

---

# Software Maintenance Report

for

## Purchasing System

Version <1.0>

**Group No.: 2**

Evangelista Grace	1171302056
-------------------	------------

Elleyah Goh Xin Qer	1171302189
---------------------	------------

Tan Siow Li	1161303812
-------------	------------

Edwin Kang Zheng Yang	1181302428
-----------------------	------------

**Date:** 3 January 2020



<b>CONTENTS</b>		<b>2</b>
<b>1</b>	<b>SYSTEM OVERVIEW</b>	<b>3</b>
1.1	DESCRIPTION	3
1.2	ACTORS	3
1.3	ASSUMPTIONS AND DEPENDENCIES	3
1.4	USE CASE DIAGRAM	4
<b>2</b>	<b>DATA DESIGN</b>	<b>5</b>
2.1	DATA DICTIONARY	5
2.2	CLASS DIAGRAM	8
2.3	SAMPLE DATA	9
<b>3</b>	<b>SOFTWARE ARCHITECTURE</b>	<b>12</b>
3.1	SOFTWARE ARCHITECTURE DIAGRAM	12
3.2	SOFTWARE MODULES	13
<b>4</b>	<b>SOFTWARE MODULES</b>	<b>14</b>
4.1	MODULE 1	14
4.2	MODULE 2	19
4.3	MODULE 3	26
4.4	MODULE 4	35
4.5	MODULE 5	40
4.6	MODULE 6	45

# **1. System Overview**

## **1.1 Description**

This Purchasing System is how an organization perform purchasing process from Purchase Requisition performed by Employee, followed by Request For Quotation and Quotation performed by Manager. Then lastly is Finance perform Purchase Order, Delivery Order then Invoice. The details of each module is provided in the following sections.

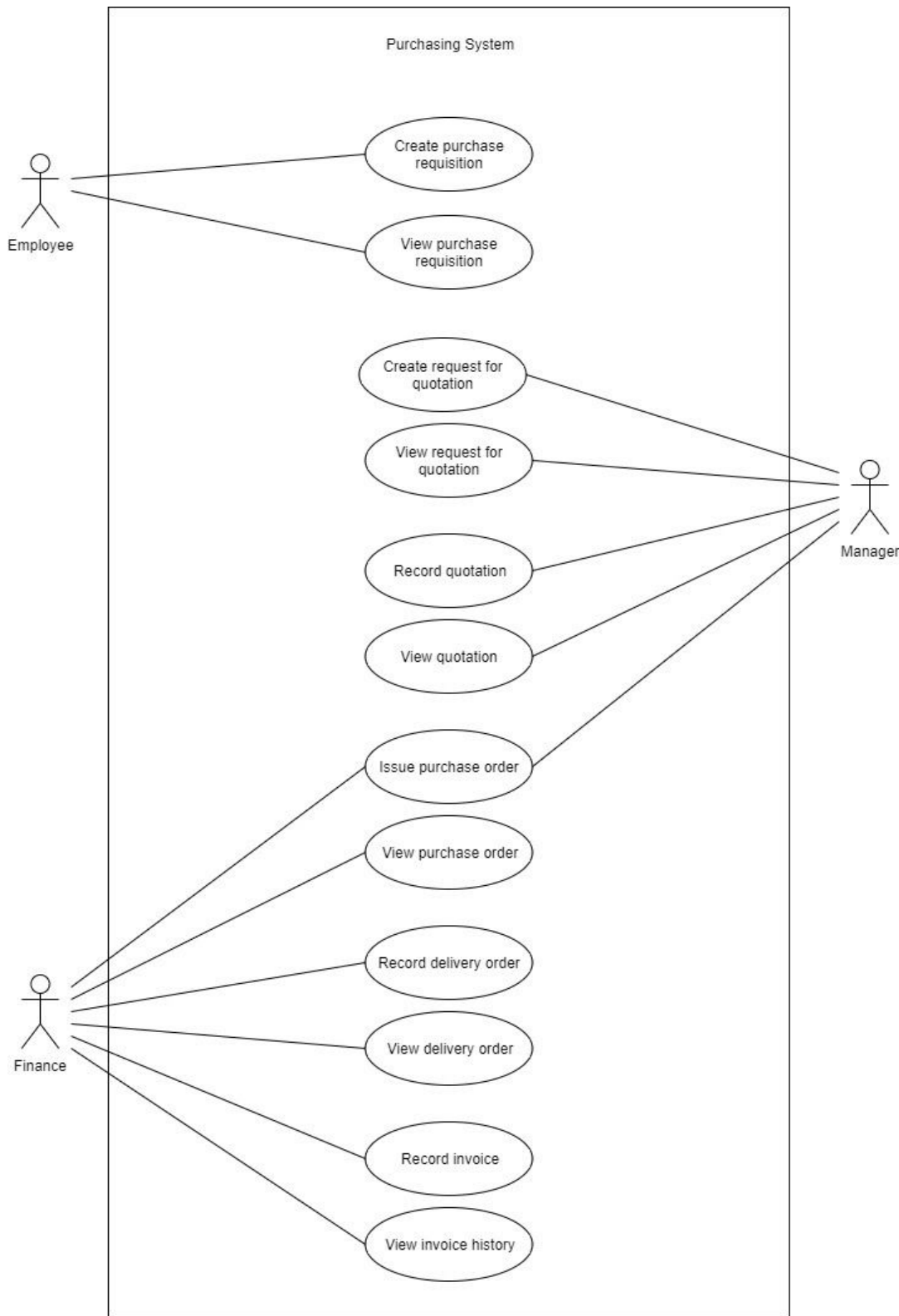
## **1.2 Actors**

The actor of this system would be Employee, Manager and Finance where Employee will control the Purchase Requisition, Manager will control Request For Quotation and Quotation and Finance would control Purchase Order, Delivery Order and Invoice.

## **1.3 Assumptions and Dependencies**

1. The employee has a list of items with the item ID
2. The reference ID for a quotation item is provided by the vendor
3. The ID of purchase requisition, request for quotation, quotation, purchase order, delivery order and invoice are expected to be generated automatically to avoid redundancy.

1.4 Use Case Diagram



## 2. Data Design

### 2.1 Data Dictionary

Data Dictionary is a centralized repository of information about data such as their data type, relationships between the tables, and their description of a system.

Table 2.1 Data Dictionary

Table	Column	Data Type	Character Length	PK/FK	Example	Nullable	FK Referenced Table	Description
Person	person_id	char	10	PK	P000001	not null		each column has unique ID
	person_name	String	50		Vicky Tan			
	person_address	String	100		123, Lorong Ali, Taman Alma, Kula Lumpur			
	person_phone_number	String	11		60123456789			
	person_role	String	15		Manager			
Vendor	vendor_id	char	10	PK	V00001	not null		each column has unique ID
	vendor_name	String	50		Ong Big Chen			
	vendor_phone_number	String	11		60123454731			
	vendor_address	String	100		145, Lorong Abu, Taman Kong, KL			
	vendor_email	String	20		1233@gmail.com			
Item	item_id	char	10	PK	I1234345	not null		each column has unique ID
	item_name	String	20		Body Shampoo			
	item_description	String	100		100g calcium powder, 20g liquid			
PurchaseRequisition	pr_id	char	10	PK	PR0001	not null		each column has unique ID
	description	String	100		This item is belong to Ovaltine Sdn Bhd			
	time_created	DateTime			25/12/2019			
	total_price	double	10		200.99			
	status	String	10		Pending			
	person_id	char	10	FK	P000001		Person	
PurchaseRequisitionItem	pr_id	char	10	PK/FK	PR0001	not null	PurchaseRequisition	
	item_id	char	10	FK	I1234345		Item	
	unit_price	double	10		19.99			
	quantity	integer	100		20			
	ref_id	char	20		ref115634654			

