

An Inventory and Sales Management System

Prepared By

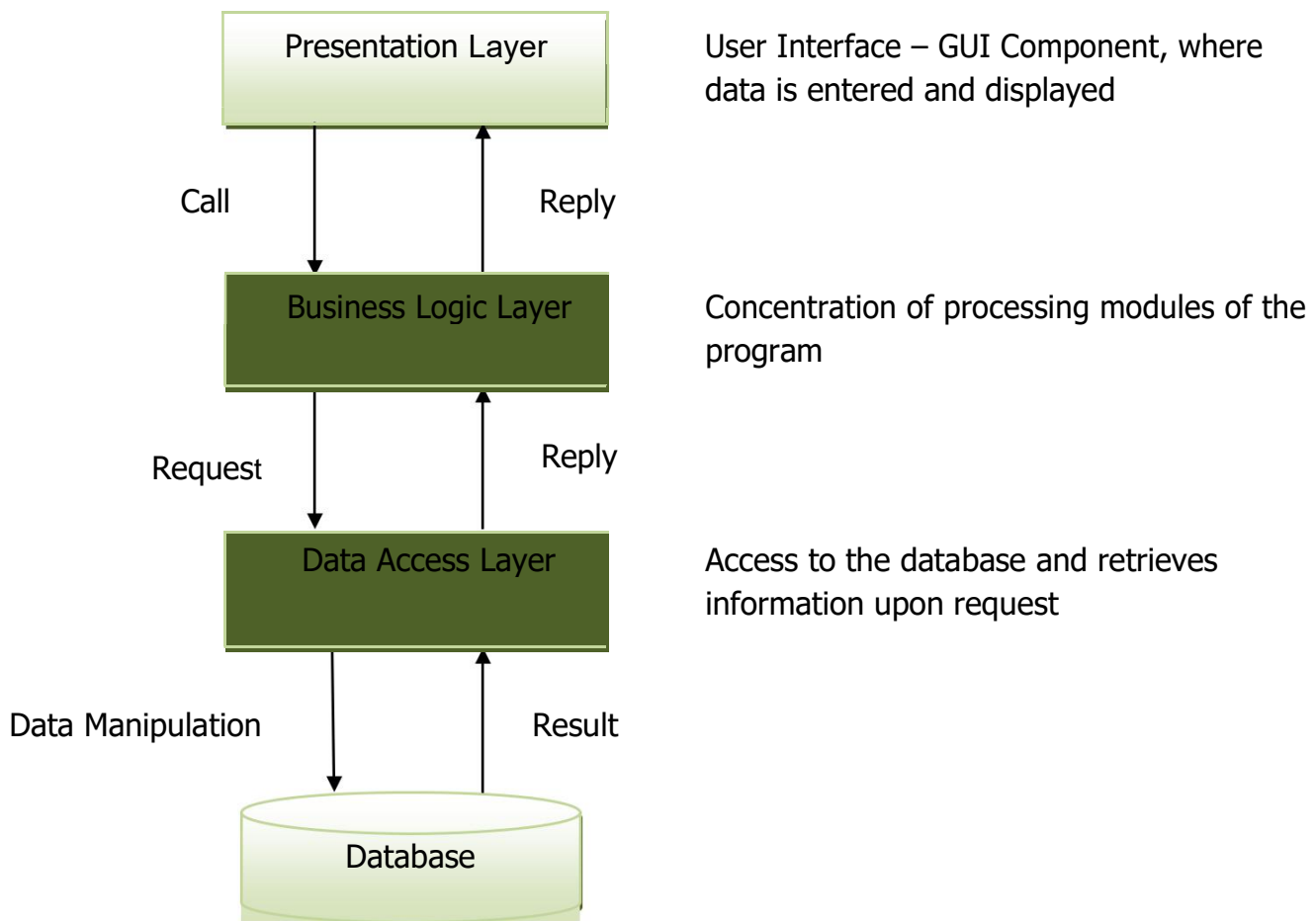
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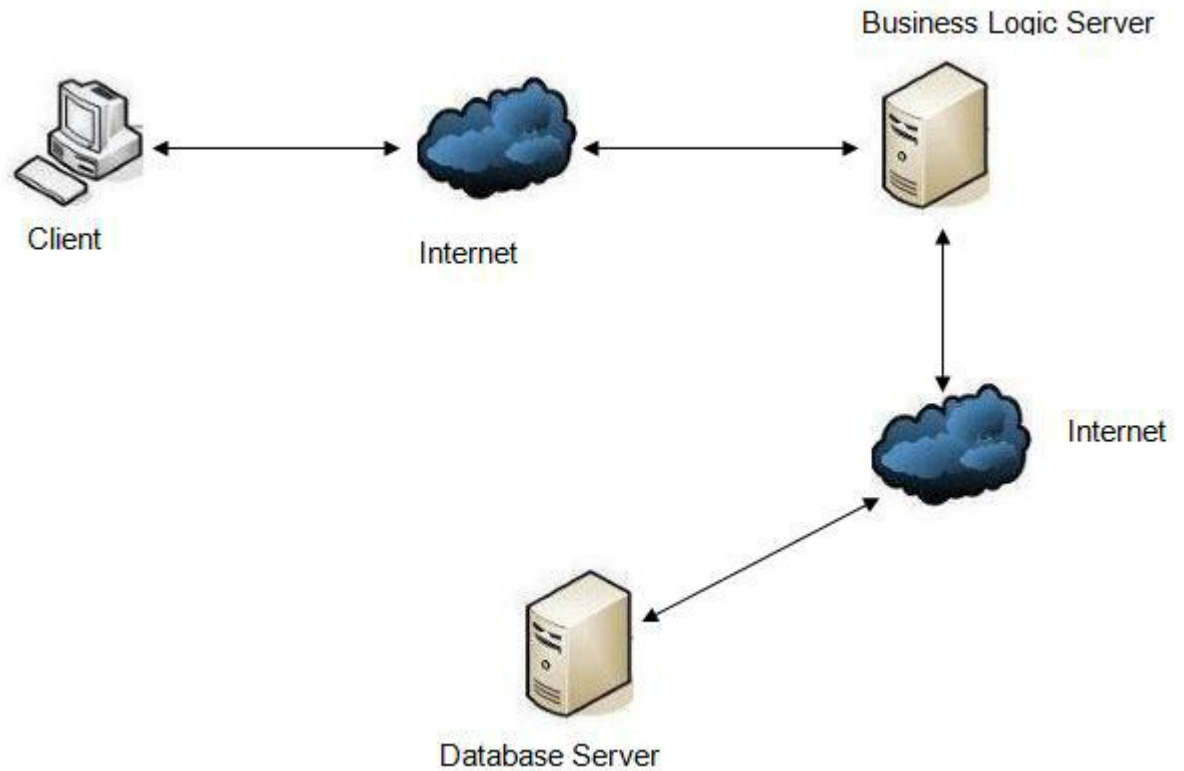
Architecture and Design of the System

Since the application will have client server architecture, it will have three-tier architecture.

A.Logical View



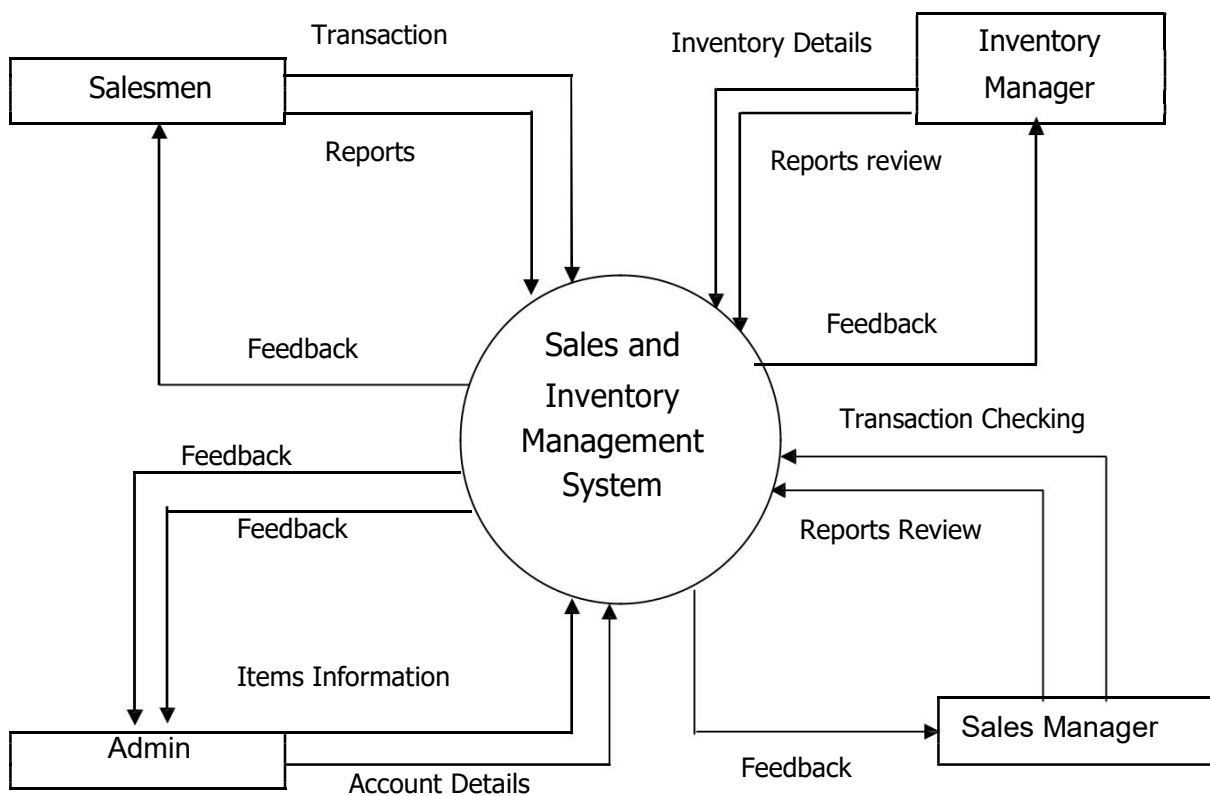
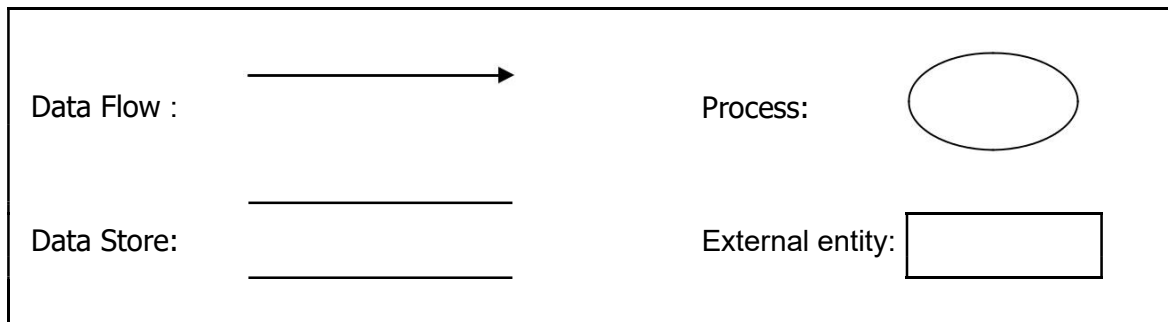
B. Physical View



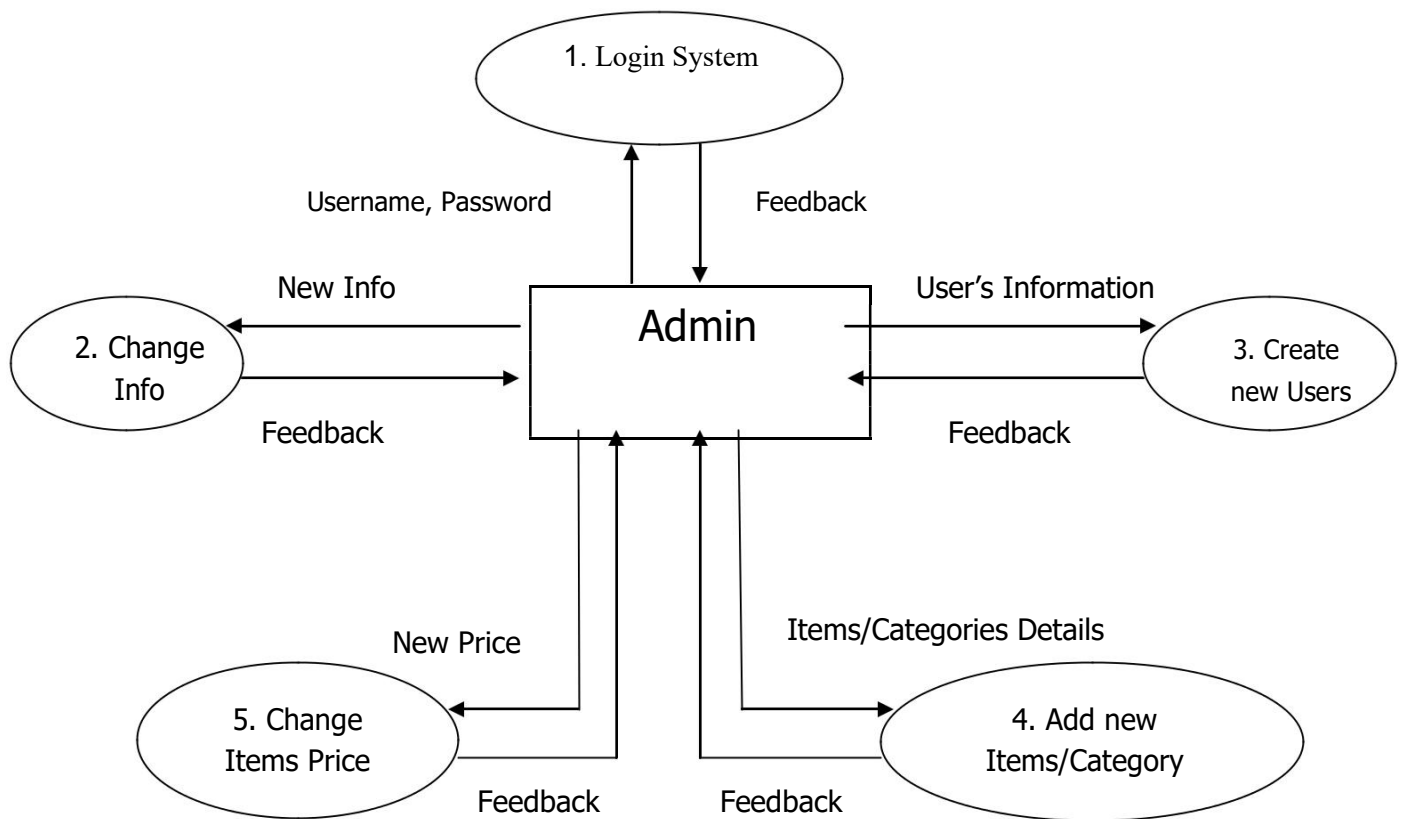
- Client sends the request operations such as adding, deleting, and updating via Internet to Business Logic Server.
- Server to receive and process those requests and then sent via Internet to Database Server.
- Database Server receives service requests and manipulates the database and return relevant results for Business Logic Server.
- Business Logic Server receives the result from Database Server and return to the Client.

