



Sri Lanka Institute of Information Technology

Procurement for Construction Industry

Group ID: 2021S2_REG_WE_56

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IT19179018	M.A.M Mahir	<ul style="list-style-type: none">• Sequence Diagram (Approve and restrict items or suppliers for site manager)• Mobile Interfaces (High fidelity)• Web Application Interfaces (High fidelity)• Use case Scenario (Approve and restrict items or suppliers for site manager.)

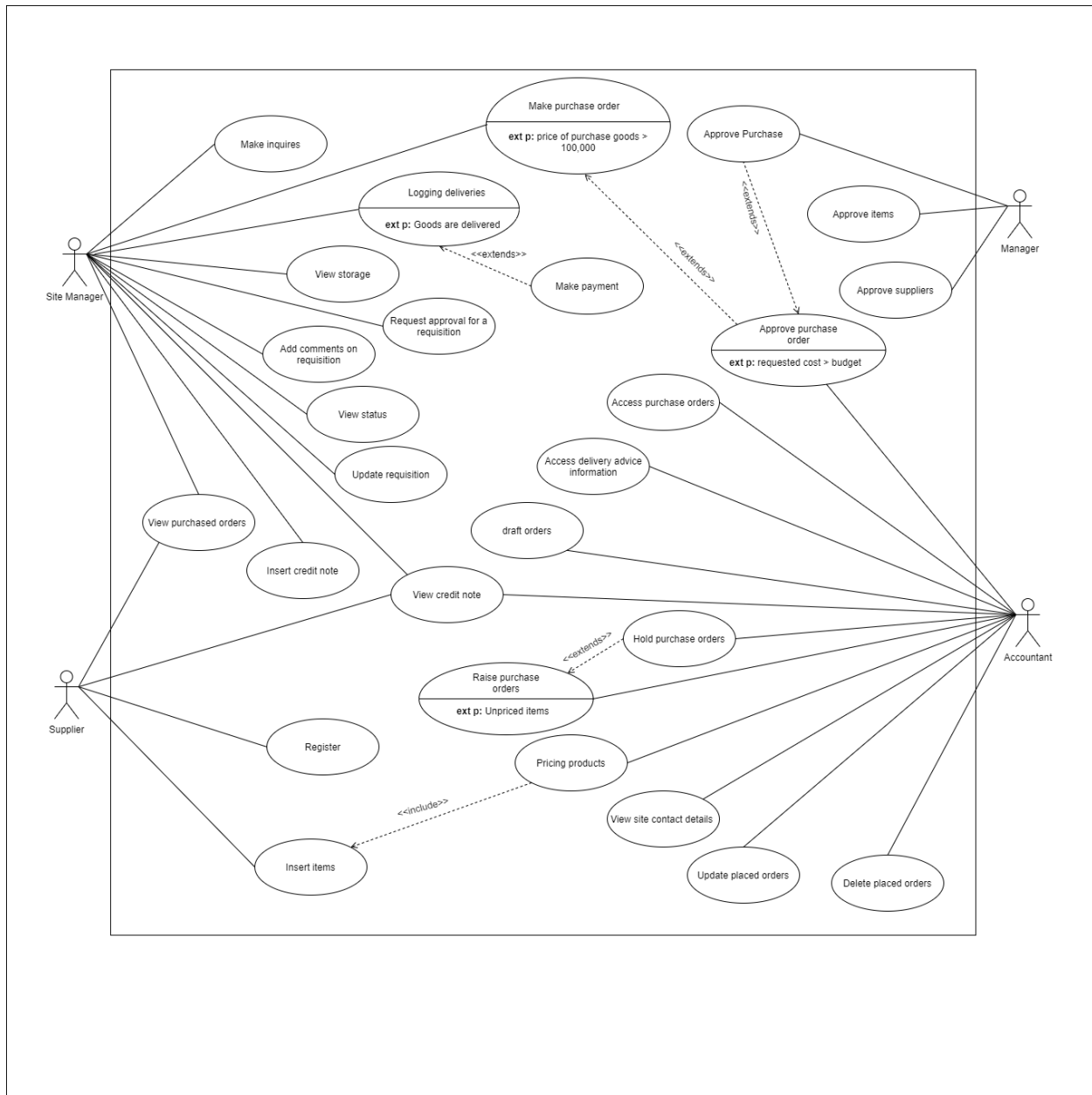
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01.Assumptions