RequestForQuotation	request_for_quotation_id	char	10	PK	RFQ0001	not null		each column has unique ID
	time_created	DateTime			25/12/2019			
	description	String	100		This is for buyer named Edwin			
	total_price	double	10		5000.9			
	person_id	char	10	FK	P000001		Person	
	vendor_id	char	10	FK	V00001		Vendor	
	purchase_requisition_id	char	10	FK	PR0001		PurchaseRequisition	
RequestForQuotationItem	request_for_quotation_id	char	10	PK/FK	RFQ0001	not null	RequestForQuotation	
	item_id	char	10	FK	I1234345		Item	
	quantity	integer	100		30			
	unit_price	double	10		21.99			
	total_price	double	10		500.98			
	ref_id	char	20		ref115634654			
Quotation	quotation_id	char	10	PK	Q000001	not null		each column has unique ID
	time_created	DateTime			25/12/2019			
	description	String	100		For Buyer named Edwin			
	total_price	double	10		500.98			
	person_id	char	10	FK	P000001		Person	
	vendor_id	char	10	FK	V00001		Vendor	
	request_for_quotation_id	char	10	FK	RFQ0001		RequestForQuotation	
QuotationItem	quotation_id	char	10	PK/FK	Q000001	not null	Quotation	
	item_id	char	10	FK	I1234345		Item	
	quantity	integer	100		30			
	unit_price	double	10		21.99			
	total_price	double	10		500.98			
	ref_id	char	20		ref115634654			
PurchaseOrder	purchase_order_id	char	10	PK	PO00001	not null		each column has unique ID
	shipping_instructions	String	100					
	time_created	DateTime			25/12/2019			
	description	String	100		For Buyer named Edwin			
	total_price	double	10		500.98			
	person_id	char	10	FK	P000001		Person	
	vendor_id	char	10	FK	V00001		Vendor	
PurchaseOrderItem	quotation_id	char	10	FK	Q000001		Quotation	
	purchase_order_id	char	10	PK/FK	PO00001	not null	PurchaseOrder	
	item_id	char	10	FK	I1234345		Item	
	quantity	integer	100		30			
	unit_price	double	10		21.99			
	total_price	double	10		500.98			
	ref_id	char	20		ref115634654			
DeliveryOrder	delivery_order_id	char	10	PK	DO000003	not null		each column has unique ID
	shipping_instructions	String	100		Item easily broke so please be careful			
	time_created	DateTime			25/12/2019			
	total_price	double	10		500.98			
	person_id	char	10	FK	P000001		Person	
	vendor_id	char	10	FK	V00001		Vendor	
	purchase_order_id	char	10	FK	PO00001		PurchaseOrder	
DeliveryOrderItem	delivery_order_id	char	10	PK/FK	DO000003	not null	DeliveryOrder	
	item_id	char	10	FK	I1234345		Item	
	quantity	integer	100		30			
	unit_price	double	10		21.99			
	total_price	double	10		500.98			
	ref_id	char	20		ref115634654			
Invoice	invoice_id	char	10	PK	I00001	not null		each column has unique ID
	time_created	DateTime			25/12/2019			
	description	String	100		For Buyer named Edwin			
	total_price	double	10		500.98			
	invoice_status	char	20		On Delivery			
	purchase_order_id	char	10	FK	PO00001		PurchaseOrder	
	person_id	char	10	FK	P000001		Person	
	vendor_id	char	10	FK	V00001		Vendor	

InvoiceItem	invoice_id	char	10	PK/FK	100001	not null	Invoice	
	item_id	char	10	FK	11234345		Item	
	quantity	integer	100			30		
	unit_price	double	10			21.99		
	total_price	double	10			500.98		
	ref_id	char	20		ref115634654			

The diagram illustrates a supply chain management system with the following entities and relationships:

- Item** (Entity): Attributes include `item_id` (PK), `item_name`, and `item_description`. It is linked to **ExistenceNo3**, **ExistenceNo2**, **ExistenceNo1**, **ExistenceNo4**, and **ExistenceNo5** via "Appears" relationships.
- Quotation** (Entity): Attributes include `quotation_id` (PK), `time_created`, `description`, `total_price`, `person_id` (FK), `vendor_id` (FK), and `request_for_quotation_id` (FK). It is linked to **ExistenceNo6** via "Appears" and to **Quotation Item** via "Consist of".
- PurRequisition** (Entity): Attributes include `pr_id` (PK), `time_created`, `description`, `total_price`, `status`, and `person_id` (FK). It is linked to **ExistenceNo1** via "Appears" and to **PurRequisition Item** via "Consist of".
- Invoice** (Entity): Attributes include `invoice_id` (PK), `time_created`, `description`, `total_price`, `invoice_status`, `purchase_order_id` (FK), `person_id` (FK), and `vendor_id` (FK). It is linked to **ExistenceNo2** via "Appears" and to **Invoice Item** via "Consist of".
- DelOrder** (Entity): Attributes include `delivery_order_id` (PK), `shipping_instruction`, `time_created`, `description`, `total_price`, `person_id` (FK), and `purchase_order_id` (FK). It is linked to **ExistenceNo3** via "Appears" and to **DelOrder Item** via "Consist of".
- Vendor** (Entity): Attributes include `vendor_id` (PK), `vendor_name`, `vendor_phone_number`, `vendor_address`, and `vendor_email`. It is linked to **ExistenceNo4** via "Appears" and to **PurOrder** via "Has".
- ReqQuotation** (Entity): Attributes include `request_for_quotation_id` (PK), `time_created`, `description`, `total_price`, `person_id` (FK), `vendor_id` (FK), and `purchase_requisition_id` (FK). It is linked to **ExistenceNo5** via "Appears" and to **ReqQuotation Item** via "Consist of".
- PurOrder** (Entity): Attributes include `purchase_order_id` (PK), `shipping_instruction`, `time_created`, `description`, `total_price`, `person_id` (FK), `vendor_id` (FK), and `quotation_id` (FK). It is linked to **ExistenceNo6** via "Appears" and to **PurOrder Item** via "Has".

The diagram also includes several auxiliary tables (ExistenceNo1 through ExistenceNo6) and relationship tables (Quotation Item, PurRequisition Item, Invoice Item, DelOrder Item, PurOrder Item, ReqQuotation Item) that serve as junctions for the main entities.

Figure 2.2.1 ERD of Purchasing System



## 2.3 Sample Data

Person	Person ID	m0001	e0001	f0001	m0002	e0002
	Person Name	Ira Kane	Harry Block	Allison Reed	Malford Tweed	Daniel Reef
	Person Address	11-22 Block M, Jalan Multimedia, Cyberjaya	123 Jalan 4/5, Taman ABC, Cyberjaya	No. 24-1, Taman Cyberia, Persiaran Multimedia, 63000 Cyberjaya	no 135 jalan jasa of jalan hj sirat.41050 klang selangor.	Kenanga International Jalan Sultan Ismail 50250 Wilayah Persekutan
	Person Phone Address	011-2233445	012-3456789	011-24389278	019-3545263	013-21646944
	Person Role	Manager	Employee	Finance	Manager	Employee
Vendor	Vendor ID	v0001	v0002	v0003	v0004	v0005
	Vendor Name	Kerry Lim	Edmond Shan	Vlad Toothmire	Marie Shane	Christoph Kenkin
	Vendor Phone Number	011-2829745	019-7230988	018-9432781	016-2627289	012-5436789
	Vendor Address	M 193 Jln Sultan Zainal Abidin 20000 Kuala Terengganu Kuala Terengganu 20000 Malaysia Kua	Bangunan Kurnia 32 Jalan Yap Ah Shak 50300 Wilayah Persekutan	No 40A-G Lebu Enggang Taman Eng Ann 41050	292 Jalan 16 Ampang New Village	Lot 9382 Jalan Tepi Sungai Kelang
	Vendor Email	kerry@tsales.com	shanedmond@gmail.com	vladtooth@sales.vventures.com	shane.marie@sales.vstatonaries.com	chrisken@live.com
Item	Item ID	It0001	It0002	It0003	It0004	It0005
	Item Name	Binder	Folder	Marker	Paper	Post-it Pads
	Item Description	3 Ring, Blue	Poly Color Jacs,	Sharpie, Fine Black	Copy, White, A4	1.5x2, Neon

			Assorted			
Purchase Requisition	PR ID	PR93987117	PR17643872	PR37574848	PR76004769	PR68522727
	Person ID	e0001	e0001	e0002	e0001	e0002
	Item ID	It0005	It0001	It0004	It0003	It0002
	Item name	Post-it Pads	Binder	Paper	Marker	Folder
	Description	stickies for scrum	file binders	Copy, White, A4	Sharpie, Fine Black	Poly Color Jacs, Assorted
	Quantity	5	3	2	4	5
	Price per Unit	4	5	10	2.5	3
Request For Quotation	RFQ ID	RFQ6432412	RFQ3433306	RFQ7826122	RFQ5147615	RFQ3136290
	PR ID	PR76004769	PR93987117	PR68522727	PR37574848	PR17643872
	Staff ID	m0001	m001	m0001	m0002	m0002
	Vendor ID	v0003	v0001	v0004	v0005	v0002
	Purchase Requisition Description (If Applicable)	loremipsum	loremipsum	loremipsum	loremipsum	loremipsum
Quotation	Quotation ID	QUO6977826	QUO6347045	QUO9794084	QUO3089445	QUO4885360
	RFQ ID	RFQ6432412	RFQ3433306	RFQ3803894	PR37574848	RFQ3136290
	Staff ID	m0001	m0001	m0001	m0001	m0001
	Vendor ID	v0003	v0001	v0002	v0004	v0005
	Quotation Description (If Applicable)	loremipsum	loremipsum	loremipsum	loremipsum	loremipsum
Purchase Order	PO ID	PO1001	PO1006	PO1007	PO1004	PO1003
	Quotation ID	QUO6347045	QUO2299011	QUO4148992	QUO3089445	QUO9794084
	Staff ID	f0001	f0001	f0001	f0001	f0001