Data Flow Diagram (DFD) & Flowcharts

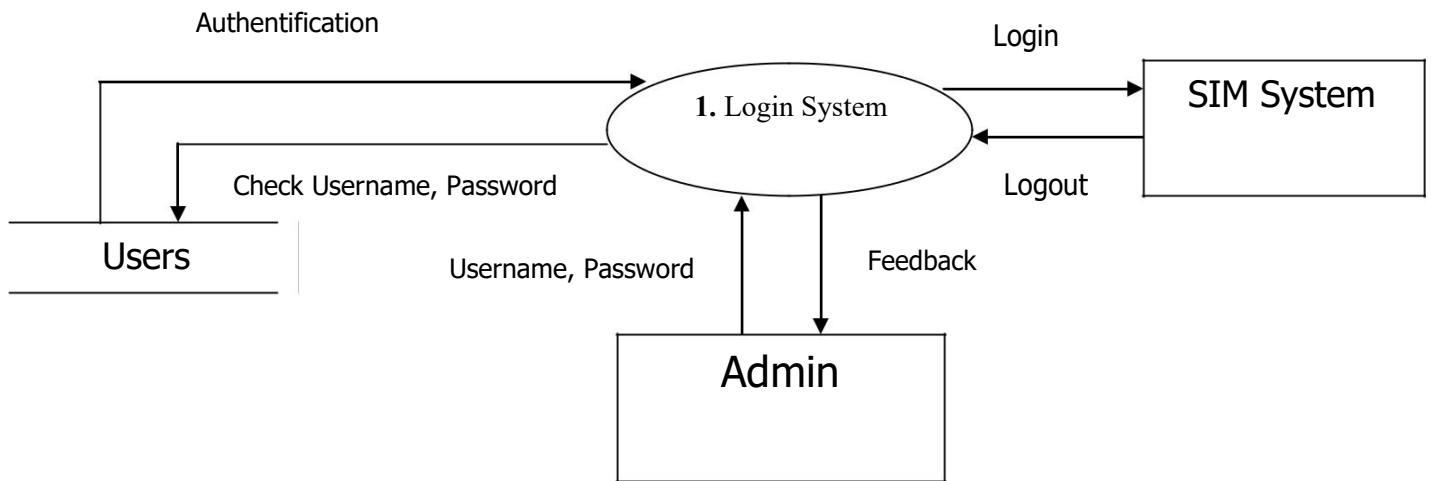
Data Flow Diagram :



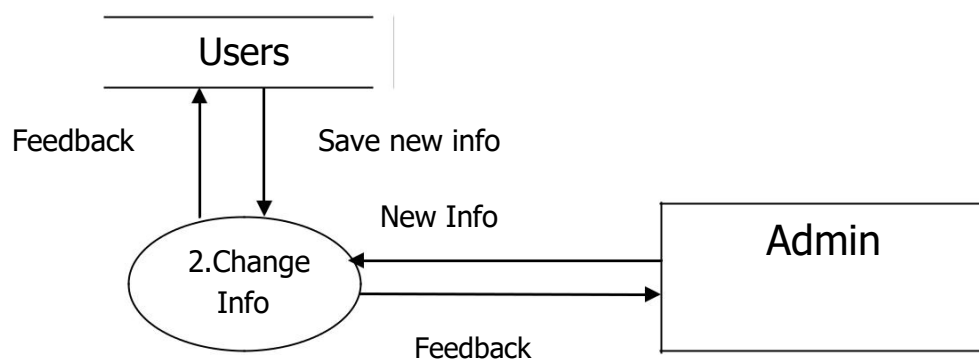
DFD level 0: Context Diagram



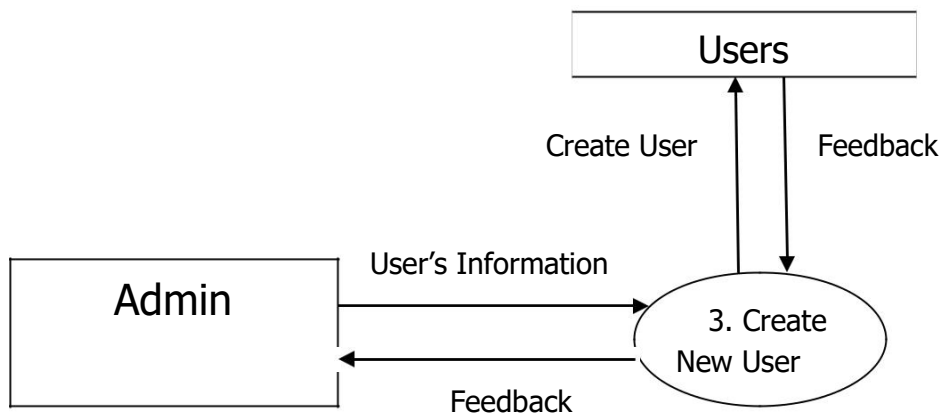
DFD Level 1.0 – Application Process : Administrator



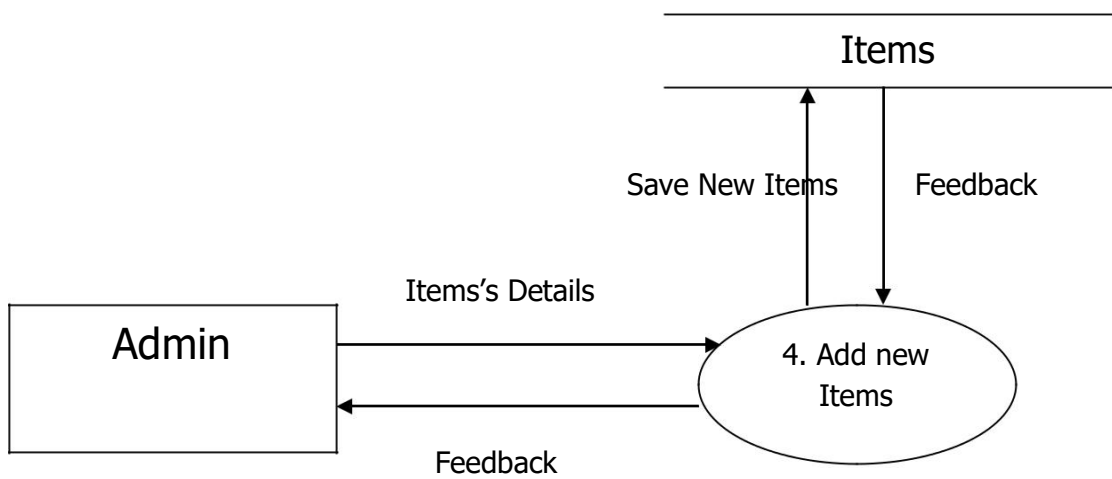
DFD Level 1.1 – Function Process : Login System



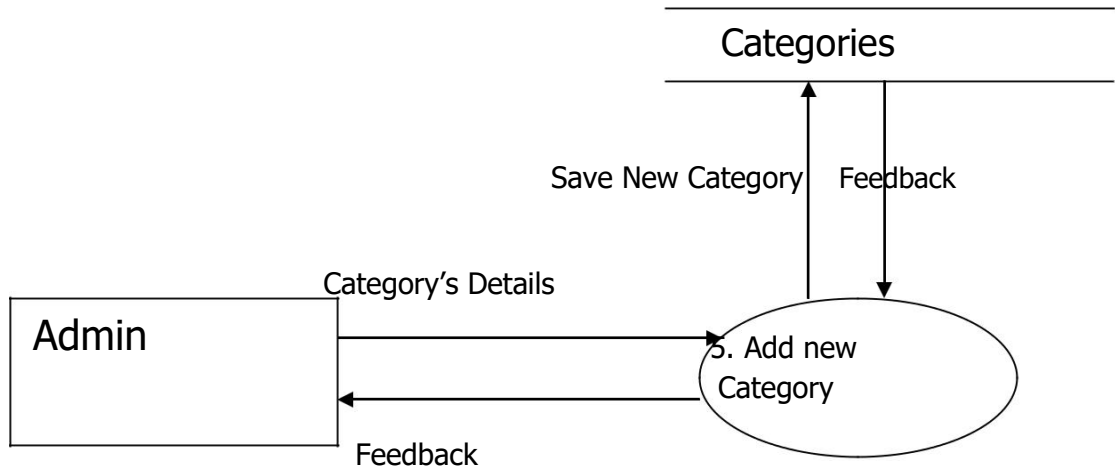
DFD Level 1.2 – Function Process : Change Information



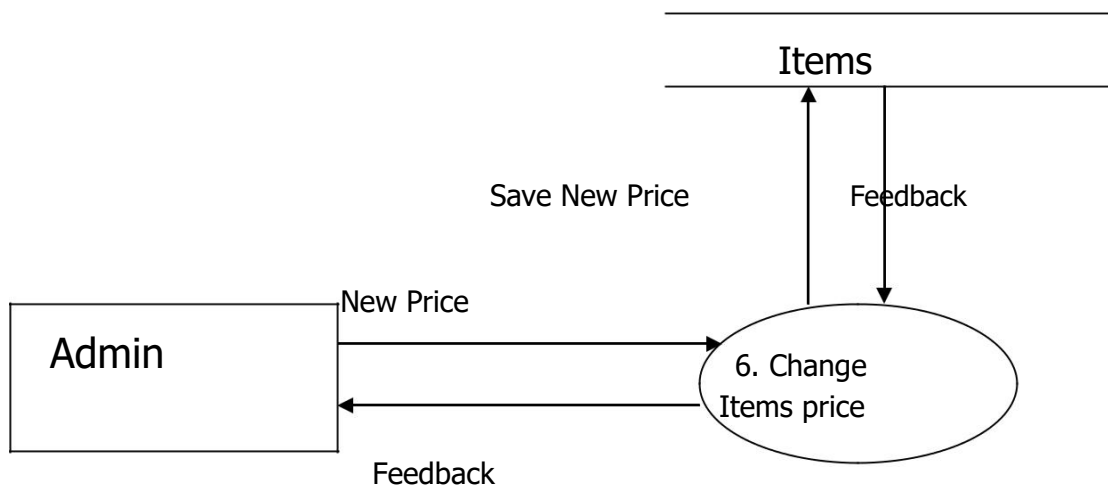
DFD Level 1.3 – Function Process: Create new User