- 1) System allows site manager to make any orders even before the threshold, as there can be a demand only for a single item at times. Therefore, when ordering that specific item, it is compared with the availability of storage and then decided to either proceed with the order or not.
- 2) When making an order requisition, the site manager does not essentially need to give any comments but if the purchase order is above rupees 100,000 the site manager will need to include comments compulsorily.
- 3) Suppliers need to be registered; therefore, the workload of the accountants will be reduced.
- 4) Since Site Managers are capable of making purchase orders to the pre-approved suppliers, therefore we have given access to the managers to approve/restrict the suppliers and also their items.
- 5) When site manager returns ordered items, another option called insert Credit Note is implemented.
- 6) When site manager makes orders, if it exceeds Rupees 100,000 the site manager needs approval from the accountant.
- 7) A site manager is also capable of ordering a single type of item from multiple suppliers.
- 8) When site manager's orders exceed the budget, accountant won't be able to approve it. Therefore, the account has to forward the order requisition to be approved or declined by the senior management.

02.Use case Diagram



03.Use case scenarios

Use case Scenario – 01

Number	01	
Name	Purchase an order	
Summary	Site manager demands for a new purchase order.	
Priority	01	
Pre-conditions	User should have valid login.	
Post conditions	Order placed successfully.	
Primary Actor(s)	Site Manager	
Trigger	Site Manager will be making orders in order to cater the site requirements.	
Main Scenario	Steps	Action
	01	Site Manager login to the system.
	02	Click the order icon in the side navigation.
	03	System will display a form.
	04	Select supplier dropdown.
	05	System will display the supplier list.
	06	Select a supplier.

	07	To add items, click the catalog dropdown.
	08	System displays the items.
	09	Select items.
	10	Add or remove amount of quantity.
	11	Insert contact details.
	12	Add comments.
	13	Click “Order” button.
	14	Amount will be displayed.
	15	Click “Proceed” button to continue.
Extensions	Steps	Action
	1.a	If invalid credentials, ask user to re-enter credentials.
	9.a	If user want to add more items, go to step 07.
	10.a	If entered amount of quantity exceed the storage space of construction site re-enter amount.
	10.b	If supplier does not have the amount of quantity, re-enter the amount.
	13.a	If amount > 100,000, send a request to accountant for approval.

Use case Scenario – 02

Number	02	
Name	View Requisition and Approve	
Summary	Items which cannot be ordered directly by the site manager because of exceeding budget is viewed by the accountant and the accountant raises the order.	
Priority	02	
Pre-conditions	User must have valid login.	
Post conditions	Approve requisition.	
Primary Actor(s)	Accountant	
Trigger	Accountant decided to approve requisition of site manager.	
Main Scenario	Steps	Action
	01	login to the system.
	02	Click the “View” in the header.
	03	System will display all the requisition made by site managers.
	04	Click specific requisition.
	05	System will display all the details.
	06	Check amount in the requisition with the budget.
	07	Raise the purchase order.

	08	System shows “successful” message.
	09	System update requisition status into approved.
Extensions	Steps	Action
	1.a	If invalid credentials, ask user to re-enter credentials.
	6.a	If amount of requisition > Budget, decline the requisition.
	6.b	If amount of requisition > Budget, request approval from senior manager.
	6.c	If there are items without having a price hold the purchase or draft the order.