	Vendor ID	v0001	v0004	v0002	v0005	v0003
	Shipping Instruction (If Applicable)	lorem ipsum dolor sit	lorem ipsum dolor sit	lorem ipsum dolor sit	lorem ipsum dolor sit	lorem ipsum dolor sit
	Purchase Order Description (If Applicable)	dolor sit amet	dolor sit amet	dolor sit amet	dolor sit amet	dolor sit amet
Delivery Order	DO ID	DO62631808	DO74122303	DO00003	DO00004	DO00005
	PO ID	PO1001	PO1006	PO1007		
	Staff ID	f0001	f0001	f0001	f0001	f0001
	Vendor ID	v0001	v0004	v0002	v0005	v0003
	Shipping Instruction (If Applicable)	Easily Breakable			Easily Breakable	
	Delivery Order Description (If Applicable)					
Invoice	Invoice ID	Inv00001	Inv00002	Inv00003	Inv00004	Inv00005
	PO ID	PO1001	PO1006	PO1007		
	Staff ID	f0001	f0001	f0001	f0001	f0001
	Vendor ID	v0001	v0004	v0002	v0005	v0003
	Invoice Description (If Applicable)					

### 3. Software Architecture

#### 3.1 Software Architecture Diagram

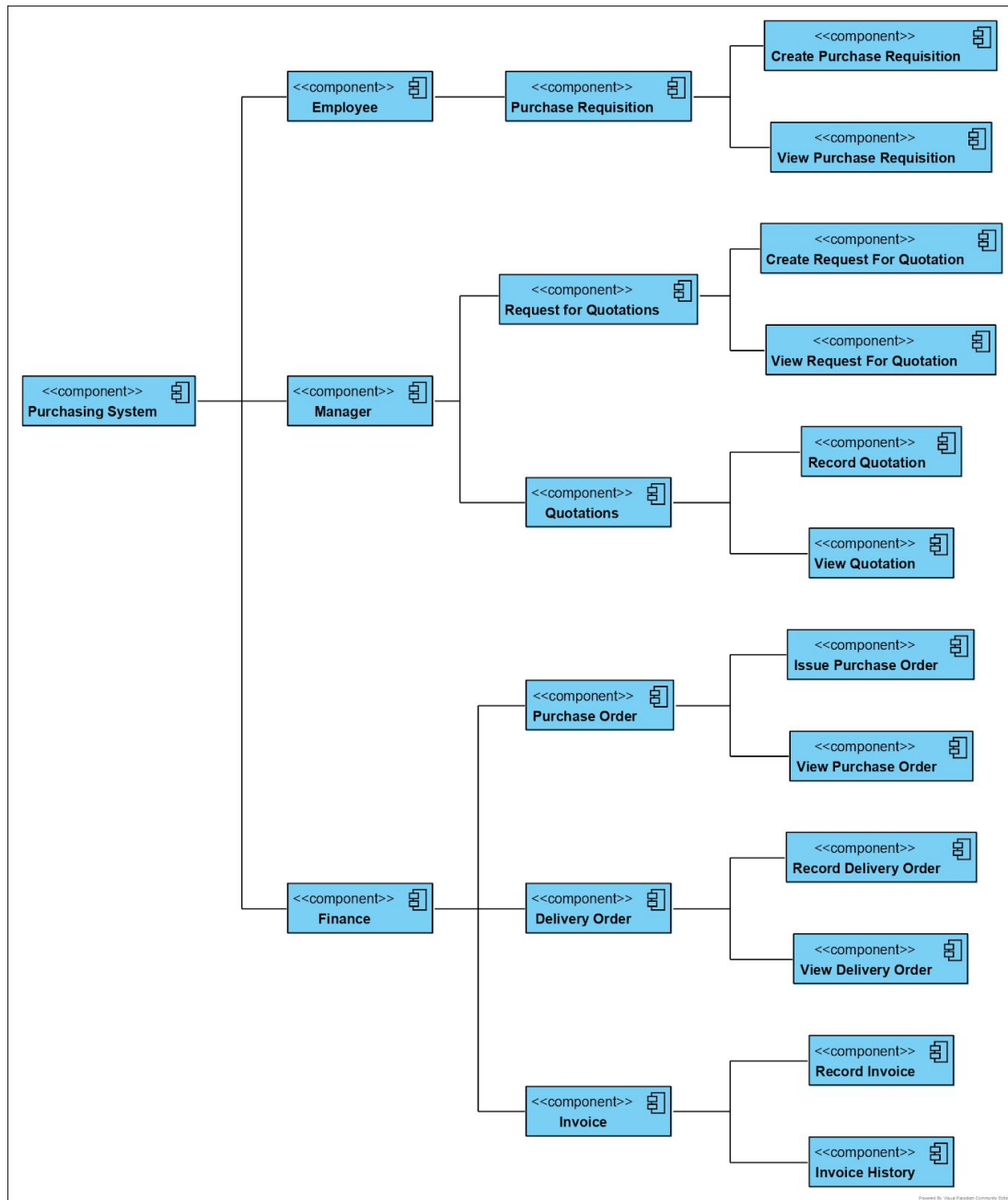


Figure 3.1.1 Architecture Diagram of Purchasing System

Figure 3.1.1 show the modules of the system and every module is controlled by a particular position such as manager only able to do Request for Quotation, Quotation.

### 3.2 Software Modules

The system is separated into 6 modules and the table below show the members is assigned to respective modules.

Member Name	Assigned Module
<b>Evangelista Grace</b>	<ul style="list-style-type: none"><li>- Request For Quotation</li><li>- Quotation</li></ul>
<b>Elleyah Goh Xin Qer</b>	<ul style="list-style-type: none"><li>- Purchase Requisition</li></ul>
<b>Tan Siow Li</b>	<ul style="list-style-type: none"><li>- Purchase Order</li></ul>
<b>Edwin Kang Zheng Yang</b>	<ul style="list-style-type: none"><li>- Delivery Order</li><li>- Invoice</li></ul>

## 4. Software Modules

### 4.1 Module 1 (Purchase Requisition)

#### 4.1.1 Module 1 Screens

<TO DO: Describe the main screens of the module and place the screens here. The screens should illustrate the execution of the module functions.>

PR79390954

e0001

#	Item ID	Item Name	Description	Quantity	Price Per Unit
1	<input type="text" value="Item id"/>	<input type="text" value="Item name"/>	<input type="text" value="Description"/>	<input type="text" value="Quantity"/>	<input type="text" value="Price Per Unit"/>

Add Item

Submit

Cancel

Delete Item

Figure 4.1.1 Module 1 Screen 1

Figure 4.1.1 show the main function of Purchase Requisition, the ID of PR is auto generated so employees just have to fill in the item ID, name, description, quantity and price per unit. If want to have more than 1 item, can click the “Add Item” button but there is a defect which is unable to add item so only 1 item. After that, employee will click the “Submit” Button to submit it.

Purchase Requisition ID	Date	Status
PR30206972	Dec. 30, 2019, 8:55 a.m.	APPROVED
PR62379244	Jan. 1, 2020, 9:49 a.m.	APPROVED

Back

Figure 4.1.2 Module 1 Screen 2

Figure 4.1.2 show the list of Purchase Requisition and employee can click the PR ID to view the details of it as Figure 4.1.3.

Time Created: Jan. 1, 2020, 9:49 a.m.

Purchase Requisition ID

PR62379244

Staff ID

Harry Block

123 Jalan 4/5, Taman

Item ID	Item Name	Quantity	Price Per Unit (RM)	Total (RM)
It00001	File Binder	3	5.00	
Grand Total				15.00

Close

Figure 4.1.3 Module 1 Screen 3

Figure 4.1.3 show the details of purchase requisition.

