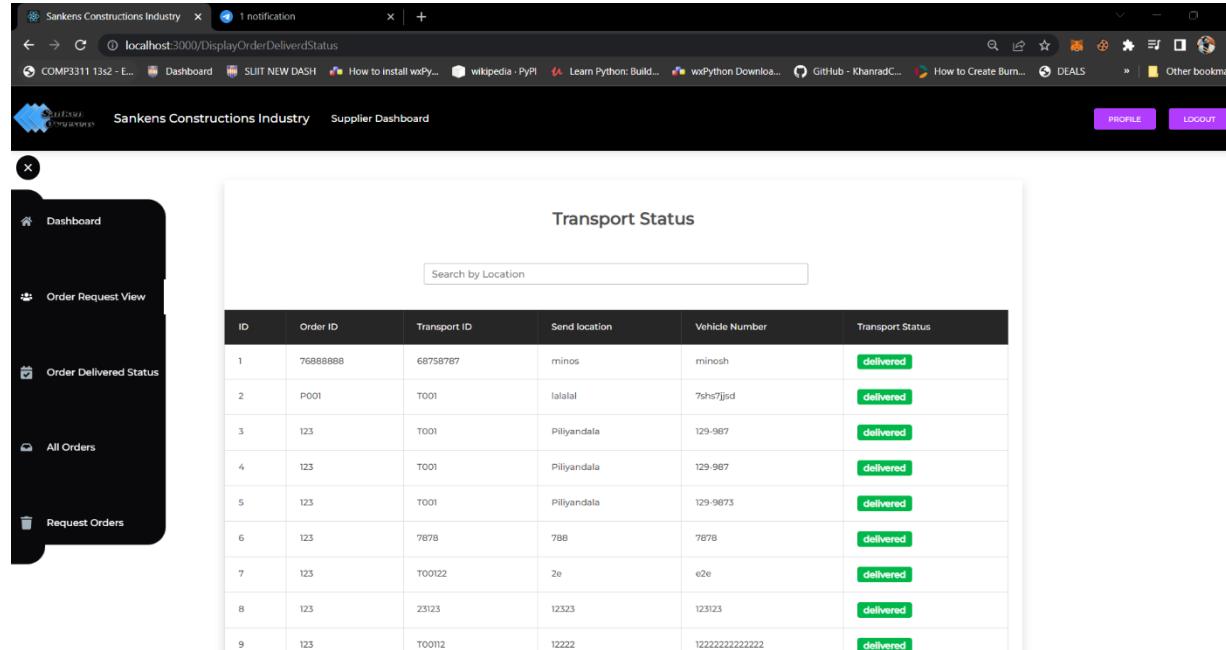
The screenshot shows a web browser window for 'Sankens Constructions Industry' at localhost:3000/Dashboard. The page title is 'Site Manager Dashboard'. On the left is a vertical sidebar with icons for home, order request view, order delivered status, all orders, and request orders. The main content area says 'Welcome to the Site Manager Dashboard' and features a 'Request Order' form with a truck icon and a 'REQUEST' button.

9.8 Profile Interface



The screenshot shows a web browser window for 'Sankens Constructions Industry' at 'localhost:3000/Profile'. The title bar includes the site name and a 'Telegram Web' icon. The dashboard header features the 'Sankens Constructions Industry' logo and 'Site Manager Dashboard' text, with 'PROFILE' and 'LOGOUT' buttons on the right. The main content area is titled 'My Profile' and displays a yellow card with the 'Sankens Overseas' logo, the user role 'siteManager', the email 'sitemanager@gmail.com', and three social media icons (Facebook, Twitter, LinkedIn). At the bottom of the page is a black footer bar with the text '2022 Copyright © Sankens Constructions Industry'.

9.9 Transport Status Interface



The screenshot shows a web browser window for 'Sankens Constructions Industry' at 'localhost:3000/DisplayOrderDeliverStatus'. The title bar indicates '1 notification'. The dashboard header features the 'Sankens Constructions Industry' logo and 'Supplier Dashboard' text, with 'PROFILE' and 'LOGOUT' buttons on the right. A sidebar on the left contains links for 'Dashboard', 'Order Request View', 'Order Delivered Status', 'All Orders', and 'Request Orders'. The main content area is titled 'Transport Status' and includes a search bar labeled 'Search by Location'. Below it is a table with the following data:

ID	Order ID	Transport ID	Send location	Vehicle Number	Transport Status
1	76888888	68758787	minos	minosh	delivered
2	P001	T001	lalalal	7shs7jisd	delivered
3	123	T001	Pillyandala	129-987	delivered
4	123	T001	Pillyandala	129-987	delivered
5	123	T001	Pillyandala	129-9873	delivered
6	123	7878	788	7878	delivered
7	123	T00122	2e	e2e	delivered
8	123	23123	12323	123123	delivered
9	123	T00112	12222	122222222222	delivered

10 Unit testing

10.1 Backend Unit Test

PROBLEMS OUTPUT TERMINAL GITLENS COMMENTS

> ▾ TERMINAL

```
PS D:\CSSE_FINAL_WEB\CSSE_Procurement-Construction-Industry\backend> npm test
npm warn config global `--global`, `--local` are deprecated. Use `--location=global` instead.

> test
> jest

PASS  utils/validation.util.test.js
  ✓ Validate OrderID With Correct Data (4 ms)
  ✓ Validate invoices With Correct Data (1 ms)
  ✓ Validate login With Correct Data (1 ms)
  ✓ Validate Transport data With Incomplete Data (missing location and vehicle number ) (2 ms)
  ✓ Validate OrderID With Correct Data (1 ms)
  ✓ Validate Order data With Incomplete Data (missing supplierID and qty) (1 ms)
  ✓ Validate PaymentID With Correct Data (1 ms)

Test Suites: 1 passed, 1 total
Tests:       7 passed, 7 total
Snapshots:  0 total
Time:        0.503 s, estimated 1 s
Ran all test suites.

PS D:\CSSE_FINAL_WEB\CSSE_Procurement-Construction-Industry\backend> []
```

10.2 Frontend Unit Test

```
Test Suites: 1 passed, 1 total
Tests:       2 passed, 2 total
Snapshots:   0 total
Time:        2.948 s, estimated 3 s
Ran all test suites related to changed files.
```

Watch Usage

- › Press **a** to run all tests.
- › Press **f** to run only failed tests.
- › Press **q** to quit watch mode.
- › Press **p** to filter by a filename regex pattern.
- › Press **t** to filter by a test name regex pattern.
- › Press **Enter** to trigger a test run.

10.3 Mobile App Unit Test

```
> csse_project@1.0.0 test
> jest

PASS screens/_tests__/LoginScreen.test.js
  > 1 snapshot obsolete.
    • Login component renders correctly 1
PASS screens/_tests__/NewOrderScreen.test.js
A worker process has failed to exit gracefully and has been force exited. This is likely caused by tests leaking due to improper teardown. Try this, ensure that .unref() was called on them.

Snapshot Summary
  > 1 snapshot obsolete from 1 test suite. To remove it, run `npm test -- -u` .
    screens/_tests__/LoginScreen.test.js
      • Login component renders correctly 1

Test Suites: 2 passed, 2 total
Tests:       4 passed, 4 total
Snapshots:   1 obsolete, 0 total
Time:        3.008 s
Ran all test suites.
PS C:\CSSE_SE3070\CSSE_MOBILE_APP> []
```

~~~ Thank You ~~~