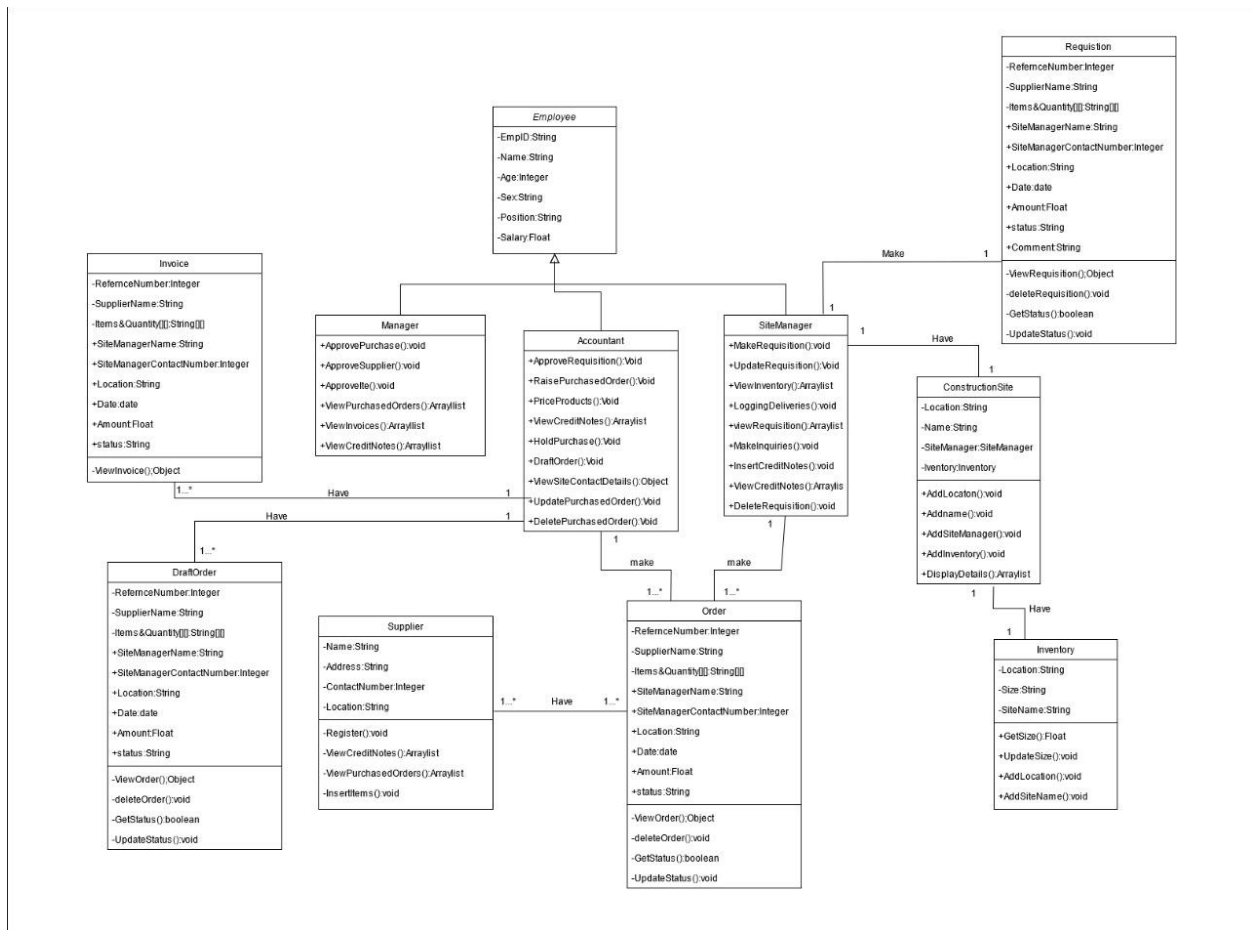
Use case Scenario – 03

Number	03	
Name	Approve and restrict items or suppliers for site manager.	
Summary	Manager approve or restrict suppliers / items so then site manager will be able to order only from approved suppliers and items.	
Priority	03	
Pre-conditions	User must have valid login.	
Post conditions	Approve / Restrict suppliers and items.	
Primary Actor(s)	Manager	
Trigger	Manager decided to approve supplier/item.	
Main Scenario	Steps	Action

	01	Login to the system.
	02	Click the “Suppliers” from header.
	03	System will display suppliers page with all registered suppliers.
	04	Select specific supplier
	05	System will display supplier details and added items.
	06	Select “Approve Supplier”
	07	System updates the status of supplier.
	08	System reloads the page with updated details.
	09	Click specific item.
	10	Item display with a popup.
	11	Click “Approve” button for item.
	12	System update state
	13	System reloads the page
Extensions	Steps	Action
	1.a	If invalid credentials, ask user to re-enter credentials.