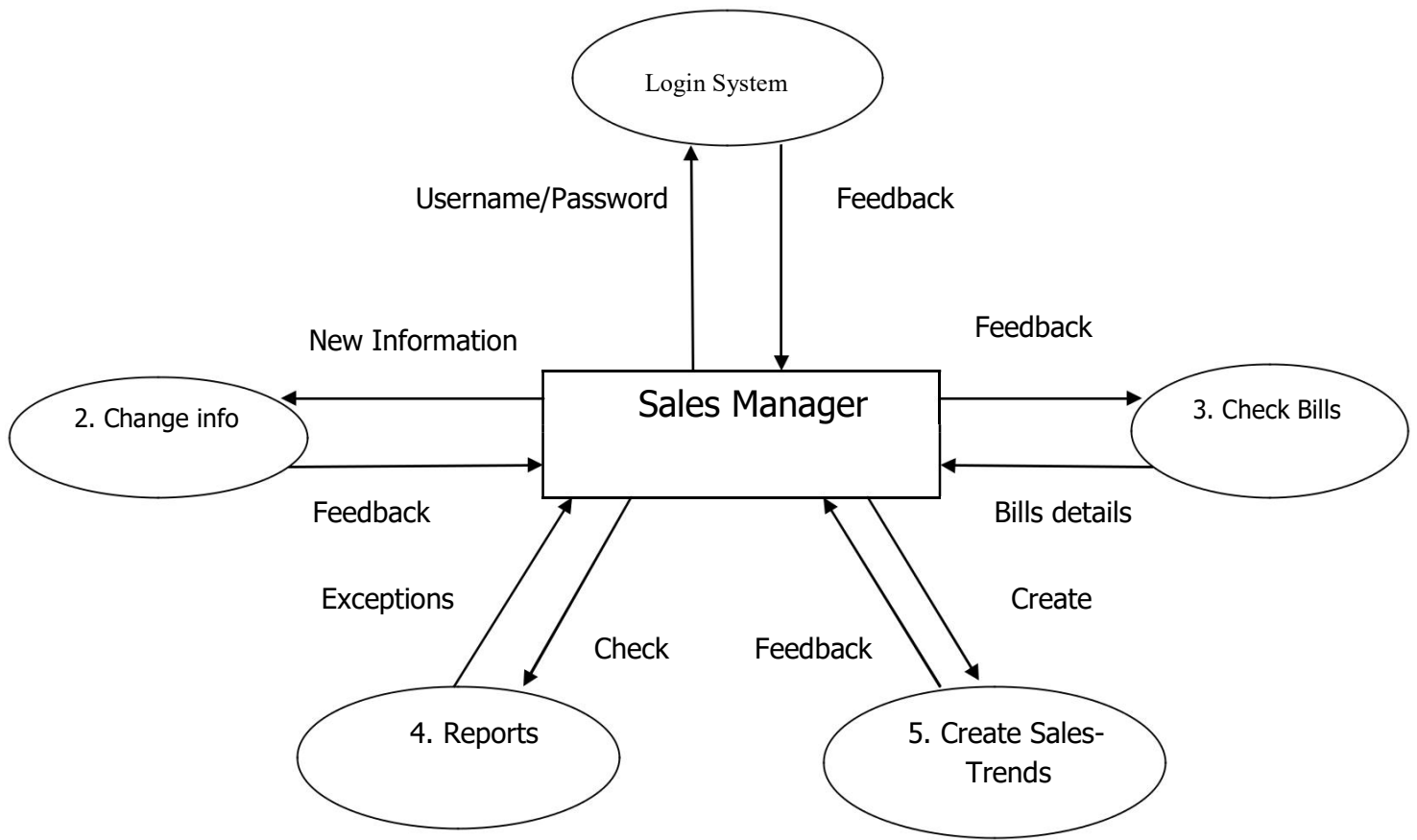


DFD Level 1.4.1 – Function Process: Add new Items

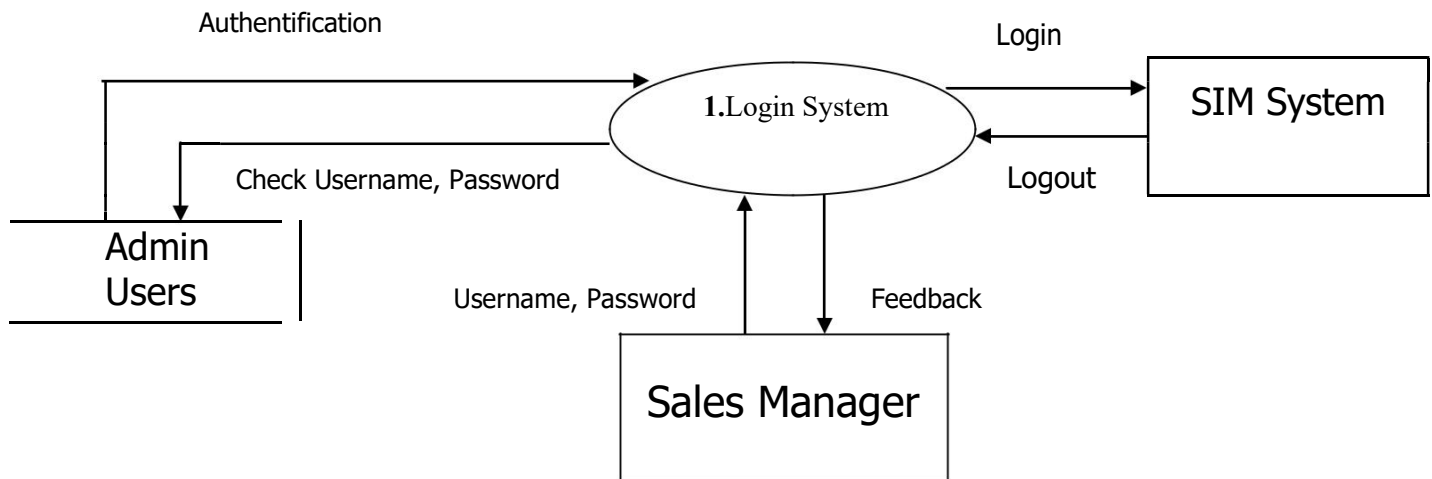


DFD Level 1.4.2 – Function Process: Add new Category

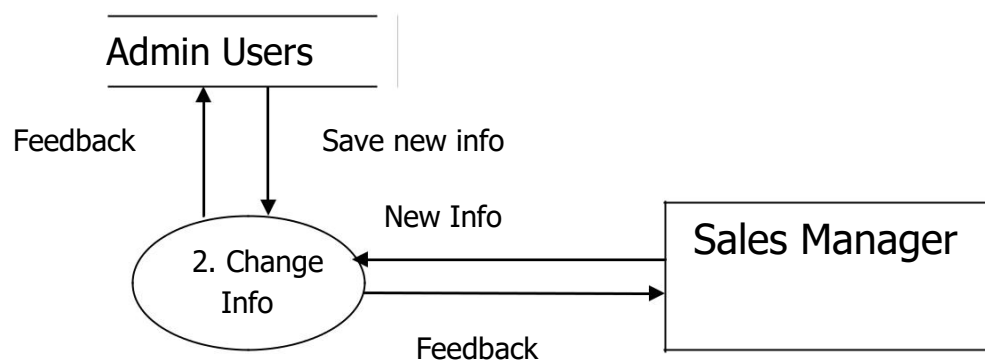




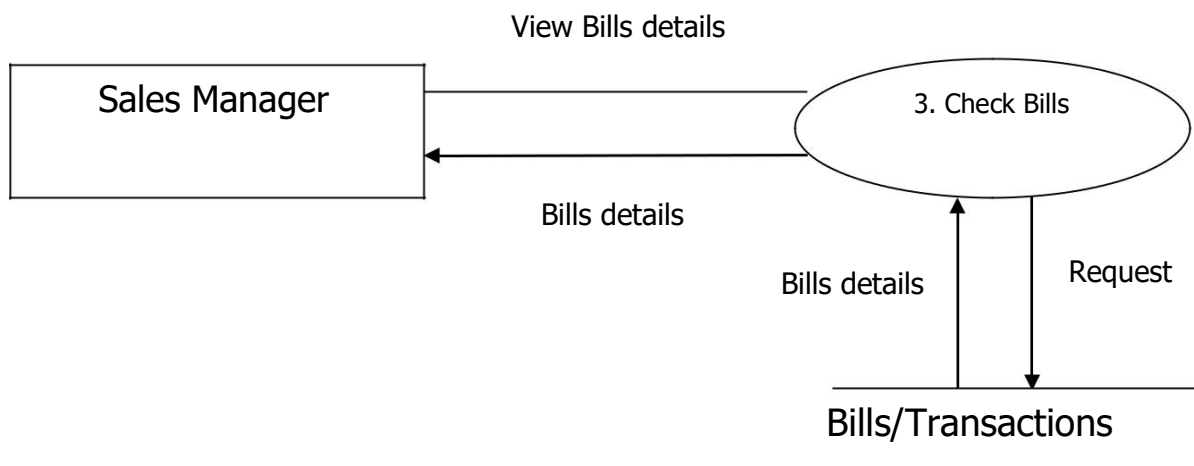
DFD Level 1 – Application Process: Sales Manager



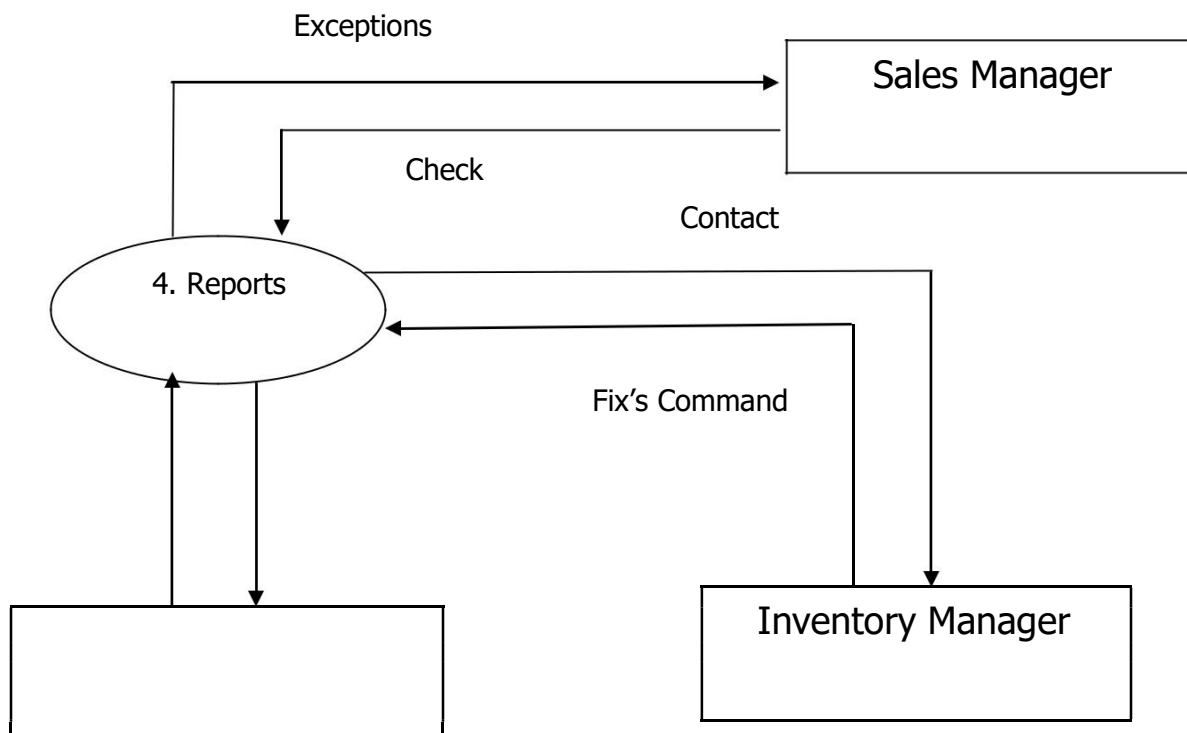
DFD Level 1.1 – Function Process: Login System