4.1.2 Module 1 Diagrams

Figure 4.1.4 shows the process flow of the Purchase Requisition

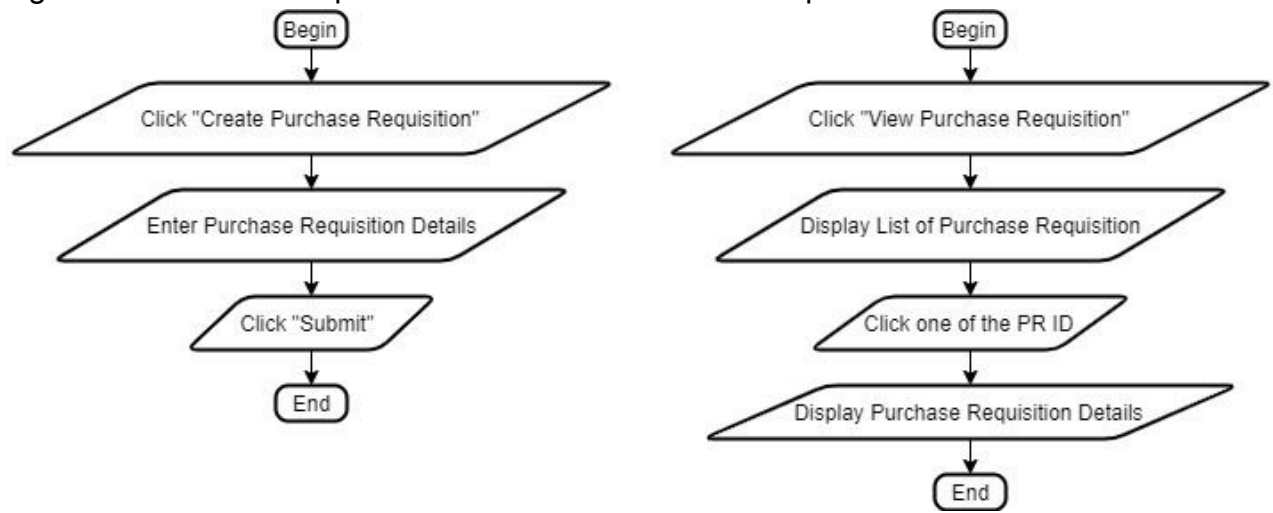


Figure 4.1.4 Flow Chart of Module 1

### 4.1.3 Module 1 Files

<TO DO: Describe the main files of the module and list the files here.>

1. System Function File

...\Purchasing System\PurchaseRequisition\views.py

2. System Interface [When Creating The Purchase Requisition]

...\Purchasing

System\PurchaseRequisition\templates\PurchaseRequisition\purchaserequisitionform.html

3. System Interface [Purchase Requisition Confirmation]

...\Purchasing

System\PurchaseRequisition\templates\PurchaseRequisition\purchaserequisitionconfirmation.html

4. System Interface [Purchase Requisition Details]

...\Purchasing

System\PurchaseRequisition\templates\PurchaseRequisition\purchaserequisitiondetails.html

5. System Interface [View Purchase Requisition]

...\Purchasing

System\PurchaseRequisition\templates\PurchaseRequisition\purchaserequisitionhistory.html

6. System Interface [View Purchase Requisition Details]

...\Purchasing

System\PurchaseRequisition\templates\PurchaseRequisition\purchaserequisitionhistorydetails.html



**4.1.4 Module 1 Test Cases**

&lt;TO DO: Describe the test cases here.&gt;

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Results	Actual Results	Pass / Fail
F601	Record Invoice	<ol style="list-style-type: none"><li>1. Click "Create Purchase Requisition".</li><li>2. Fill in Item ID, Item Name, Description, Quantity and Price Per Unit.</li><li>3. "Add Item" if more than 1 item</li><li>4. Click the "Submit" button.</li></ol>	<ul style="list-style-type: none"><li>- Item ID:lt0001</li><li>- Item Name: Binder</li><li>- Description: file binders</li><li>- Quantity: 3</li><li>- Price Per Unit: 5</li></ul>	Display the correct details and able to add more than 1 item.	Display the correct details but unable to add more than 1 item.	Fail
F602	Invoice History	<ol style="list-style-type: none"><li>1. Click the "View Purchase Requisition" button.</li></ol>		Display list of the Purchase Requisitions	Display list of the Purchase Requisitions	Pass

---

#### **4.1.5 Module 1 Report**

No.	Errors/Defects	Description/Remarks
1	Add Item	Unable to Add Item

## 4.2 Module 2 (Request for Quotation)

This module is accessed and used by a 'Manager' staff.

### 4.2.1 Module 2 Screens

Upon signing in to a Manager account, the Manager staff is able to view the 'Manager' menu as displayed in Figure 4.2.1.

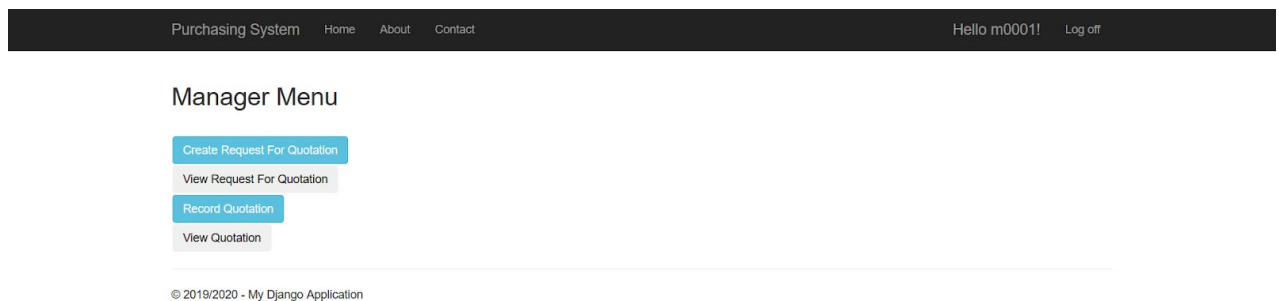


Figure 4.2.1 Manager menu

Figure 4.2.2 shows the main functions of the Request for Quotation module. A Purchase Requisition ID is entered into the search bar to search for an existing Purchase Requisition. If there is a matching Purchase Requisition ID, the Request for Quotation form is populated with the Purchase Requisition ID, staff ID and a random unique ID is generated for the Request for Quotation ID. The items listed in the Purchase Requisition is also displayed below the form. The 'Manager can then proceed to insert the Vendor ID and insert a description for the Request for Quotation before clicking on 'Submit'.

Purchasing System Home About Contact Hello m0001! Log off

Purchase Requisition IC

Find

Request For Quotation ID

Purchase Requisition ID

Staff ID

Vendor ID

Purchase Requisition Description (If applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)

Submit Cancel

© 2019/2020 - My Django Application

Figure 4.2.2 Request for quotation form

A confirmation screen is shown soon after the form submission. Here the staff gets to review the details of the Request for Quotation.

Purchasing System Home About Contact Hello m0001! Log off

Request For Quotation ID

RFQ7330803

Purchase Requisition ID

PR93987117

Company Information

Ira Kane  
11-22 Block M, Jalan  
Multimedia, Cyberjaya

Vendor Information

Kerry Lim  
M 193 Jln Sultan Zainal  
Abidin 20000 Kuala Lumpur

Description

Request For Quotation Description (If applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
It0005	Post-It Pads	5	4.00	20.00
Grand Total				20.00

Confirm Cancel

© - My Django Application

Figure 4.2.3 Request for quotation confirmation

After confirmation, the details of the Request for Quotations gets shown again. The staff can proceed to click on 'Close' to exit the form and be redirected to the Manager menu.

Purchasing SystemHomeAboutContact

Hello m0001!Log off

Time Created: Jan. 3, 2020, 8:38 p.m.

Request For Quotation ID

RFQ7330803

Purchase Requisition ID

PR93987117

Company Information

Ira Kane  
11-22 Block M, Jalan  
Multimedia, Cyberjaya

Vendor Information

Kerry Lim  
M 193 Jin Sultan Zainal  
Abidin 20000 Kuala

Shipping Instructions

Shipping Instructions (if applicable)

Description

Request For Quotation Description (if applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
It0005	Post-it Pads	5	4.00	20.00
Grand Total				20.00

Close

© 2019/2020 - My Django Application

Figure 4.2.4 Request for quotation view

Figure 4.2.5 shows the record of all the Request for Quotation under ‘View Request for Quotation’ function.