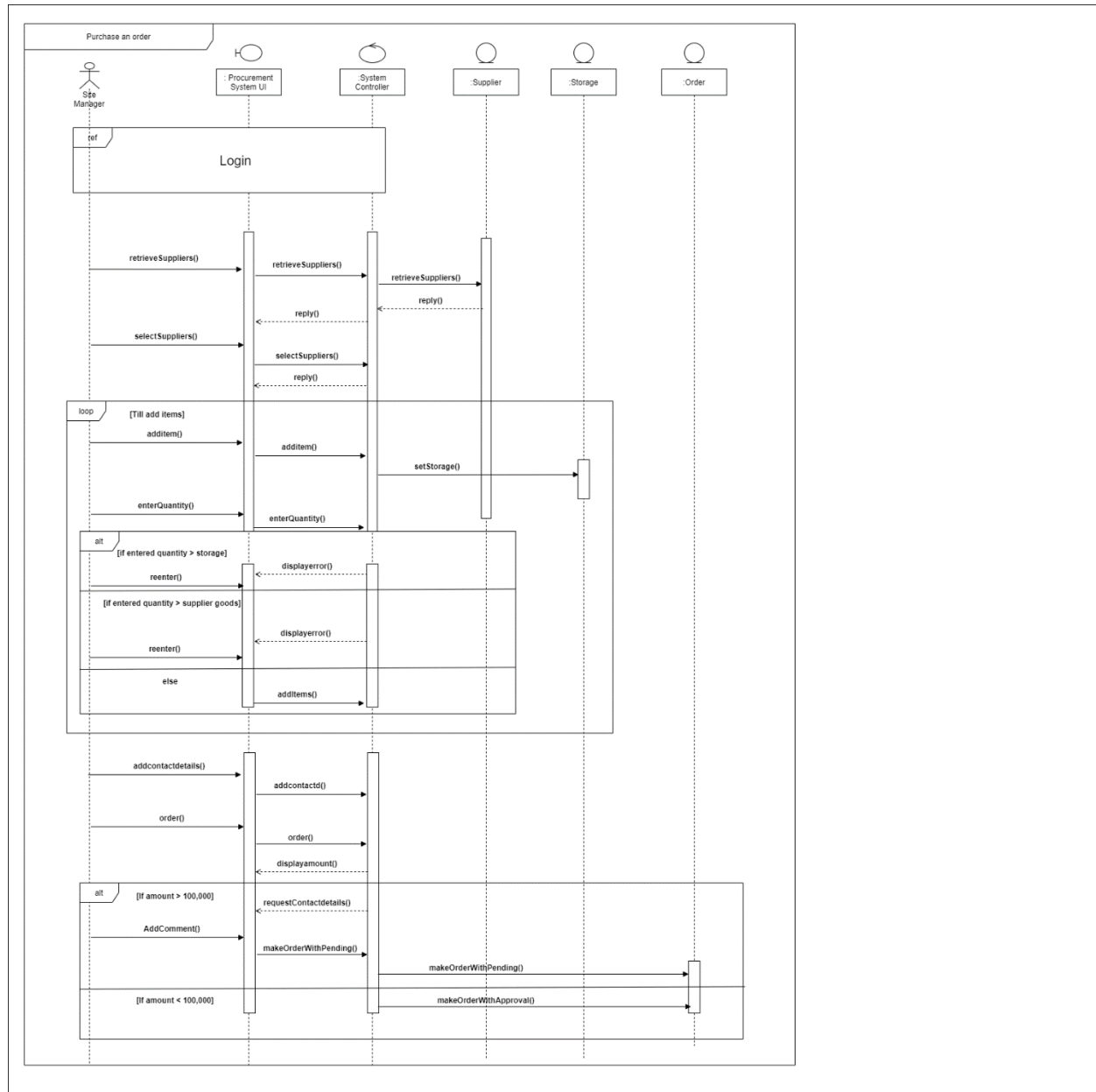
	6.a	If details are not clear restrict the supplier.
	11.a	If there are unwanted items restrict the item.