DFD Level 1.2 – Function Process: Change information

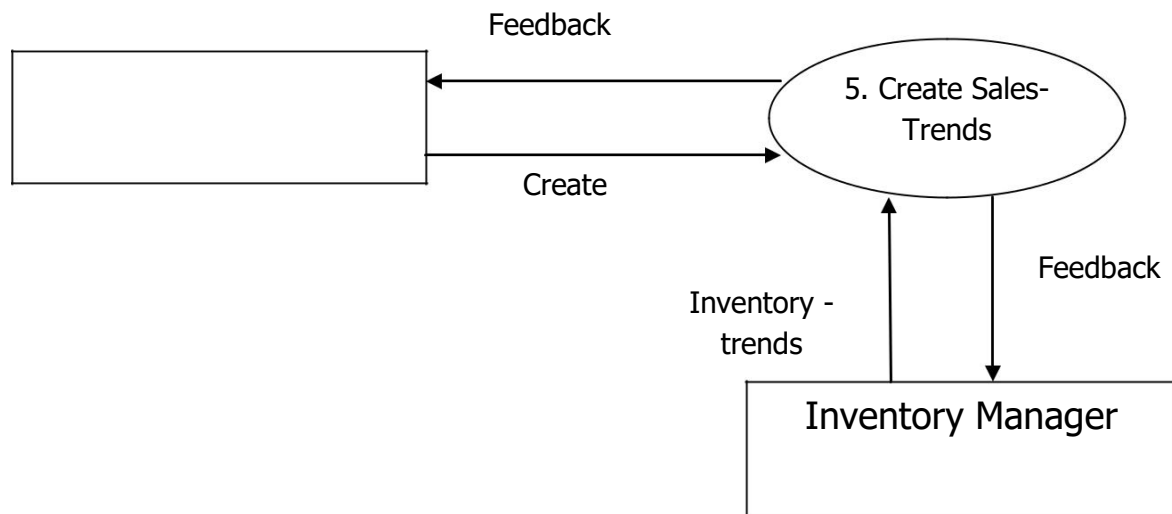


DFD Level 1.3 – Function Process: Check Bill

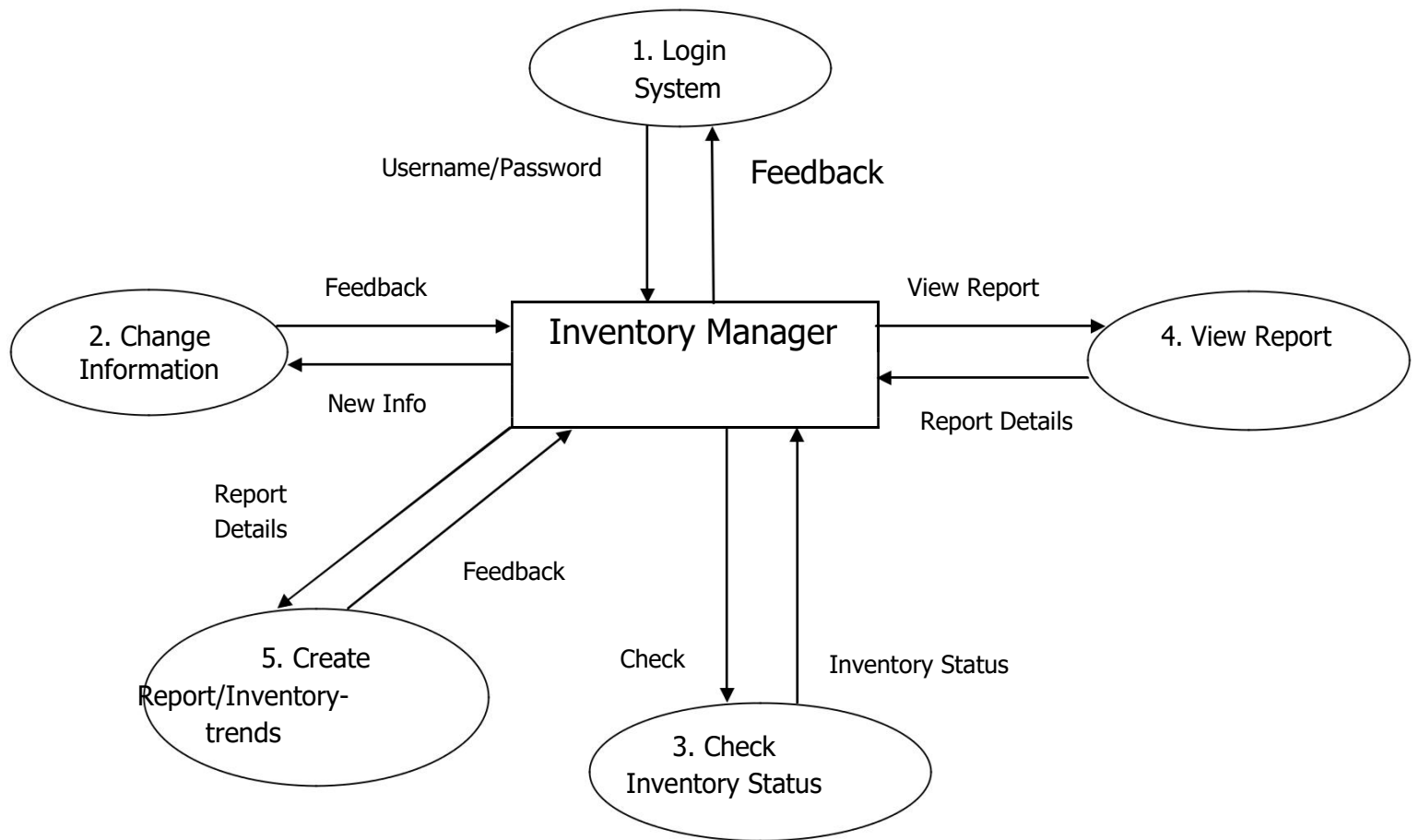


DFD Level 1.4 – Function Process: Report

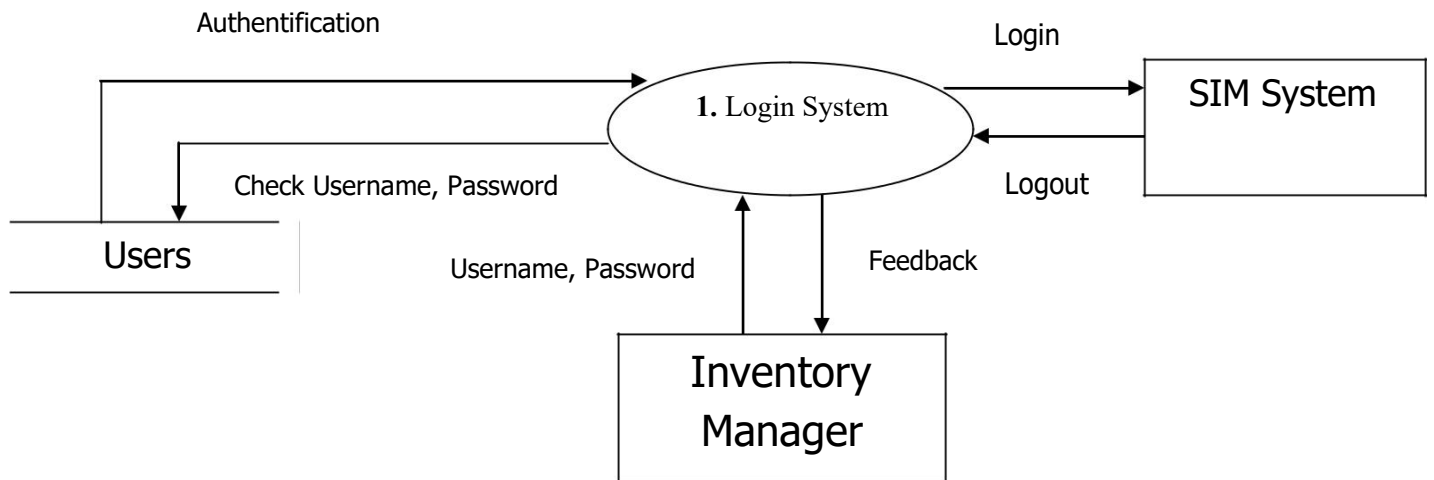
Sales Manager



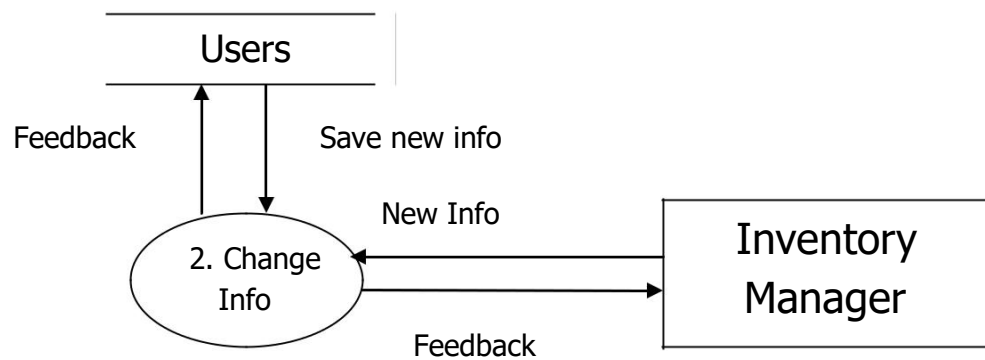
DFD Level 1.5 – Function Process: Create Sales-Trends



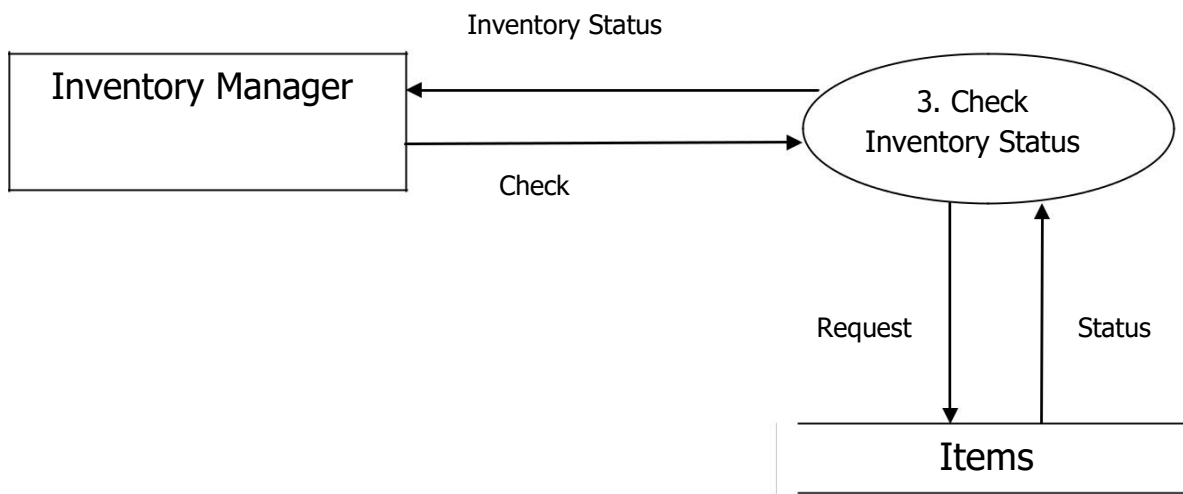
DFD Level 1 – Application Process: Inventory Manager



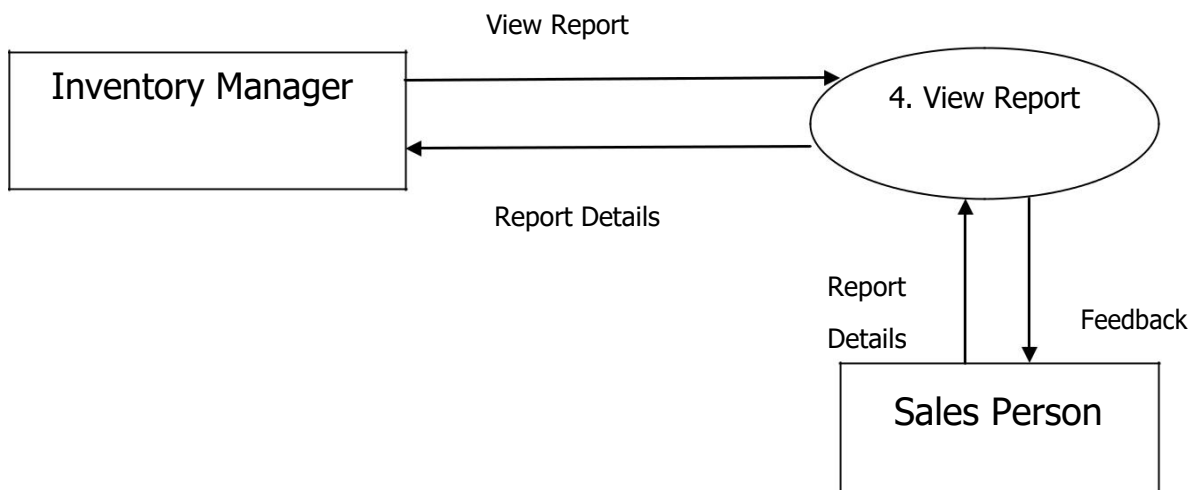
DFD Level 1.1 – Function Process: Login System



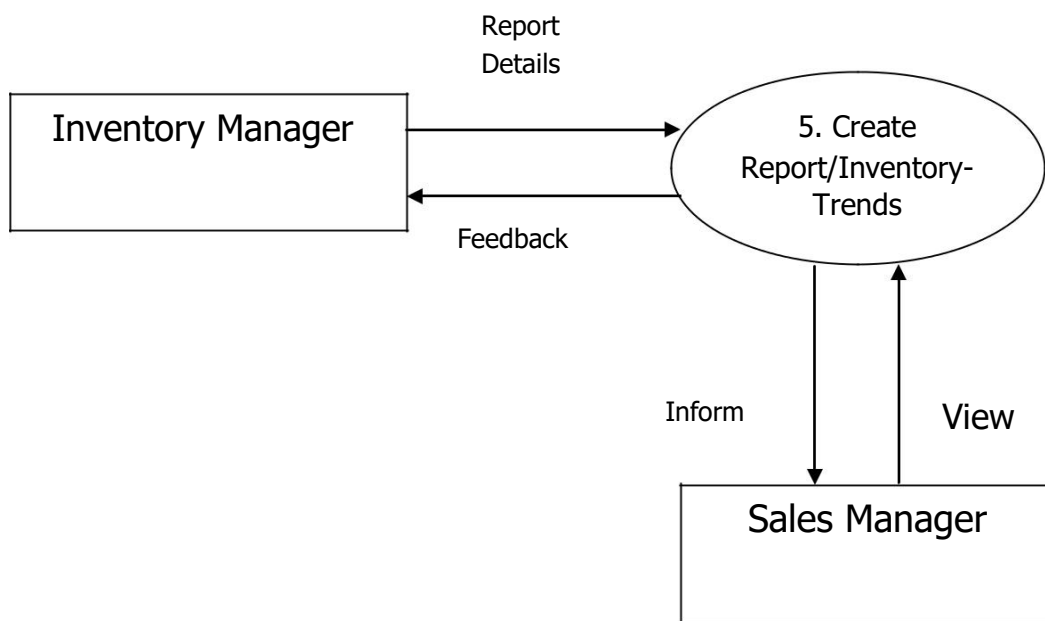
DFD Level 1.2 – Function Process: Change Information



DFD Level 1.3 – Function Process: Check Inventory Status



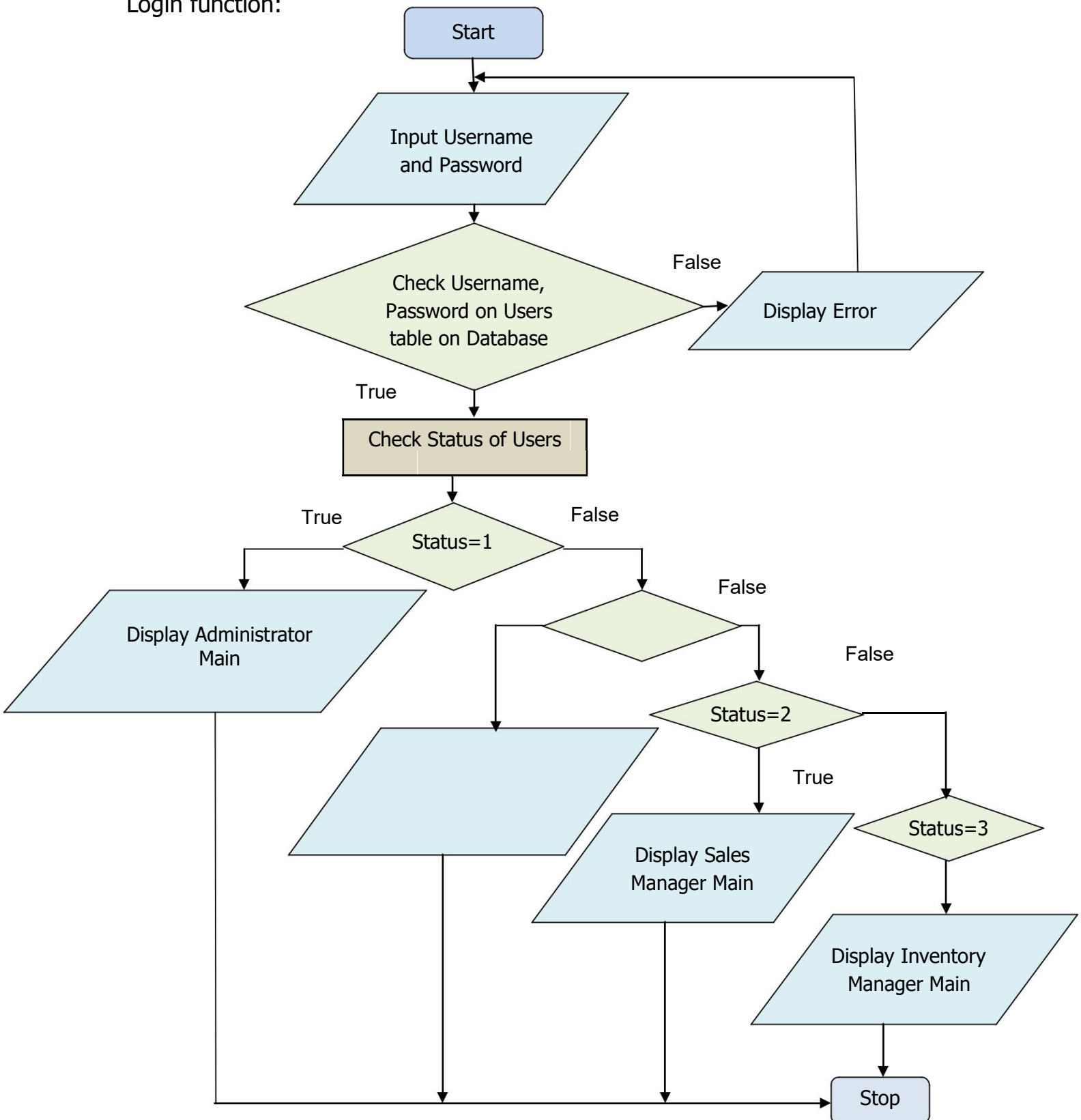
DFD Level 1.4 – Function Process: View Reports