Purchasing SystemHomeAboutContact

Hello m0001!Log off

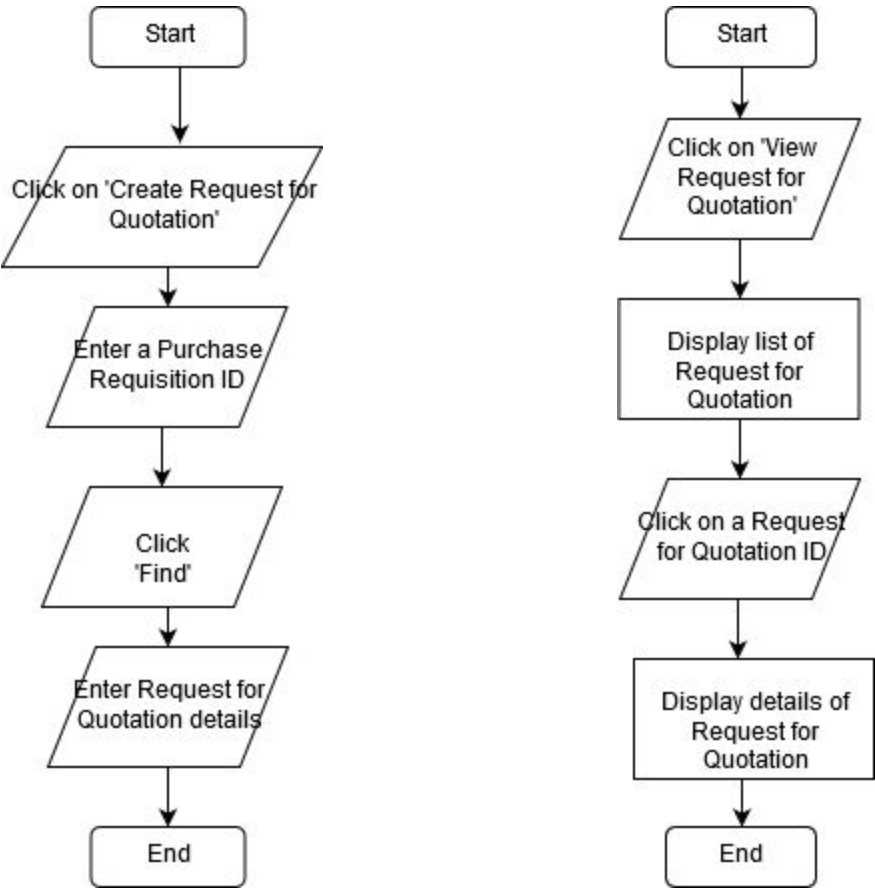
Request For Quotation ID	Staff ID	Vendor ID	Time
RFQ6432412	m0001	v0003	Dec. 29, 2019, 5:15 p.m.
RFQ3433306	m0001	v0001	Dec. 30, 2019, 1:23 a.m.
RFQ6104058	m0001	v0004	Dec. 30, 2019, 2:04 a.m.
RFQ3803894	m0001	v0004	Dec. 30, 2019, 8:37 a.m.
RFQ7826122	m0001	v0004	Dec. 30, 2019, 8:44 a.m.
RFQ5147615	m0001	v0005	Dec. 30, 2019, 8:50 a.m.
RFQ3136290	m0001	v0002	Dec. 30, 2019, 8:53 a.m.
RFQ4637108	m0001	v0002	Dec. 30, 2019, 8:59 a.m.
RFQ7330803	m0001	v0001	Jan. 3, 2020, 8:38 p.m.

Back

© 2019/2020 - My Django Application

Figure 4.2.5 Display of record for request for quotation

4.2.2 Module 2 Diagrams



### 4.2.3 Module 2 Files

1. System Function File  
...\\Purchasing System\\RequestForQuotation\\views.py
2. System Interface [When Creating the Request for Quotation]  
...\\Purchasing  
System\\RequestForQuotation\\templates\\RequestForQuotation\\requestforquotation  
form.html
3. System Interface [Request for Quotation confirmation]  
...\\Purchasing  
System\\RequestForQuotation\\templates\\RequestForQuotation\\requestforquotation  
confirmation.html
4. System Interface [Record of Request for Quotation]  
...\\Purchasing  
System\\RequestForQuotation\\templates\\RequestForQuotation\\requestforquotation  
history.html
5. System Interface [Request for Quotation details]  
...\\Purchasing  
System\\RequestForQuotation\\templates\\RequestForQuotation\\requestforquotation  
historydetails.html

#### 4.2.4 Module 2 Test Cases

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Results	Actual Results	Pass/Fail
MNG100	Search for purchase requisition	-Login to the system with manager credentials -Click 'Create request for quotation' - Enter purchase requisition ID in the search box	PR ID: PR93987117	The auto-generated RFQ ID, PR ID, manager ID and PR description details(if any) are populated into the RFQ form and the PR item details are displayed.	All the necessary details are pre-populated in the form except the PR description details.	Fail
MNG101	Create request for quotation	-Login to the system with manager credentials -Click 'View request for quotation' - Enter purchase requisition ID in the search box - Enter vendor ID - Click 'Submit' - Click 'Confirm'	PR ID: PR93987117 Vendor ID: v0001	The RFQ ID, PR ID, company information, vendor information, RFQ description and RFQ item details are displayed.	The manager ID is displayed incorrectly beside the company information and shipping instructions field is displayed only after confirmation.	Fail
MNG102	View request for quotation	-Login to the system with manager credentials -Click 'View request for quotation' -Click on a RFQ ID	-	The RFQ ID, PR ID, company information, vendor information, RFQ description,	No page is found	Fail



				shipping instructions(if any) and RFQ item details are displayed.		
--	--	--	--	---	--	--

#### 4.2.5 Module 2 Report

No.	Errors/Defects	Description/Remarks
1	Missing Purchase Requisition description	All the necessary details are pre-populated in the Purchase Requisition form except the Purchase Requisition description details.
2	Incorrect company details in Request for Quotation confirmation	The manager ID is displayed incorrectly beside the company information and shipping instructions field is displayed only after confirmation.
3	Page not found when viewing Request for Quotation details	The link in each Request for Quotation ID redirects to the wrong URL

### 4.3 Module 3 (Quotation)

#### 4.3.1 Module 3 Screens

Upon receiving a quotation from a vendor, a Manager can record the quotation under the ‘Record Quotation’ function.

Purchasing SystemHomeAboutContact

Hello m0001!Log off

Request For Quotation |

Find

QUO2438609

RFQ7826122

m0001

v0004

Quotation Description (If applicable)

Item ID	Reference ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
IT0002	Reference ID	Folder	5	3.00	15.00

Submit

Cancel

© - My Django Application

Figure 4.3.1 Quotation form

Once a match for a Request for Quotation ID is found, the Quotation form is populated with a randomly generated unique Quotation ID, the Request for Quotation ID, the Manager’s ID and the vendor’s ID. The form will also display all the items under the Request for Quotation that was made. The Manager can also optionally include a description for the Quotation.

After submitting the Quotation form, the Manager is presented with a review of the details of the Quotation before clicking on ‘Confirm’.

Purchasing System
Home
About
Contact
Hello m0001!
Log off

Quotation ID  
QUO1075006
Request For Quotation ID  
RFQ7826122
Company Information  
Ira Kane  
11-22 Block M, Jalan  
Multimedia, Cyberjaya
Vendor Information  
Marie Shane  
292 Jalan 16 Ampang  
New Village
Description  
Quotation Description (If applicable)

Item ID	Reference ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
IT0002	Reference ID	Folder	5	3.00	15.00
Grand Total				0	

Confirm
Cancel

© - My Django Application

Figure 4.3.2 Quotation confirmation

The Manager can view the records of all Quotation under the 'View Quotation' function.

Quotation ID	Staff ID	Vendor ID	Time	Status
QUO6347045	m0001	v0001	Dec. 30, 2019, 2:26 a.m.	Issue Purchase Order
QUO8615819	m0001	v0004	Dec. 30, 2019, 8:39 a.m.	Issue Purchase Order
QUO9794084	m0001	v0004	Dec. 30, 2019, 8:45 a.m.	Issue Purchase Order
QUO3089445	m0001	v0005	Dec. 30, 2019, 8:50 a.m.	Issue Purchase Order
QUO4885360	m0001	v0002	Dec. 30, 2019, 8:54 a.m.	Issue Purchase Order
QUO2299011	m0001	v0002	Dec. 30, 2019, 9:02 a.m.	Issue Purchase Order

Back

© 2019/2020 - My Django Application

Figure 4.3.3 Records of quotation

Under each quotation record, the Manager can choose to issue a Purchase Order. After a Quotation ID is searched for, the Purchase Order form is populated with details of the Quotation.