04.Class Diagram

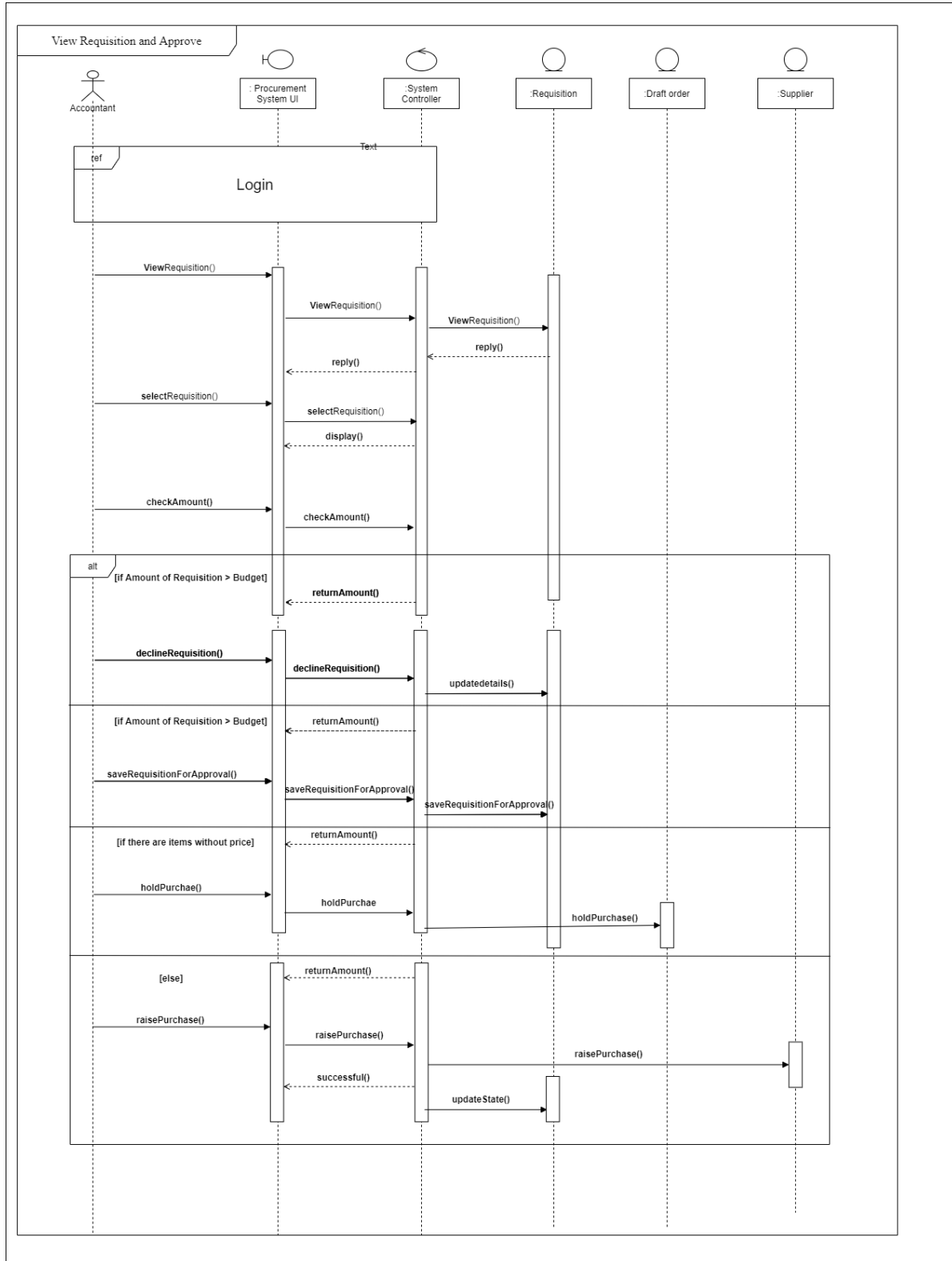


05.Sequence Diagram

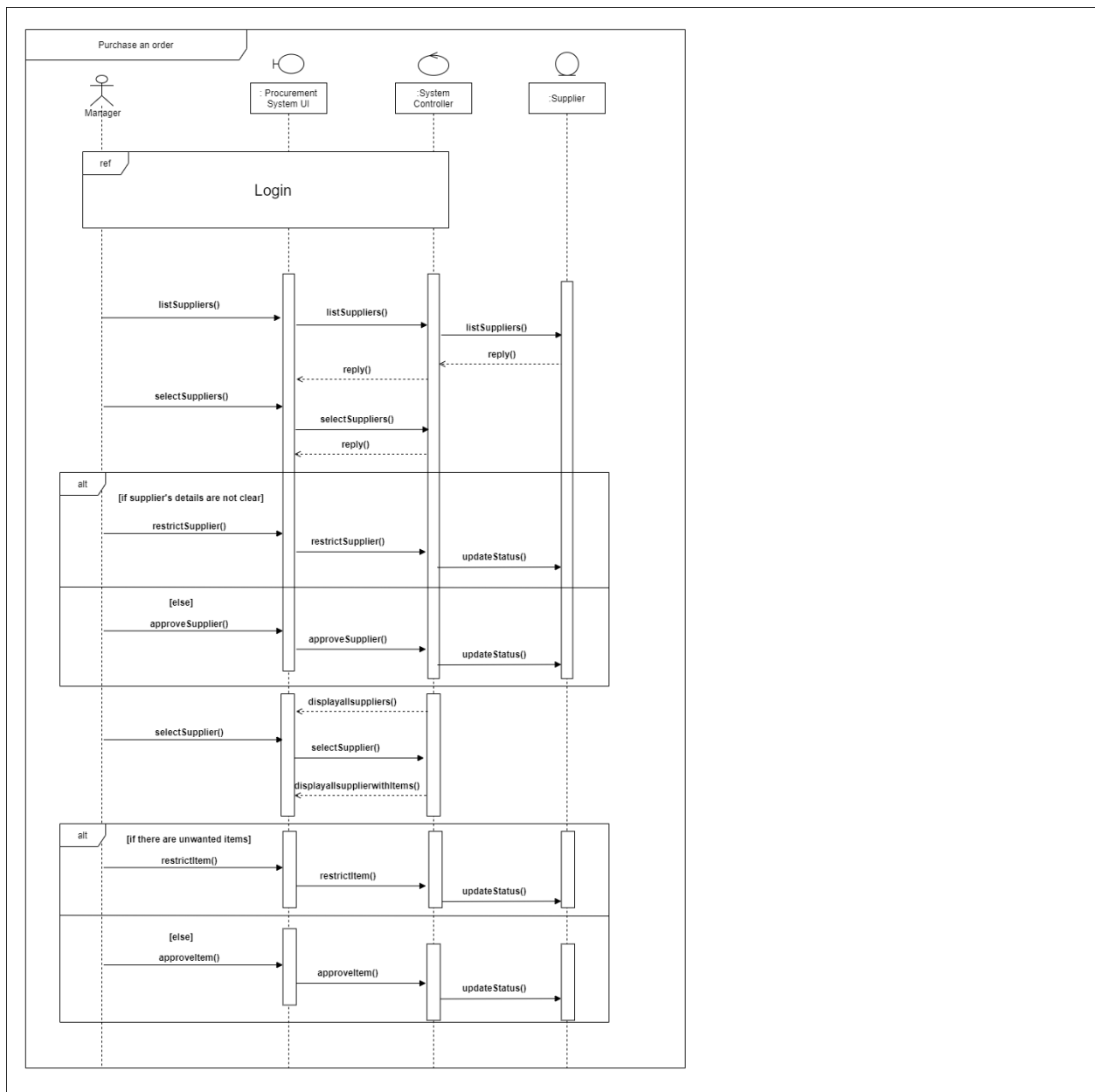
Sequence Diagram for Purchase an order



Sequence Diagram for View Requisition and Approve

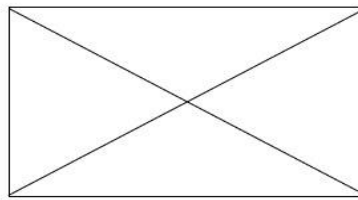


Sequence Diagram for Approve and restrict items or suppliers for site manager.