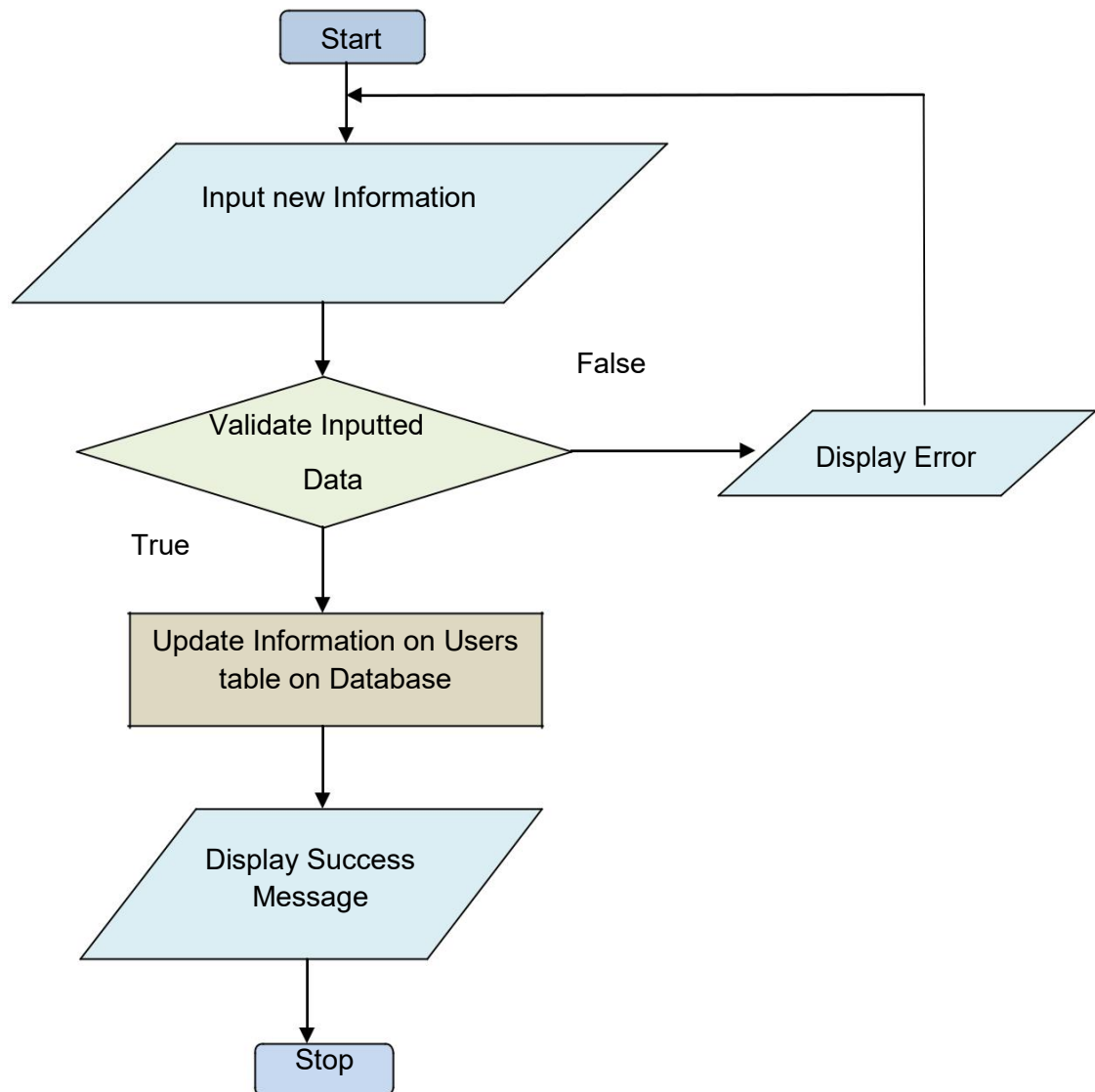
DFD Level 1.4 – Function Process: Create Report/Inventory-Trends

Design Flowcharts:

Login function:

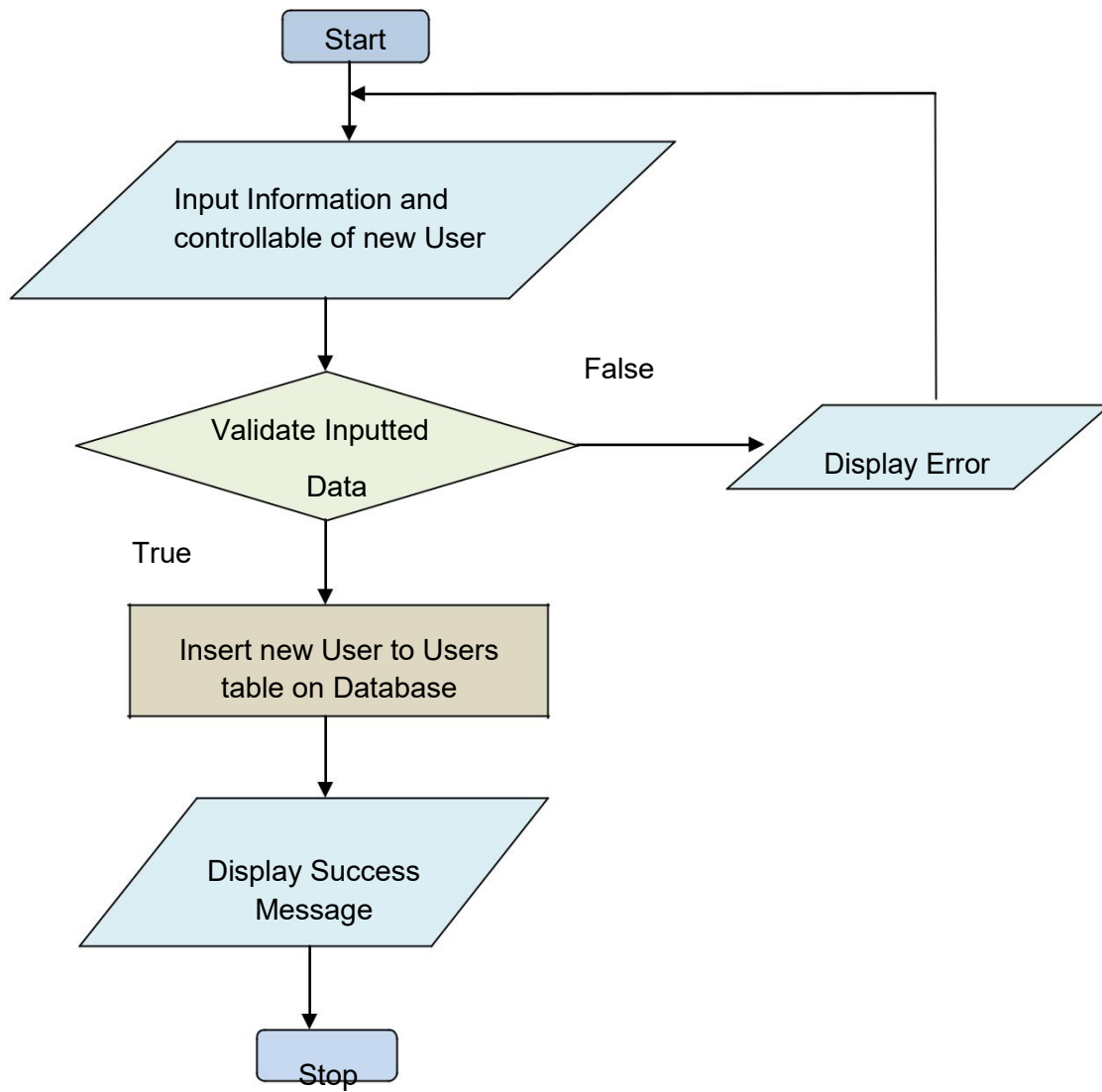


Change User Information Function

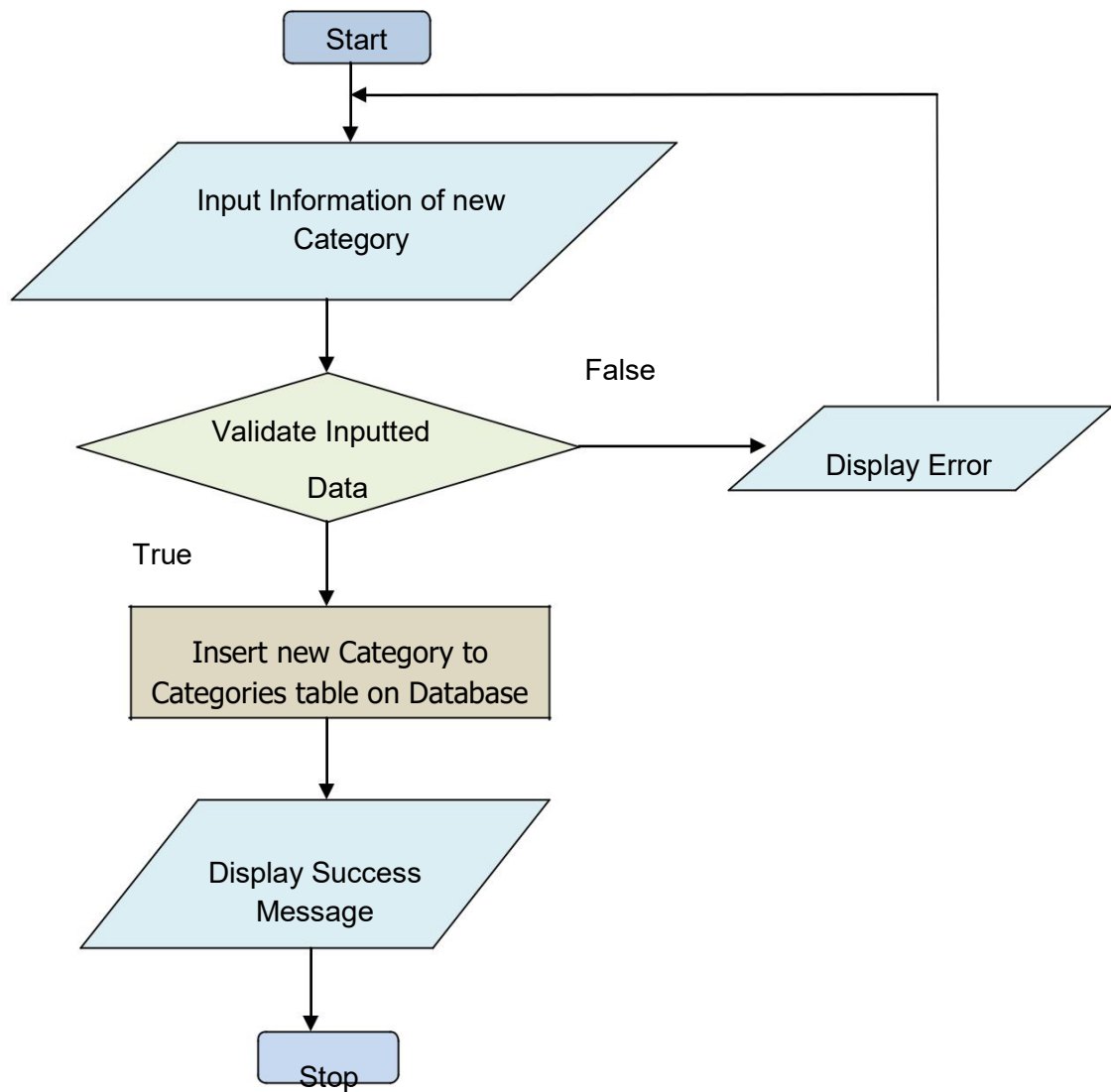


Functions of Administrator

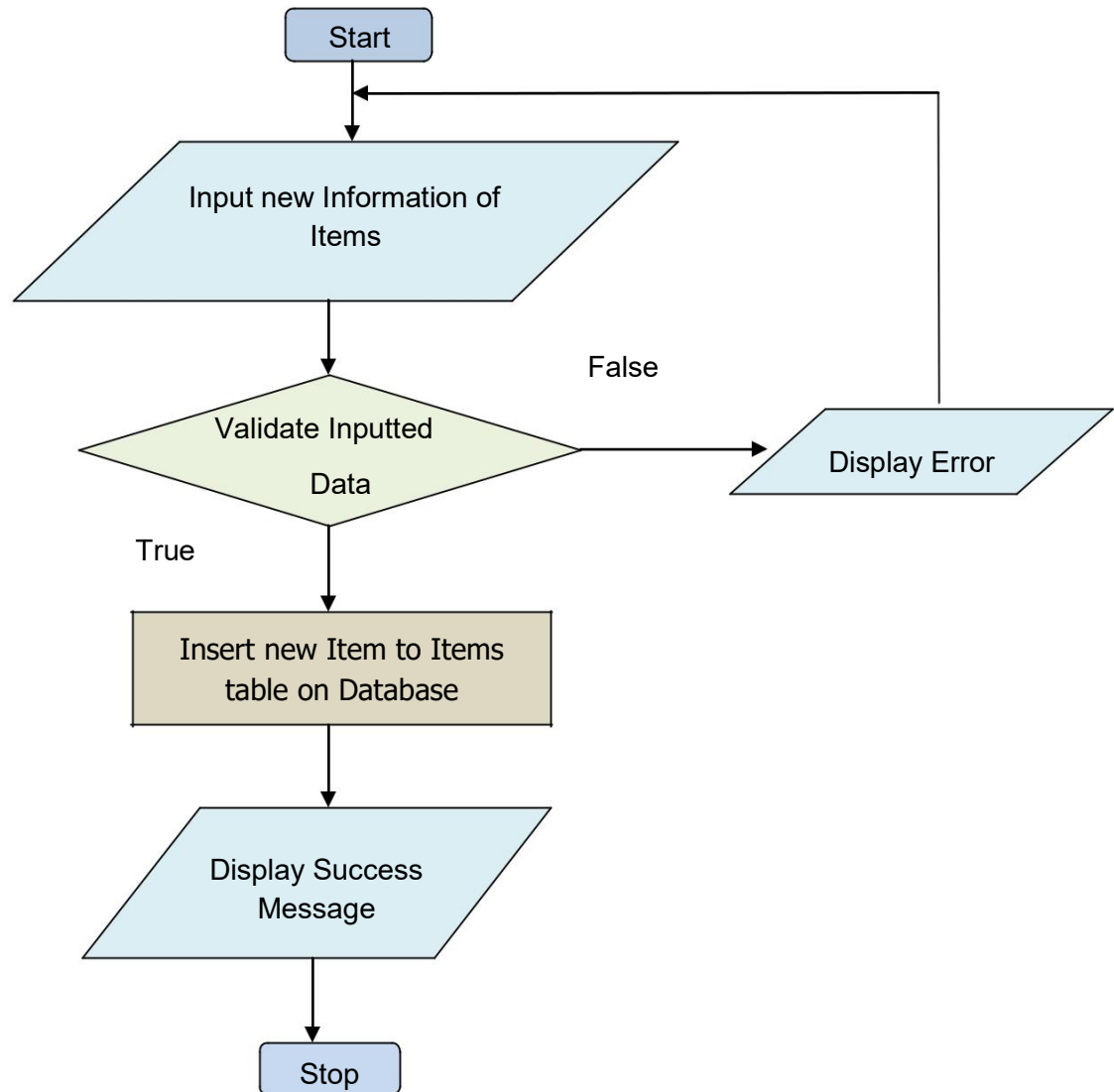
Add new User:



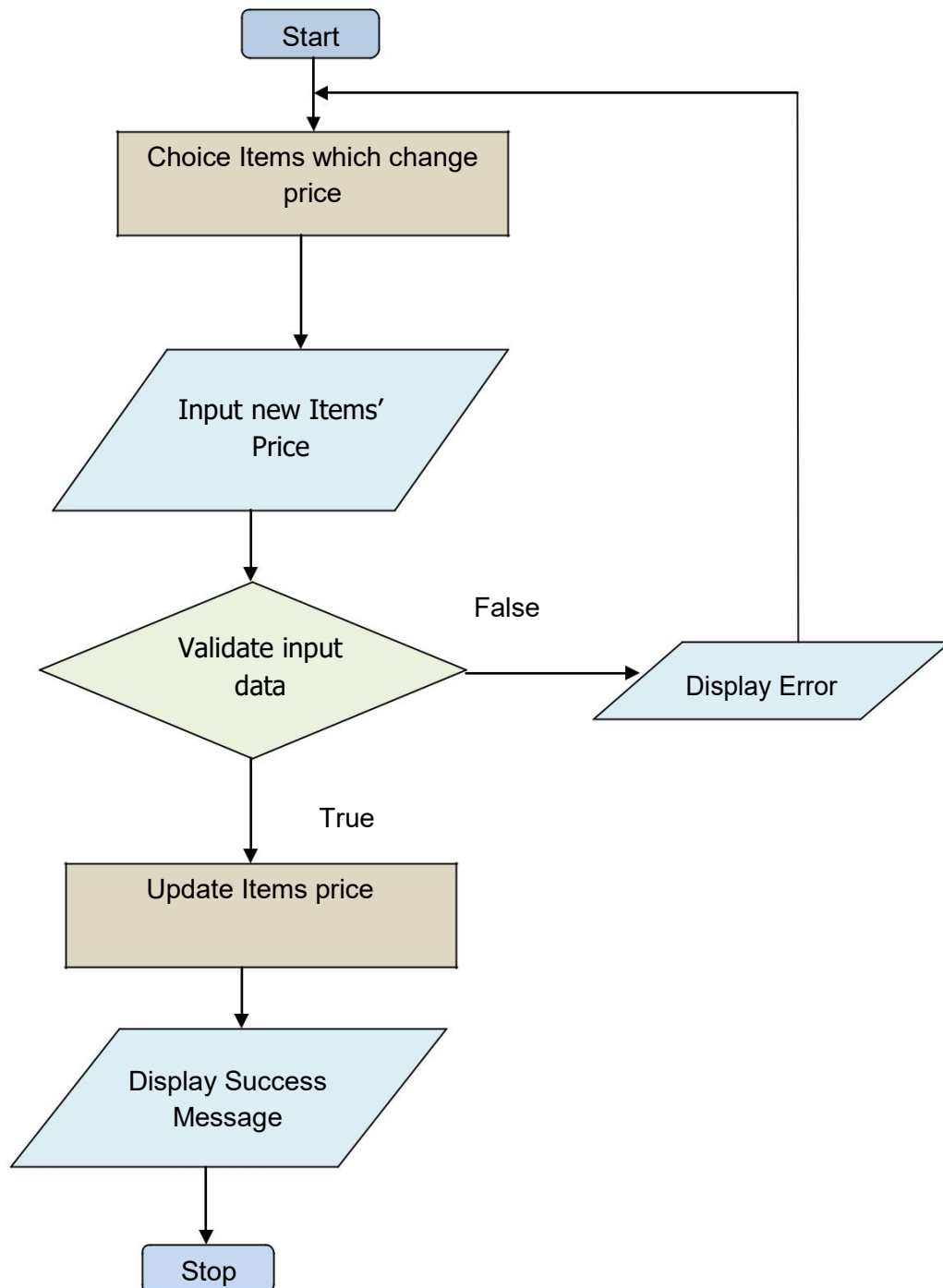
Add new Category



Add new Items

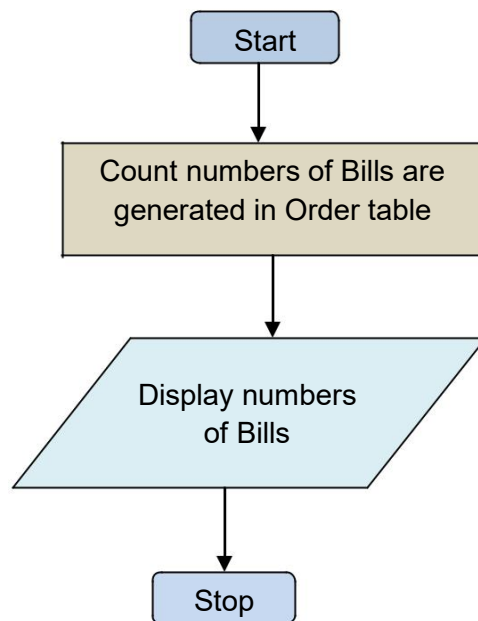


Change Items' Price

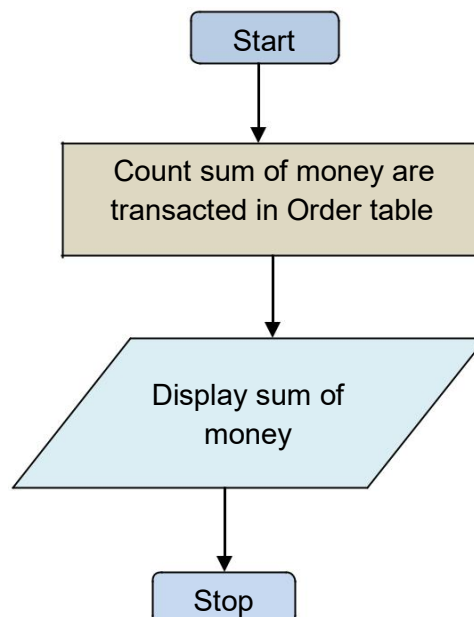


Function of Sales Manager:

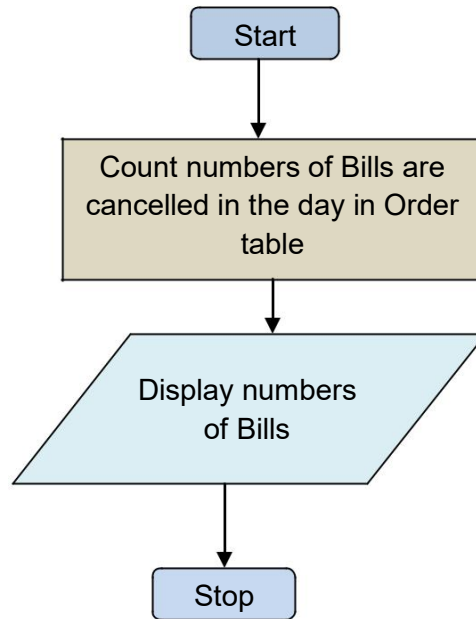
Check bills are created in day:



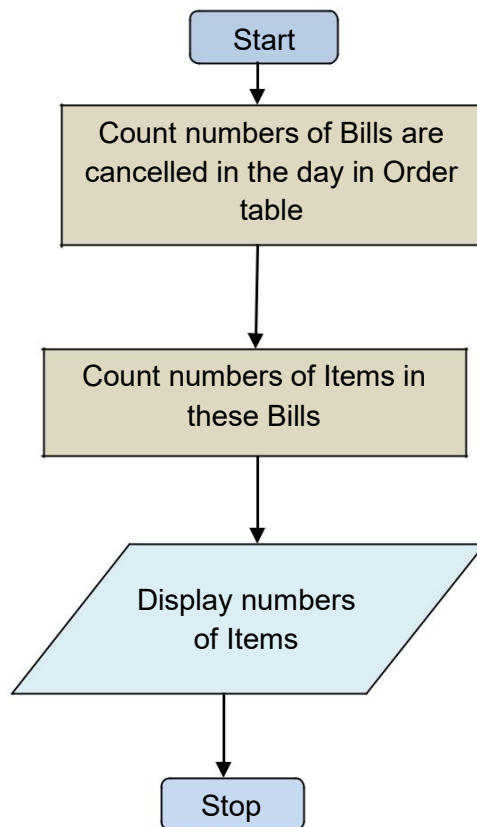
Check moneys are transacted in day:



Check Bills/Transactions are cancelled in the day:

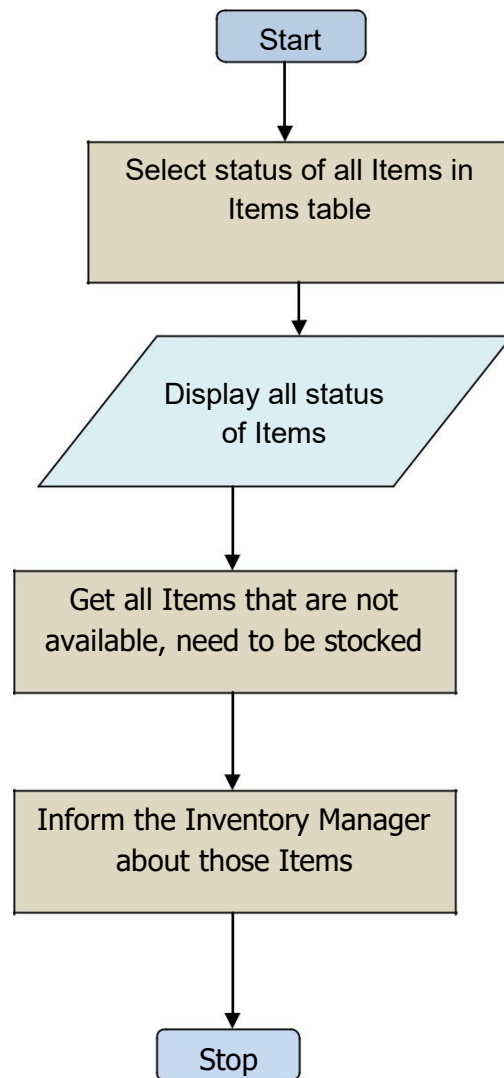


Check Items are returned in the day:

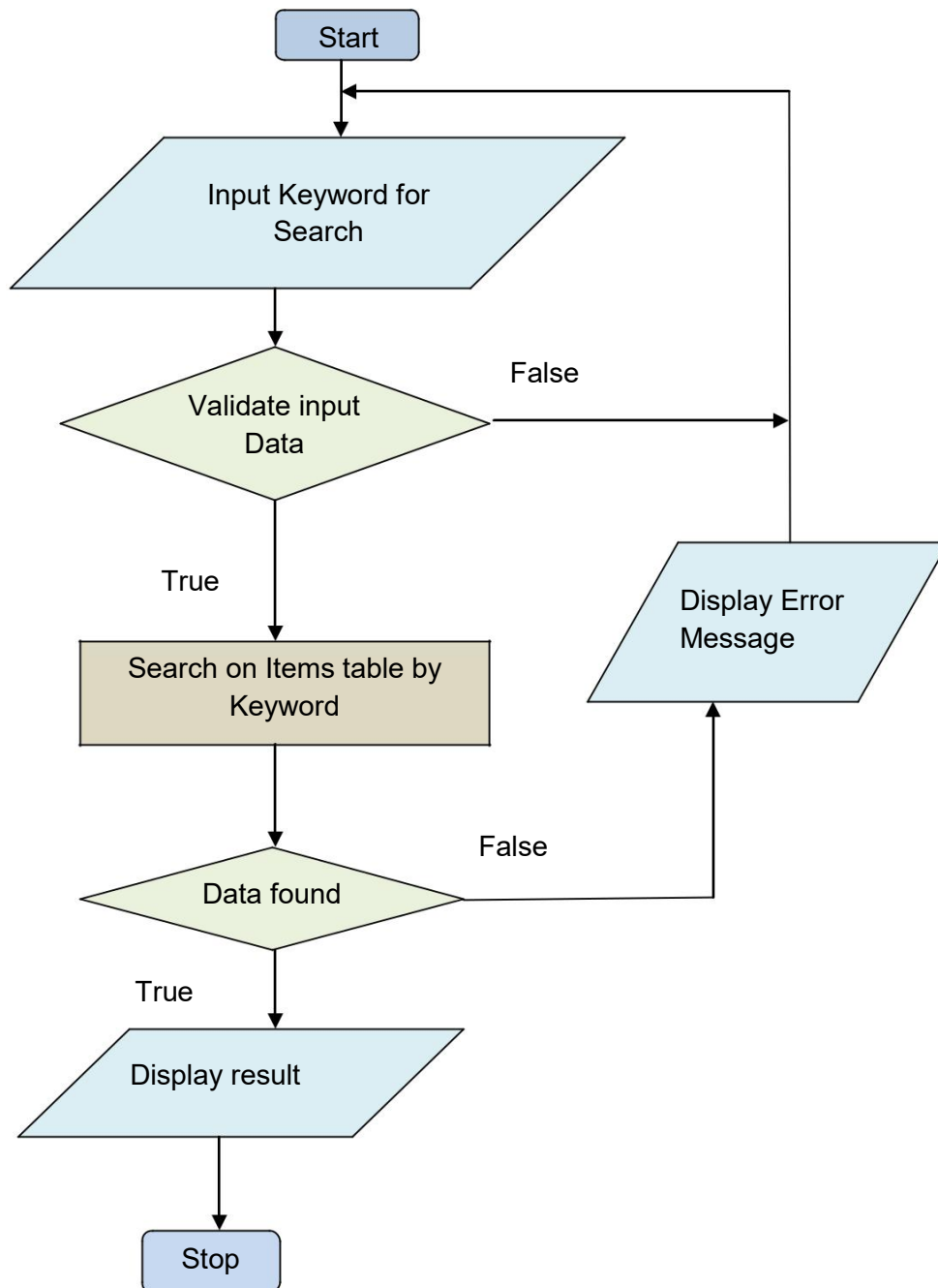


Function of Sales Person:

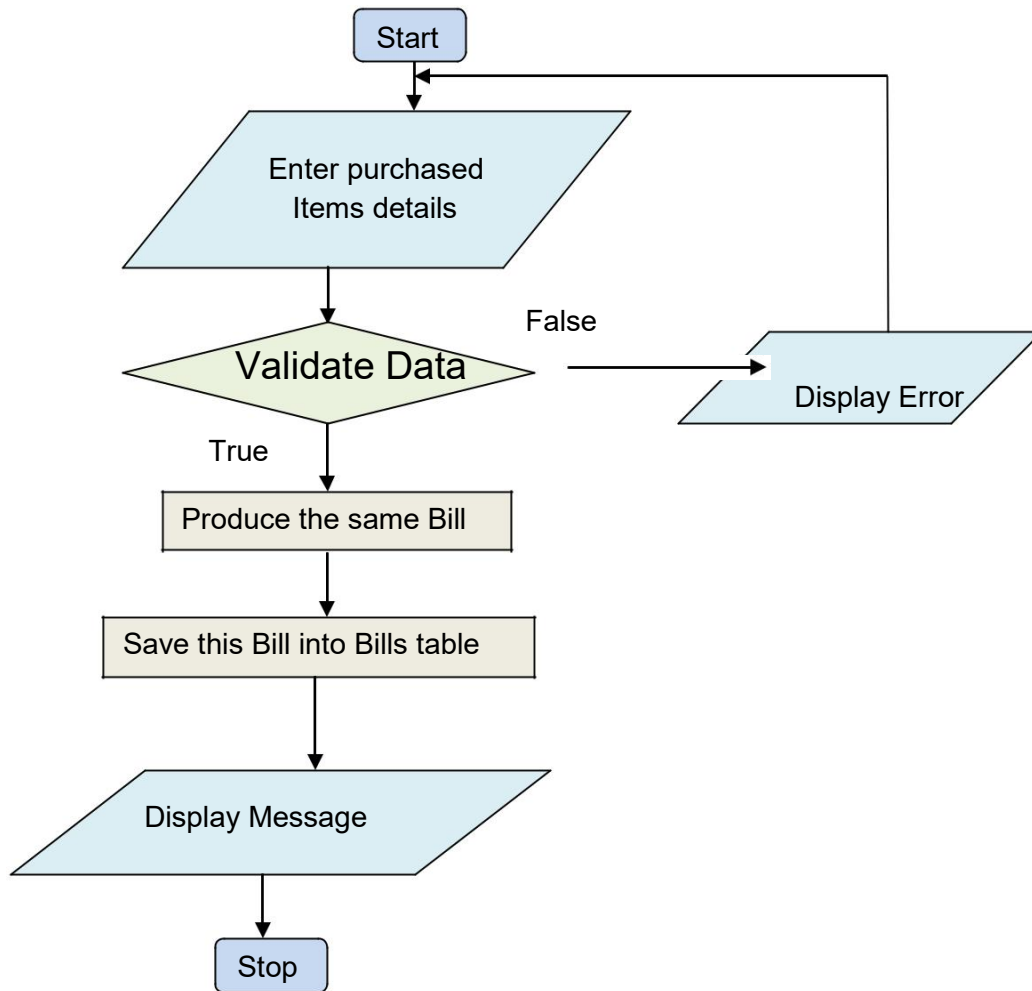
View Status of Inventory and inform:



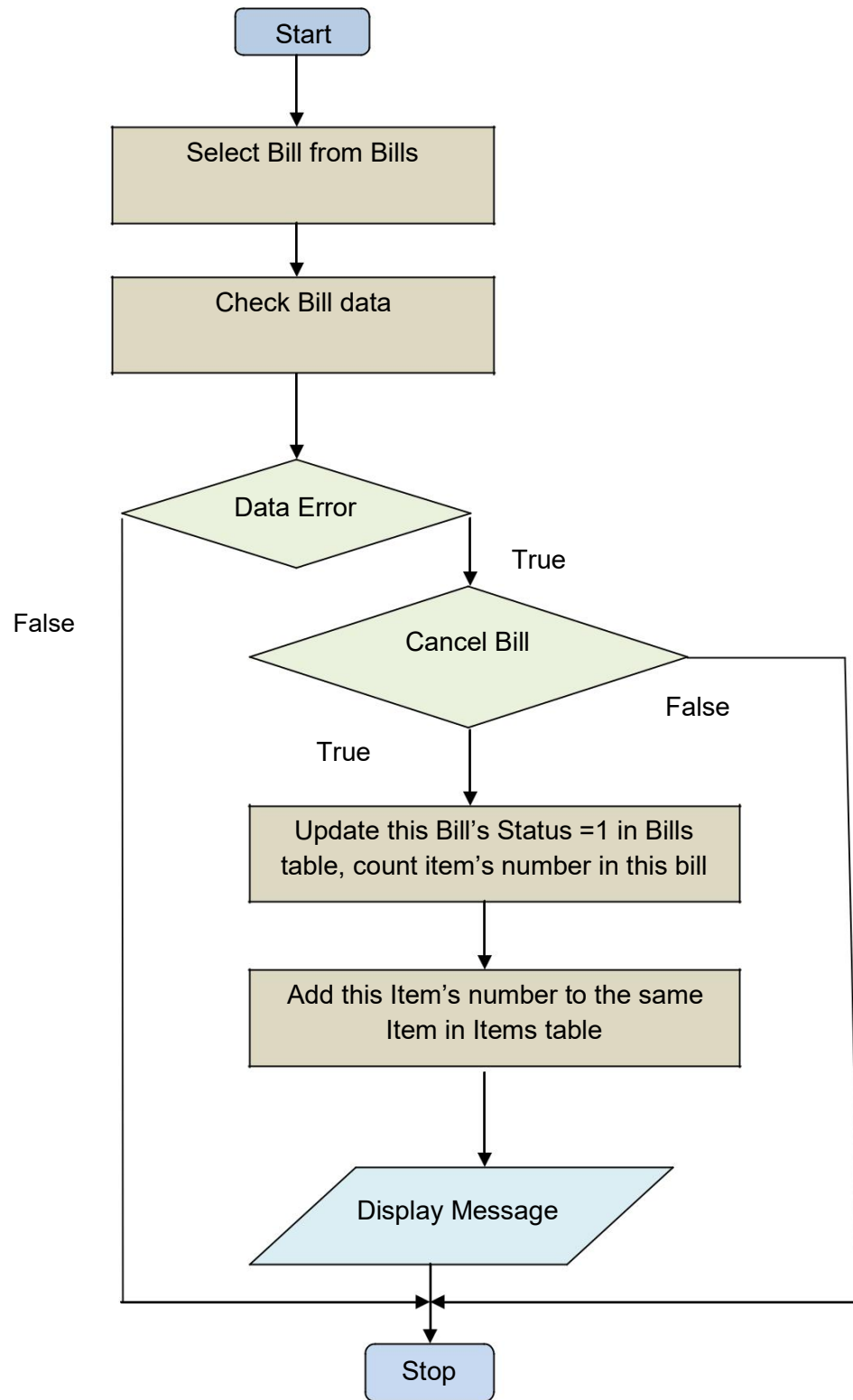
Search Item:



Enter Purchased Items and produce the same Bills:

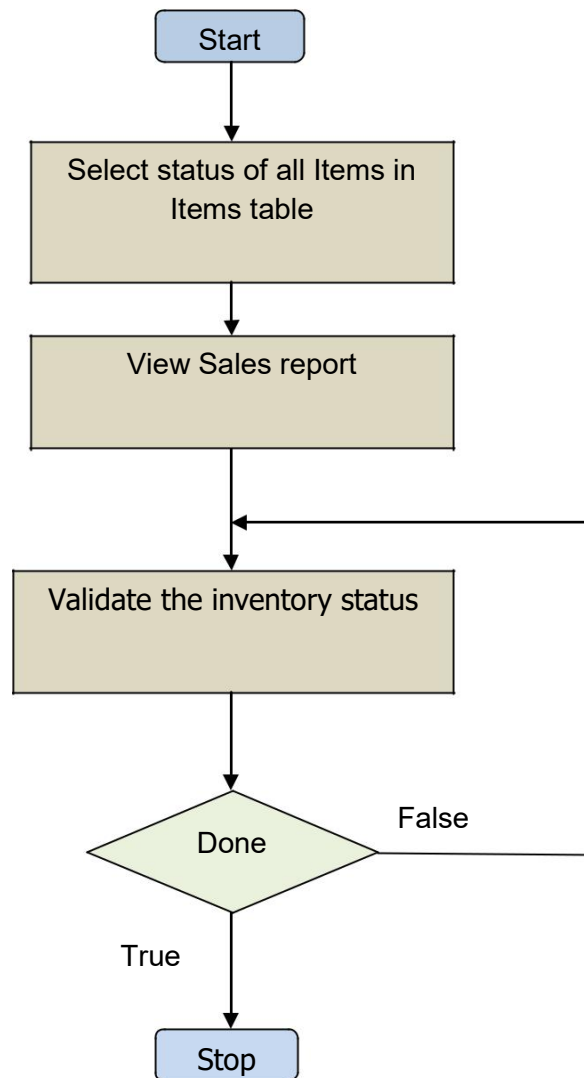


5.4 Cancel produced bill and take back Items:

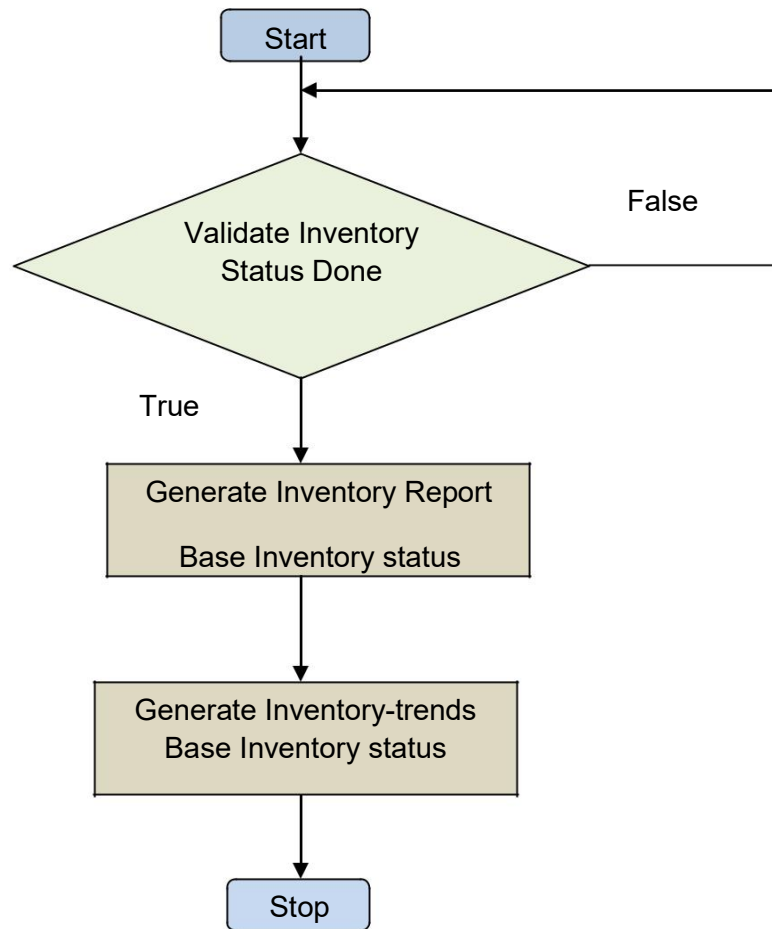


Function of Inventory Manager.


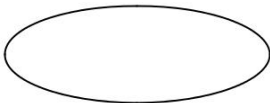




Check Inventory's status and validate against.



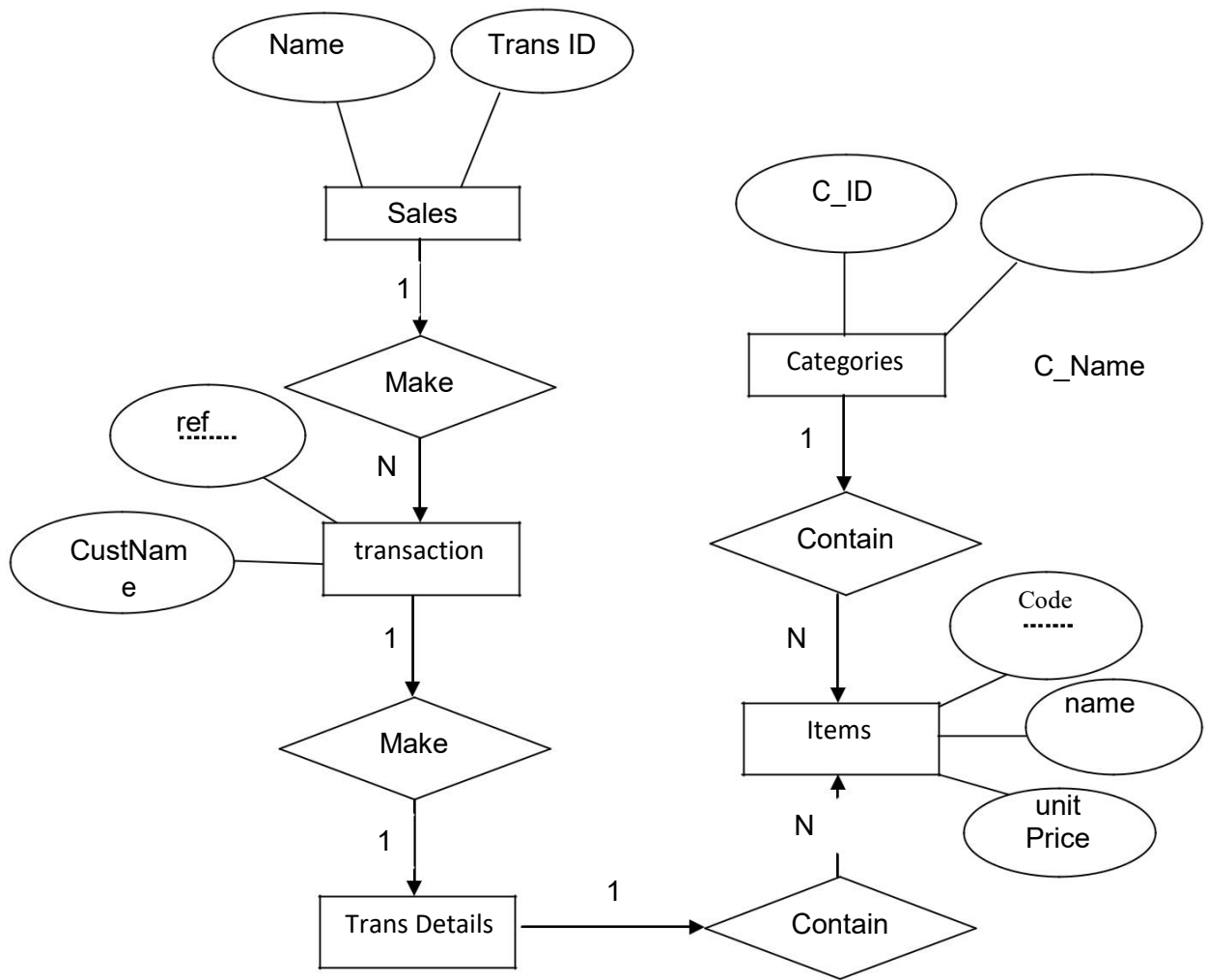
View Sales report and generate Inventory report/inventory-trends