Purchasing System

HomeAboutContact

Hello m0001!Log off

Quotation ID

Find

PO1007

QUO4148992

m0001

v0002

Shipping Instructions (If applicable)

Purchase Order Description (If applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
IT0005	Folder	4	2.50	10.00

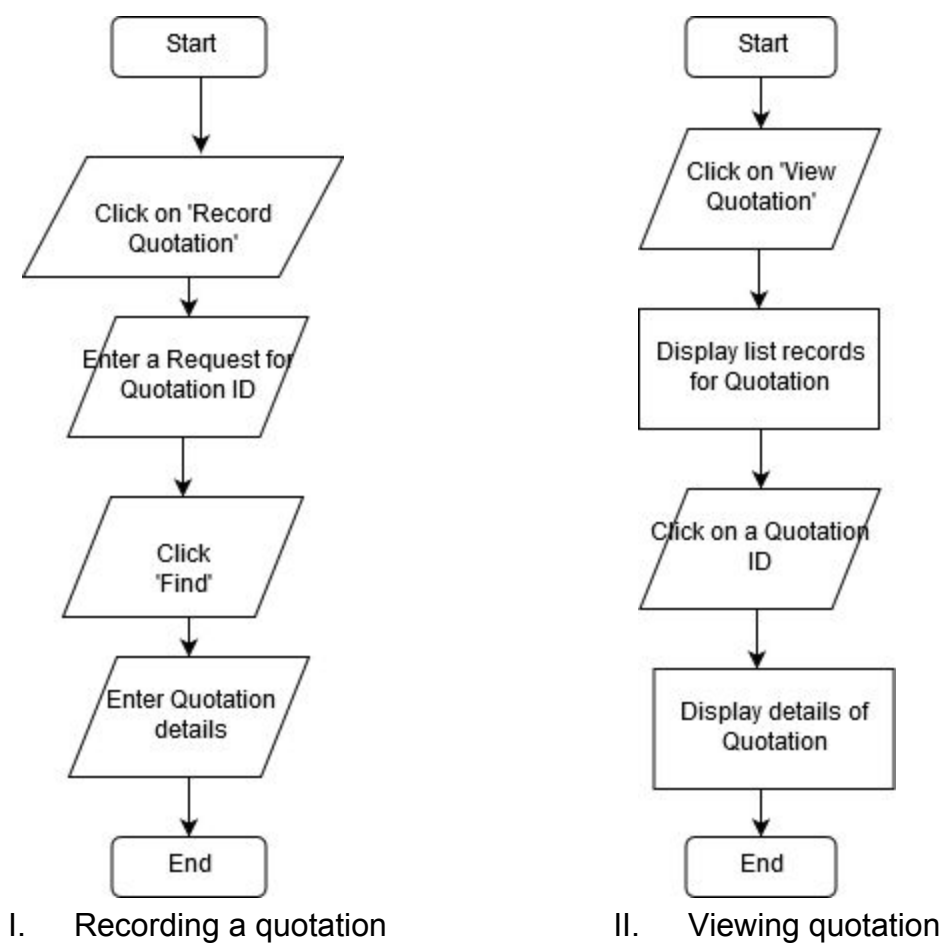
Submit

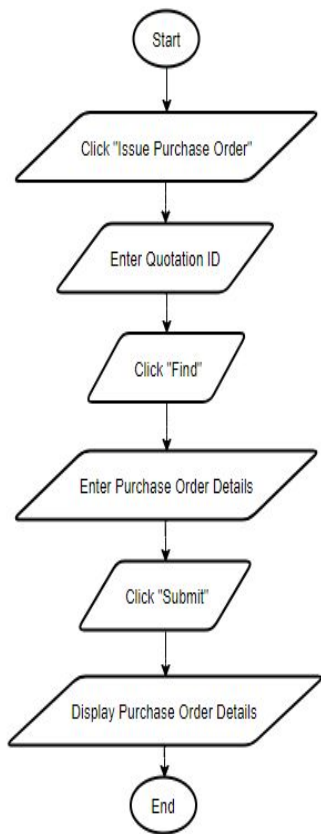
Cancel

© - My Django Application

Figure 4.3.4 Purchase Order form (Manager module)

4.3.2 Module 3 Diagrams





III. Issuing a purchase order from Manager module

### 4.3.3 Module 3 Files

- 1 System Function File  
    ...\Purchasing System\Quotation\views.py
- 2 System Interface [When recording a Quotation]  
    ...\Purchasing System\Quotation\templates\Quotation\quotationform.html
- 3 System Interface [Quotation confirmation]  
    ...\Purchasing System\Quotation\templates\Quotation\quotationconfirmation.html
- 4 System Interface [Record of Quotation]  
    ...\Purchasing System\Quotation\templates\Quotation\quotationhistory.html
- 5 System Interface [Quotation details]  
    ...\Purchasing System\Quotation\templates\Quotation\quotationhistorydetails.html

#### 4.3.4 Module 3 Test Cases

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Results	Actual Results	Pass/Fail
MNG 103	Record quotation	-Login to the system with manager credentials -Click 'Record quotation' - Enter RFQ ID in the search box - Enter quotation description (optional) - Enter reference ID - Click 'Submit'	RFQ ID: RFQ6104058 Quotation description: Lorem ipsum Reference ID: it0002a	The auto-generated Quotation ID, RFQ ID, manager ID and vendor ID are pre-populated in the form and the Quotation details are displayed correctly after confirming.	The quotation history is displayed instead of the quotation form. Moreover, the reference ID is not displayed upon confirmation.	Fail
MNG 104	View quotation	-Login to the system with manager credentials -Click 'View quotation' - Click on a quotation ID	-	The quotation ID, RFQ ID, company information, vendor information, quotation description and quotation items are displayed correctly.	The quotation form is displayed instead of the quotation history. Moreover, the reference ID of the quotation item is not displayed.	Fail



### 4.3.5 Module 3 Report

No.	Errors / Defects	Description / Remarks
1	Wrong page link attached to 'Record Quotation' and 'View Quotation'	The links are wrongly swapped to each module
2	Reference ID is not displayed upon confirmation in 'Record Quotation' form	-
3	Reference ID of the quotation item is not displayed in 'View Quotation'	-



## 4.4 Module 4 (Purchase Order)

### 4.4.1 Module 4 Screens

Quotation ID

Find

Purchase Order ID

Quotation ID

Staff ID

Vendor ID

Shipping Instructions (If applicable)

Purchase Order Description (If applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
---------	------	----------	---------------------	------------

Submit

Cancel

© 2019/2020 - My Django Application

Figure 4.4.1 Module 4 Screen 1

Figure 4.4.1 shows the main function of this module, firstly is by type in the Quotation ID and then press “Find” button and the Purchase Order ID will automatically generate a random ID. The Quotation ID, Staff ID and Vendor ID will be filled with same details with Quotation’s. After that, the user can either fill in the Shipping Instructions and Purchase Order Description or just let both be blank and click the “Submit” button. Then the details will be shown again as Figure 4.4.3.

Purchase Order ID	Staff ID	Vendor ID	Time
PO1001	f0001	v0001	Dec. 23, 2019, 10:57 a.m.
PO1002	f0001	v0002	Dec. 23, 2019, 10:59 a.m.
PO1003	f0001	v0003	Dec. 23, 2019, 11 a.m.

Figure 4.4.2 Module 4 Screen 2

Figure 4.4.2 shows the list of purchase order made and finance ables to click the Purchase Order ID button to show the details as shown as Figure 4.4.3.

Time Created: Dec. 23, 2019, 10:57 a.m.

Purchase Order ID

PO1001

Quotation ID

QUO2833827

Company Information

Allison Reed  
No. 24-1, Taman

Vendor Information

Edwin  
E66B, Jalan Cyberia 4,

Shipping Instructions

Description

Purchase Order Description (If applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
1001	MacBook Air	1	4699.00	4699.00
Grand Total				4699.00

Close

© 2019/2020 - My Django Application

Figure 4.4.3 Module 4 Screen 2

Figure 4.4.3 show the details of a purchase order.

4.4.2 Module 4 Diagrams

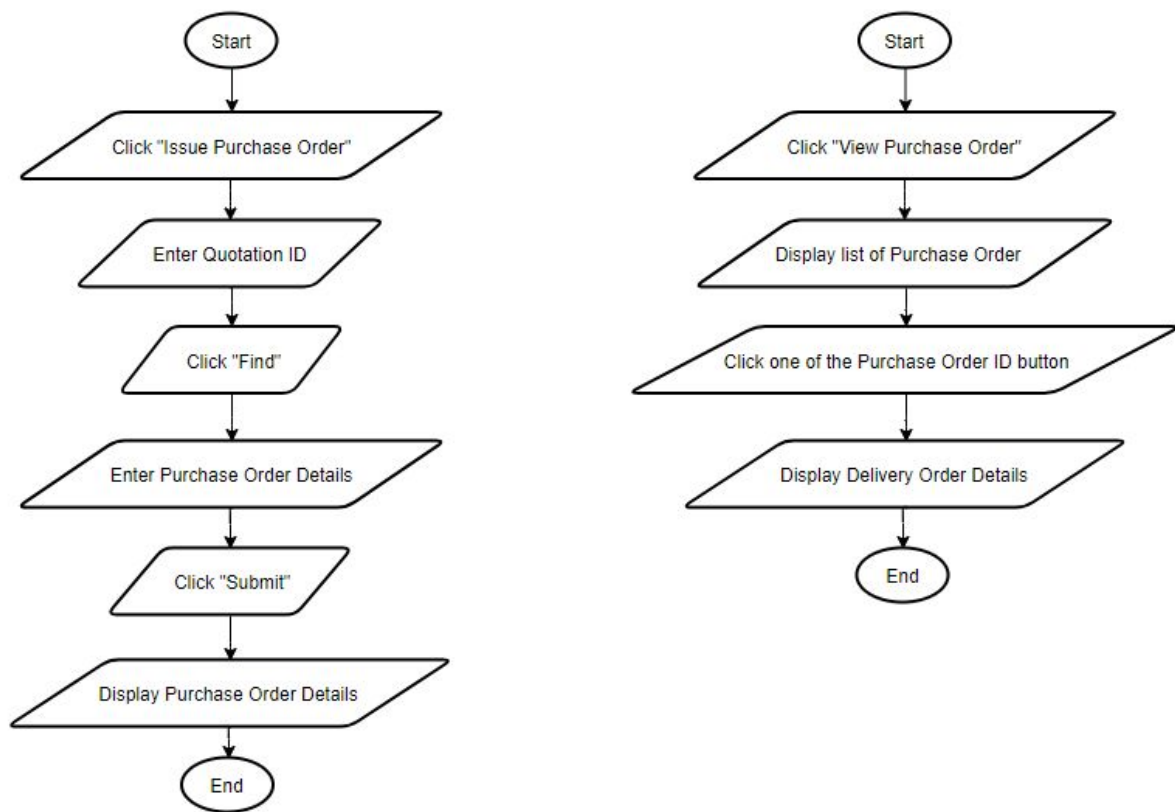


Figure 4.4.4 Flow Chart of Module 4

Figure 4.4.4 shows the process flow of the Purchase Order.