06.Wireframes

Low fidelity




Login



Mobile App Interface for Purchase an Order – Site manager



☒ Remember me

Login





[create an account](#) | [Forget Password?](#)


 Site Manager 

Available Inventory

Items	Quantity
Cement Bag	10
Sand	05 (Cubes)
Bricks	80
Metal	05 (Cubes)

Available Inventory Space



Site Manager

☰

Select Supplier

Select catalogue

Item 01

+

1

-

Item 02

+

1

-

Item 03

+

1

-

Enter Contact Details

Add Comments

Order


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Site Manager

☰

Select Supplier

Total Amount

Item 01

200 * 1

Rs. 200

Item 02

1500 * 1

Rs. 1500

Item 03

2500 * 1

Rs. 2500

Net Amount

Rs. 4200

Proceed


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Site Manager

☰

Select Supplier

Select catalogue

Item 01

+

1

-

Item 02

+

1

-

Item 03

+

1

-

Enter Contact Details

Add Comments

Order


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➡



Site Manager

☰

Select Supplier

Total Amount

Item 01

200 * 1

Rs. 200

Item 02

1500 * 1

Rs. 1500

Item 03

2500 * 1

Rs. 2500

Net Amount

Rs. 4200

Proceed

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View Requisition and Approve



Procurement Management System
Sysco Max System PLC

[Home](#)[Projects](#)[View Requisition](#)[Invoices](#)[Suppliers](#)[Purchase Order](#)

Requisitions

Reference Number	Site	Site Manager
EW100	Panadura	Udara Silva
QB200	Nawala	Nimal Sing



Reference Number **QB200**
Site **Nawala**
Site Manager **Nimal Sing**

Supplier **Mahinda**

Items

Item 01	01
Item 02	01
Item 03	01

Approval

Placed

Total Amount 4,200



Reference Number QB200
Site Nawala
Site Manager Nimal Sing

Supplier Mahinda

Items

Item 01

01

Item 02

01

Item 03

01

Approval

Pending

Comments


Must Need these items

Total Amount 4,200

Approval

Request ManagerApproval

Approve and restrict items or suppliers for site manager.

**Procurement Management System**
Sysco Max System PLC

[Home](#) [Projects](#) [View Requisition](#) [Invoices](#) [Suppliers](#) [Purchase Order](#)

Registered Suppliers

ABC Traders	Preview Supplier	Supplier 06	Preview Supplier
Supplier 02	Preview Supplier	Supplier 07	Preview Supplier
Supplier 03	Preview Supplier	Supplier 08	Preview Supplier
Supplier 04	Preview Supplier	Supplier 09	Preview Supplier
Supplier 05	Preview Supplier	Supplier 10	Preview Supplier



Supplier Details

Supplier Name :	ABC Traders	
Supplier Location :	Colombo 05	
Cement bags	Approve Item	Decline Item
Sand	Approve Item	Decline Item
Bricks	Approve Item	Decline Item
Approve Supplier		



Registered Suppliers

Approved	
ABC Traders	Preview Supplier
Supplier 02	Preview Supplier
Supplier 03	Preview Supplier
Supplier 04	Preview Supplier
Supplier 05	Preview Supplier

Supplier 06	Preview Supplier
Supplier 07	Preview Supplier
Supplier 08	Preview Supplier
Supplier 09	Preview Supplier
Supplier 10	Preview Supplier



Supplier Details

Supplier Name :	ABC Traders
Supplier Location :	Colombo 05
Supplier's Items :	Cement bags Sand Bricks