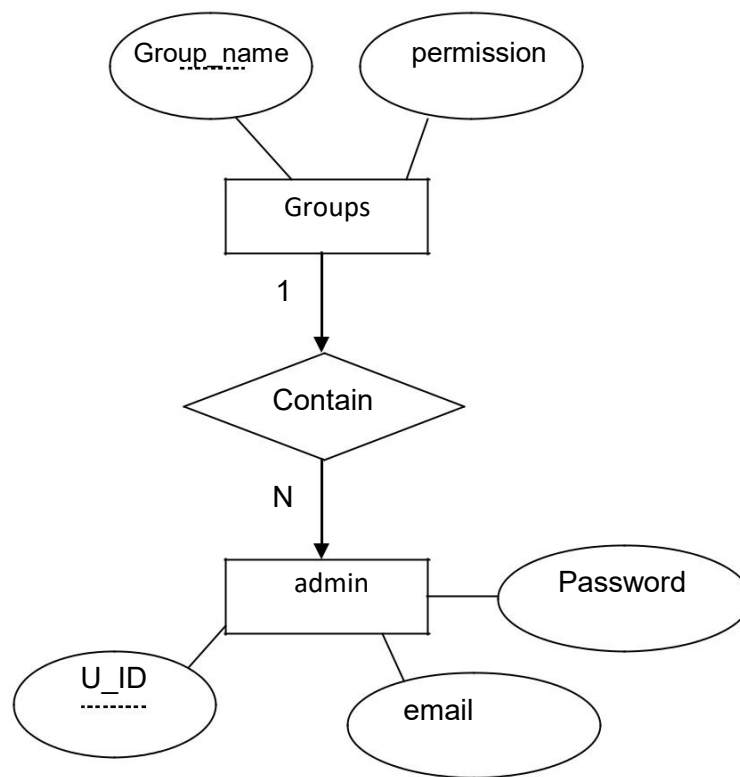
Entity Relationship Diagram (ERD)

Symbol	Description
	Entity
	Preferences
	Primary key attribute
	connection relations
	connection properties
	Relational
1:1	One – one Relational
1:N	one – many Relational

I. Transaction:



II: Permission for Users



III. Database Structure

Table 1: Admin Users

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id 🔑	int(3)			No	None		AUTO_INCREMENT
2	first_name	varchar(25)	latin1_swedish_ci		No	None		
3	last_name	varchar(25)	latin1_swedish_ci		No	None		
4	email 📧	varchar(255)	latin1_swedish_ci		No	None		
5	mobile1 📱	varchar(15)	latin1_swedish_ci		No	None		
6	mobile2	varchar(15)	latin1_swedish_ci		No	None		
7	password	char(60)	latin1_swedish_ci		No	None		
8	role	char(5)	latin1_swedish_ci		No	None		
9	created_on	datetime			No	None		
10	last_login	datetime			No	None		
11	last_seen	datetime			No	None		
12	last_edited	timestamp		on update CURRENT_TIMESTAMP	No	CURRENT_TIMESTAMP		ON UPDATE CURRENT_TIMESTAMP
13	account_status	char(1)	latin1_swedish_ci		No	1		
14	deleted	char(1)	latin1_swedish_ci		No	0		

Table 2: Items

#	Name	Type	Collation	Attributes	Null	Default
1	id 🔑	bigint(20)		UNSIGNED	No	None
2	name 🔑	varchar(50)	latin1_swedish_ci		No	None
3	code 🔑	varchar(50)	latin1_swedish_ci		No	None
4	description	text	latin1_swedish_ci		Yes	NULL
5	unitPrice	decimal(10,2)			No	None
6	quantity	int(6)			No	None
7	dateAdded	datetime			No	None
8	lastUpdated	timestamp		on update CURRENT_TIMESTAMP	No	CURRENT_TIMESTAMP

Table 4: Transactions


#	Name	Type	Collation	Attributes	Null	Default
1	transId 	bigint(20)		UNSIGNED	No	None
2	ref	varchar(10)	latin1_swedish_ci		No	None
3	itemName	varchar(50)	latin1_swedish_ci		No	None
4	itemCode	varchar(50)	latin1_swedish_ci		No	None
5	description	text	latin1_swedish_ci		Yes	NULL
6	quantity	int(6)			No	None
7	unitPrice	decimal(10,2)			No	None
8	totalPrice	decimal(10,2)			No	None
9	totalMoneySpent	decimal(10,2)			No	None
10	amountTendered	decimal(10,2)			No	None
11	discount_amount	decimal(10,2)			No	None
12	discount_percentage	decimal(10,2)			No	None
13	vatPercentage	decimal(10,2)			No	None
14	vatAmount	decimal(10,2)			No	None
15	changeDue	decimal(10,2)			No	None
16	modeOfPayment	varchar(20)	latin1_swedish_ci		No	None
17	cust_name	varchar(20)	latin1_swedish_ci		Yes	NULL
18	cust_phone	varchar(15)	latin1_swedish_ci		Yes	NULL
19	cust_email	varchar(50)	latin1_swedish_ci		Yes	NULL
20	transType	char(1)	latin1_swedish_ci		No	None
21	staffId	bigint(20)		UNSIGNED	No	None
22	transDate	datetime			No	None
23	lastUpdated	timestamp		on update CURRENT_TIMESTAMP	No	CURRENT_TIMESTAMP
24	cancelled	char(1)	latin1_swedish_ci		No	0

Table 4: eventlog



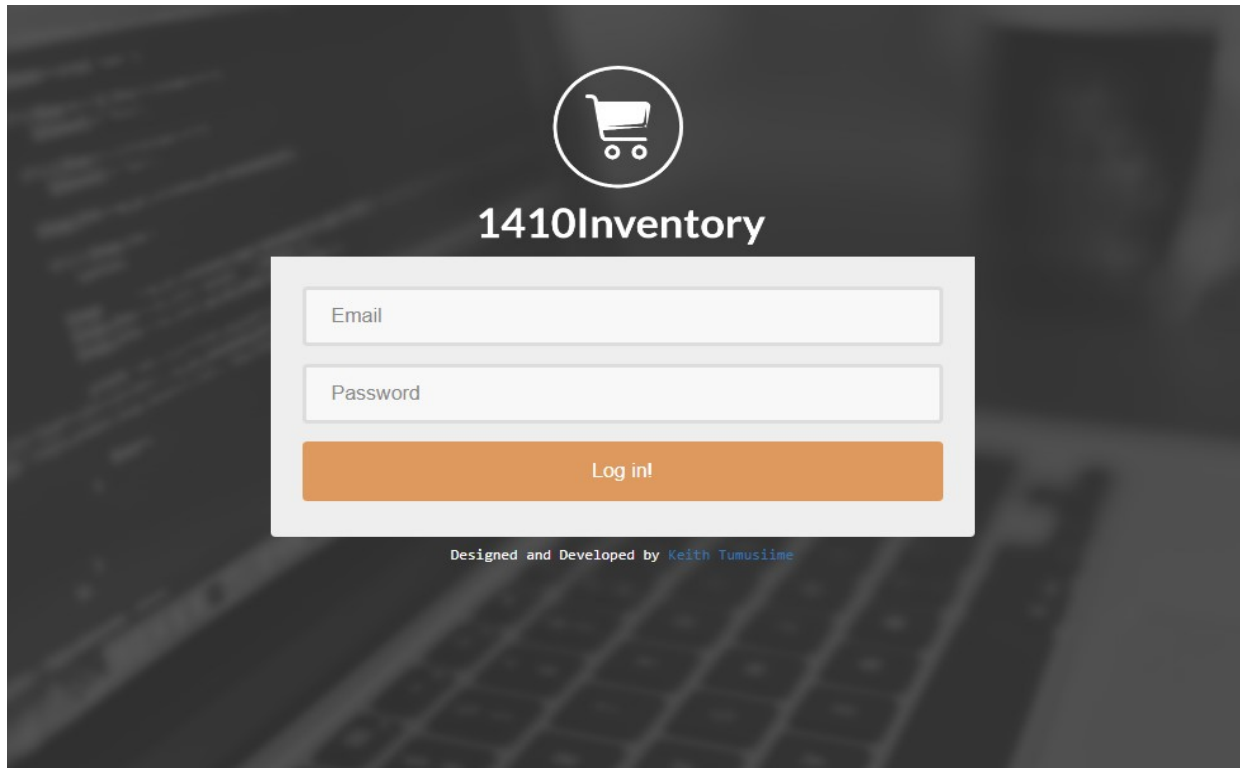
#	Name	Type	Collation	Attributes	Null	Default
1	id 	bigint(20)		UNSIGNED	No	None
2	event	varchar(200)	latin1_swedish_ci		No	None
3	eventRowIdOrRef	varchar(20)	latin1_swedish_ci		Yes	NULL
4	eventDesc	text	latin1_swedish_ci		Yes	NULL
5	eventTable	varchar(20)	latin1_swedish_ci		Yes	NULL
6	staffInCharge	bigint(20)		UNSIGNED	No	None
7	eventTime	timestamp		on update CURRENT_TIMESTAMP	No	CURRENT_TIMESTAMP

Table 5: categories

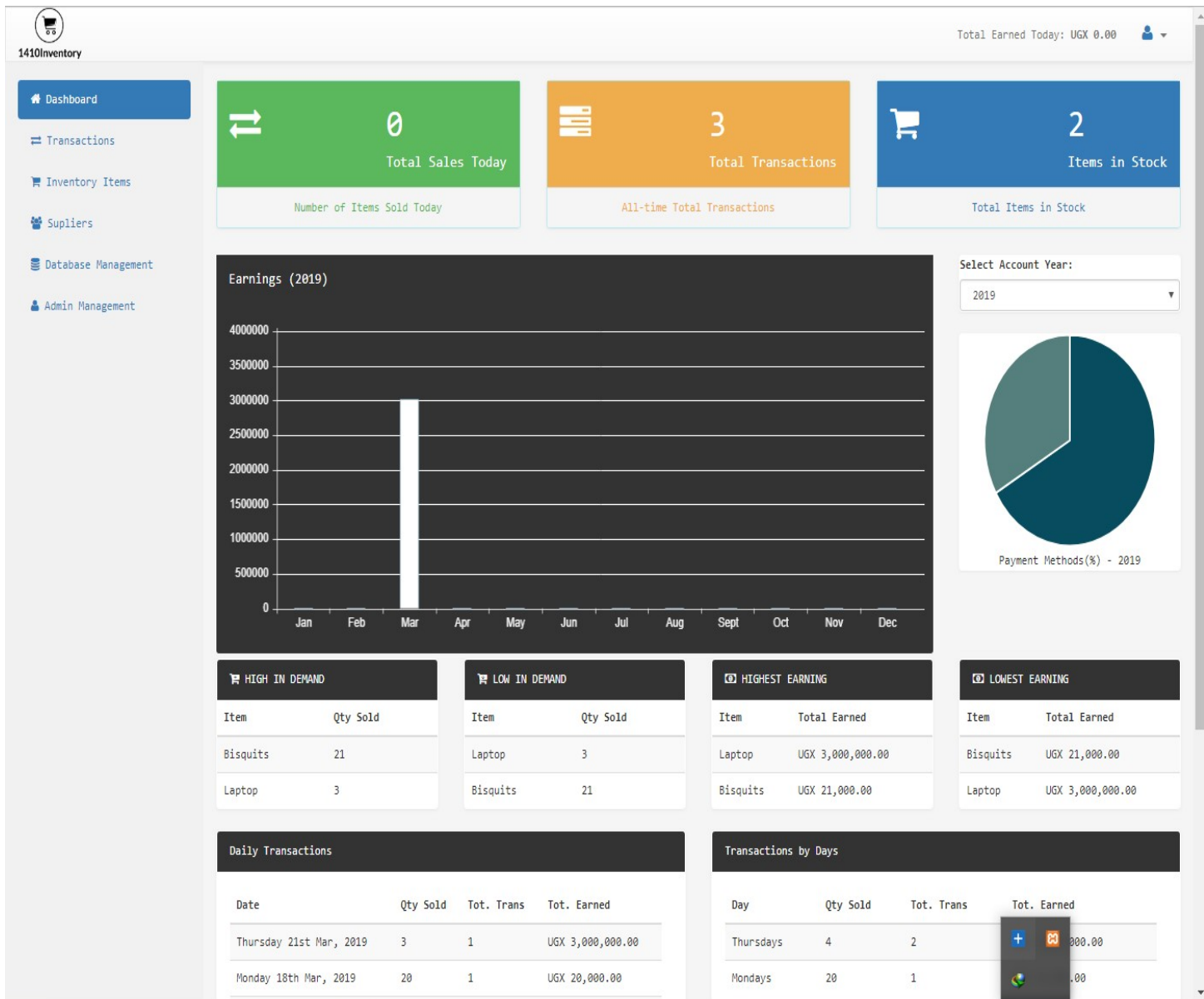
#	Name	Type	Collation	Attributes	Null	Default
1	id 	int(11)			No	None
2	group_name	varchar(255)	utf8_general_ci		No	None
3	permission	text	utf8_general_ci		No	None

III. Screenshot:

Login Form



Administrator Dashboard



1410Inventory

Dashboard

Transactions

Inventory Items

Suppliers

Database Management

Admin Management

Total Earned Today: UGX 0.00

Add New Item

Show 10 per page

Sort by Item Name (A-Z)

Search Items

Use Scanner

Item Code

Item Name

Quantity

(UGX)Unit Price

Description (Optional)

Add Item

Cancel

Showing 1-2 of 2

Items Total Worth/Price: UGX 17,007,000.00

SN	ITEM NAME	ITEM CODE	DESCRIPTION	QTY IN STOCK	UNIT PRICE	TOTAL SOLD	TOTAL EARNED ON ITEM	UPDATE QUANTITY	EDIT	D
1.	Bisquits	I123	This is item one	7	UGX 1,000.00	21	UGX 21,000.00	Update Quantity		
2.	Laptop	I124	Samsung Laptops are the best	17	UGX 1,000,000.00	3	UGX 3,000,000.00	Update Quantity		

Thank You.
Hope it works for you well.

Contact me for inquiries:

Keithtumusiime6@gmail.com

<https://www.facebook.com/keithorganisations>