#### 4.4.3 Module 4 Files

1. System Function File

...\Purchasing System\PurchaseOrder\views.py

2. System Interface [When Creating The Delivery Order]

...\Purchasing

System\PurchaseOrder\templates\PurchaseOrder\purchaseorderform.html

3. System Interface [Delivery Order Confirmation]

...\Purchasing

System\PurchaseOrder\templates\PurchaseOrder\purchaseorderconfirmation.html

4. System Interface [Delivery Order Details]

...\Purchasing

System\PurchaseOrder\templates\PurchaseOrder\purchaseorderdetails.html

5. System Interface [View Delivery Order]

...\Purchasing

System\PurchaseOrder\templates\PurchaseOrder\purchaseorderhistory.html

6. System Interface [View Delivery Order Details]

...\Purchasing

System\PurchaseOrder\templates\PurchaseOrder\purchaseorderhistorydetails.html

#### 4.4.4 Module 4 Test Cases

Table 4.4.1 Test Cases

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Results	Actual Results	Pass / Fail
F401	Issue Purchase Order	<ol style="list-style-type: none"> <li>Click "Issue Purchase Order".</li> <li>Fill in Quotation ID, Purchase Order ID, Staff ID, Vendor ID, Shipping Instructions and Purchase Order Description.</li> <li>Click the "Submit" button.</li> </ol>	- Quotation ID: QUO2833827 - Purchase Order ID: PO1001 - Staff ID: f001 - Vendor ID: v001 - Shipping Instructions: - - Purchase Order Description: -	Display the purchase order details	Display the purchase order details	Pass
F402	View Purchase Order	<ol style="list-style-type: none"> <li>Click the "View Purchase Order" button.</li> </ol>		Display list of the purchase order	Display list of the purchase order	Pass

#### 4.4.5 Module 4 Report

Table 4.4.2 Error Table

No.	Errors / Defects	Description / Remarks
1	show fail to submit webpage	able to submit but it show error webpage and the data is saved to the database.

## 4.5 Module 5 (Delivery Order)

### 4.5.1 Module 5 Screens

Purchase Order ID

Find

delivery Order ID

Purchase\_Order\_ID

Staff ID

Vendor ID

Shipping Instructions (If applicable)

Purchase Order Description (If applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
---------	------	----------	---------------------	------------

Submit

Cancel

Figure 4.5.1 Module 5 Screen 1

Figure 4.5.1 shows the main function of this module, firstly is by type in the Purchase Order ID and then press “Find” button and the Delivery Order ID will automatically generate a random ID. The Purchase Order ID, Staff ID and Vendor ID will be filled with same details with Purchase Order’s. After that, finance can either fill in the Shipping Instructions and Purchase Order Description or just let it be blank and click the “Submit” button. Then the details will be shown again as Figure 4.5.3.

Delivery Order ID	Staff ID	Vendor ID	Time
DO43287538	f0001	v0001	Dec. 30, 2019, 9:52 a.m.
DO81607711	f0001	v0001	Jan. 1, 2020, 9:51 a.m.

Back

Figure 4.5.2 Module 5 Screen 2

Figure 4.5.2 shows the list of delivery order made and finance ables to click the Delivery Order ID button to show the details as shown as Figure 4.5.3.



Time Created: Jan. 1, 2020, 9:51 a.m.

Delivery Order ID

DO81607711

Quotation ID

PO1002

Company Information

Allison Reed  
No. 24-1, Taman

Vendor Information

Edwin  
edwinkang98@gmail.

Shipping Instructions

123

Description

123123

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
It00001		3	5.00	15.00
Grand Total				15.00

Close

Figure 4.5.3 Module 5 Screen 3

Figure 4.5.3 shows the details of a delivery order.

4.5.2 Module 5 Diagrams

Figure 4.5.4 shows the process flow of the Delivery Order.

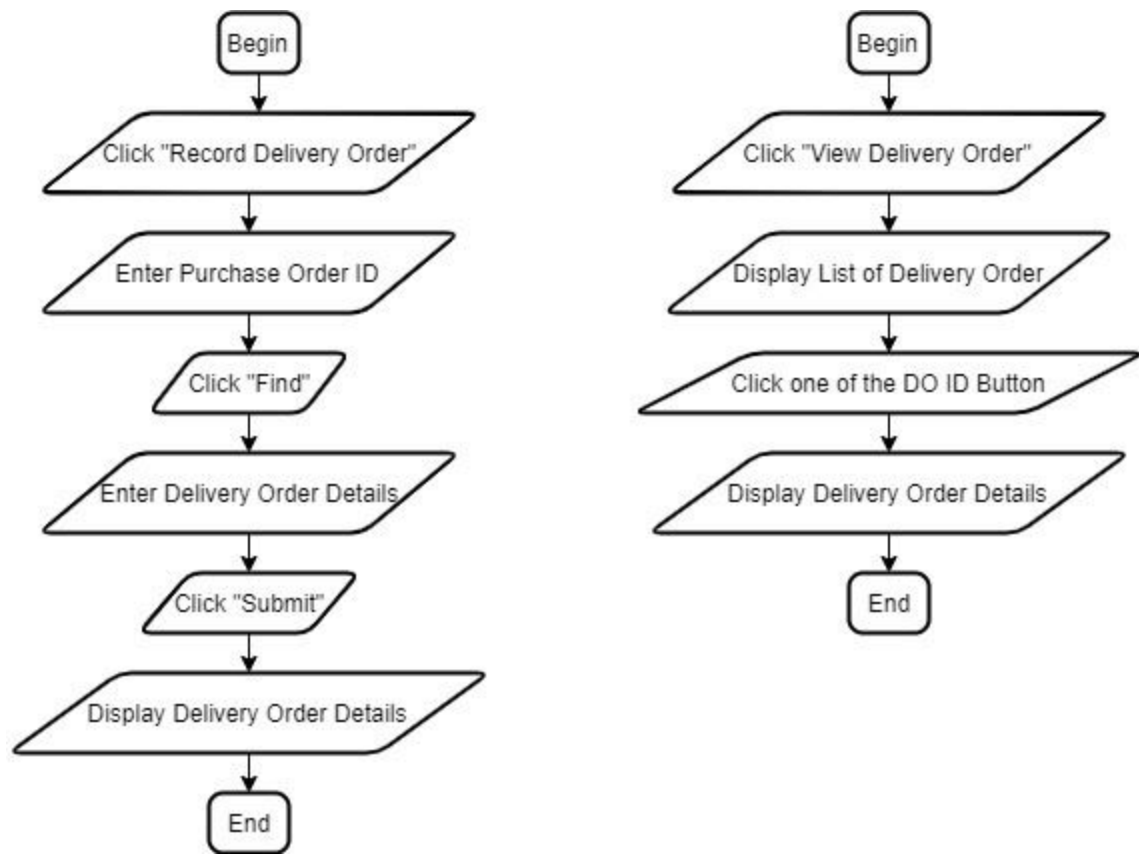


Figure 4.5.4 Flow Chart of Module 5

### 4.5.3 Module 5 Files

1. System Function File  
    ...\Purchasing System\DeliveryOrder\views.py
2. System Interface [When Creating The Delivery Order]  
    ...\Purchasing System\DeliveryOrder\templates\DeliveryOrder\deliveryorderform.html
3. System Interface [Delivery Order Confirmation]  
    ...\Purchasing  
    System\DeliveryOrder\templates\DeliveryOrder\deliveryorderconfirmation.html
4. System Interface [Delivery Order Details]  
    ...\Purchasing  
    System\DeliveryOrder\templates\DeliveryOrder\deliveryorderdetails.html
5. System Interface [View Delivery Order]  
    ...\Purchasing  
    System\DeliveryOrder\templates\DeliveryOrder\deliveryorderhistory.html
6. System Interface [View Delivery Order Details]  
    ...\Purchasing  
    System\DeliveryOrder\templates\DeliveryOrder\deliveryorderhistorydetails.html

#### 4.5.4 Module 5 Test Cases

Table 4.5.1 Test Cases

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Results	Actual Results	Pass / Fail
F501	Record Delivery Order	<ol style="list-style-type: none"> <li>1. Click "Record Delivery Order".</li> <li>2. Fill in Purchase Order ID, Delivery Order ID, Staff ID, Vendor ID, Shipping Instructions and Purchase Order Description.</li> <li>3. Click the "Submit" button.</li> </ol>	<ul style="list-style-type: none"> <li>- Purchase Order ID: PO1001</li> <li>- Delivery Order ID:</li> <li>- Staff ID: f001</li> <li>- Vendor ID: v001</li> <li>- Shipping Instructions: Delivery with extra care</li> <li>- Purchase Order Description: 3 Binders</li> </ul>	Display the delivery order details	Display the delivery order details but is different shipping instructions from purchase order details	Fail
F502	View Delivery Order	<ol style="list-style-type: none"> <li>1. Click the "View Delivery Order" button.</li> </ol>		Display list of the delivery order	Display list of the delivery order	Pass

#### 4.5.5 Module 5 Report

Table 4.5.2 Error Table

No.	Errors / Defects	Description / Remarks
1	Shipping instructions	Different from the purchase order details so is not same instructions
2	Wrong word showing	As figure 4.5.1, it is supposed to be "Delivery Order Description" but not "Purchase Order Description" as this is Delivery Order module.

## 4.6 Module 6 (Invoice)

### 4.6.1 Module 6 Screens

Purchase Order ID

Find

Invoice ID

Purchase Order ID

Staff ID

Vendor ID

Invoice Description (If applicable)

Item ID	Item	Quantity	Price Per Unit (RM)	Total (RM)
---------	------	----------	---------------------	------------

Submit

Cancel

Figure 4.6.1 Module 6 Screen 1

Figure 4.6.1 shows the main function of this module, firstly is by type in the Purchase Order ID and then press “Find” button and the Invoice ID will automatically generate a random ID. The Purchase Order ID, Staff ID and Vendor ID will be filled with same details with Purchase Order’s. After that, finance can either fill in the Invoice Description or just let it be blank and click the “Submit” button. Then the details will be shown again as Figure 4.6.3.

Invoice ID	Staff ID	Vendor ID	Time
INV4943394	f0001	v0001	Dec. 30, 2019, 10:02 a.m.

Back

Figure 4.6.2 Module 6 Screen 2

Figure 4.6.2 shows the list of the invoice made and finance ables to click the Invoice ID button to show the details as shown as Figure 4.6.3.

Time Created: Dec. 30, 2019, 10:02 a.m.

Purchase Order ID

PO1001

Invoice ID

INV4943394

Company Information

Allison Reed  
No. 24-1, Taman

Vendor Information

Edwin  
edwinkang98@gmail.

Shipping Instructions

Shipping Instructions (If applicable)

Description

123

Item ID	Price Per Unit (RM)	Item	Quantity	Total (RM)
"It0001 "		100	10.00	1000.00
Grand Total				1000.00

Close

Figure 4.6.3 Module 6 Screen 3

Figure 4.6.3 shows the details of a delivery order

4.6.2 Module 6 Diagrams

Figure 4.6.4 shows the process flow of the Invoice.

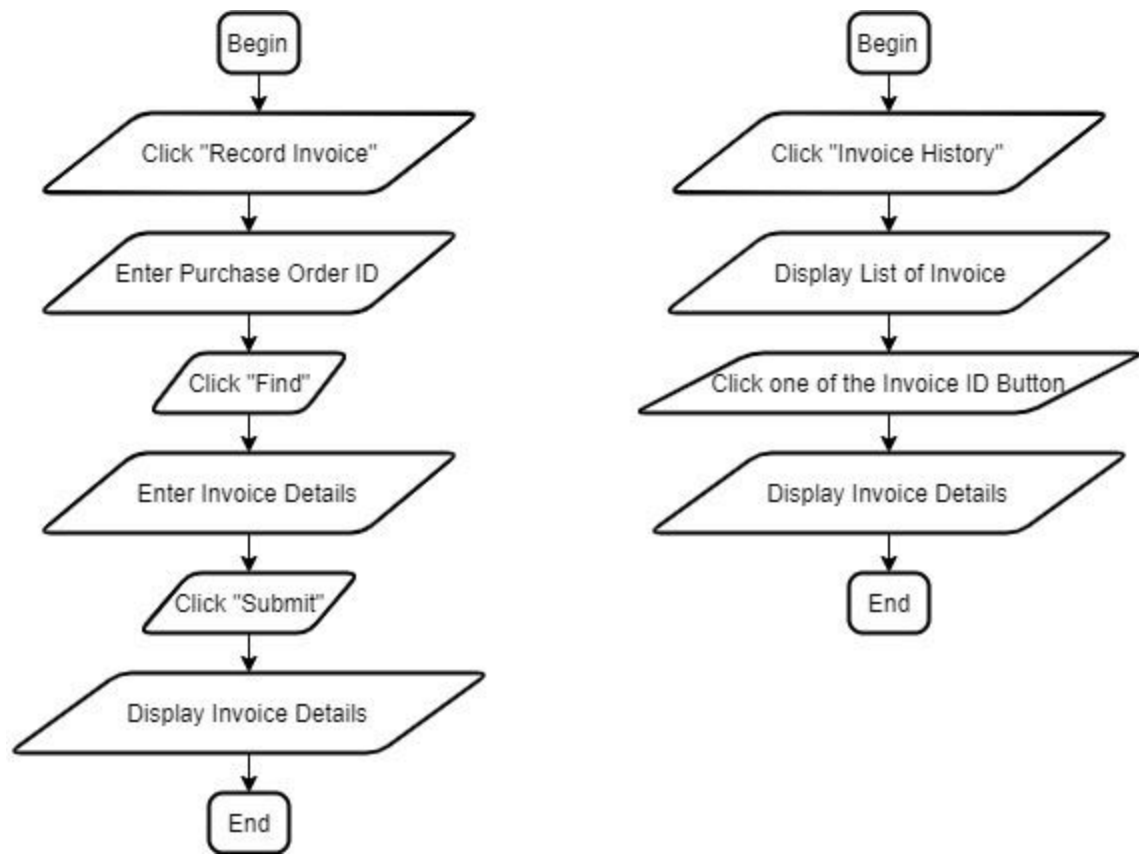


Figure 4.6.4 Flow Chart of Module 6

#### 4.6.3 Module 6 Files

1. System Function File  
...\\Purchasing System\\Invoice\\views.py
2. System Interface [When Creating The Invoice]  
...\\Purchasing System\\Invoice\\templates\\Invoice\\invoiceform.html
3. System Interface [Invoice Confirmation]  
...\\Purchasing System\\Invoice\\templates\\Invoice\\invoiceconfirmation.html
4. System Interface [Invoice Details]  
...\\Purchasing System\\Invoice\\templates\\Invoice\\invoicedetails.html
5. System Interface [View Delivery Order]  
...\\Purchasing System\\Invoice\\templates\\Invoice\\invoicehistory.html
6. System Interface [View Delivery Order Details]  
...\\Purchasing System\\Invoice\\templates\\Invoice\\invoicehistorydetails.html



**4.6.4 Module 6 Test Cases**

Table 4.6.1 Test Case

Test Case ID	Test Scenario	Test Steps	Test Data	Expected Results	Actual Results	Pass / Fail
F601	Record Invoice	5. Click "Record Invoice". 6. Fill in Purchase Order ID, Invoice ID, Staff ID, Vendor ID and Invoice Description. 7. Click the "Submit" button.	- Purchase Order ID: PO1001 - Invoice ID: - Staff ID: f001 - Vendor ID: v001 - Invoice Description: 3 Binders	Display the invoice details with correct Purchase Order ID and submitted	Display the invoice details with wrong Purchase Order ID but able to submit and also different Purchase Order ID and if item name same as other purchase order will return an error and unable to submit	Fail
F602	Invoice History	2. Click the "Invoice History" button.		Display list of the invoices	Display list of the invoices	Pass

**4.6.5 Module 6 Report**

Table 4.5.2 Error Table

No.	Errors / Defects	Description / Remarks
1	Wrong Purchase Order ID	Display different Purchase Order ID
2	Different purchase order but same item name	Same item name in different purchase order will failed to submit invoice