



Practical Development of Information System in Business Context:
Inventory System for Thanaporn

Mr. Peerapong Sutthavassuntorn

Submitted in Partial Fulfillment
of the Course BC 4500 280 Hour Training Program
Bachelor's Degree of Business Administration
in Business Computer Program
Assumption University

December 2002

Project Name: Practical Development of Information System in Business Context:

Inventory System for Thanaporn Company

Intern: Mr.Peerapong Sutthavassuntorn

Advisor: A.Kritsada Bumpenboon

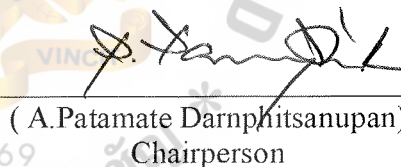
Academic Year: 2002

The Department of Business Computer, ABAC School of Management has approved the aforementioned student's BC 4500 280-Hour Training Project, which includes complete documentation and program as a partial fulfillment of the requirements for the Bachelor's Degree of Business Administration in Business Computer

Advisory Committee:



(A.Kritsada Bumpenboon)
Advisor



(A.Patamate Darnphitsanupan)
Chairperson



(A.Dhirachat Chayaporn)
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PROJECT WRITE-UP

Prepared by
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I. INTRODUCTION

1.1 Background of the Organization

Thanaporn Company was established in 1977 on Phaholyothin Road at Chiang Rai Province as a retailer of spare parts for cars and colors for painting, etc. The company also provides repair and maintenance services.

Since the company was established around 24 years ago, it has 4 competitors in the same province (Chiang Rai). In order to be leader in this business and improve quality of management. The company needs to be more efficient inventory system in order to gain competitive advantages and reengineering the company to support the new economic segmentation.

The company has about 5 workers and it is operating the whole process in the company manually. Such as keep, adjust, and manage inventory in stock and selling the product.

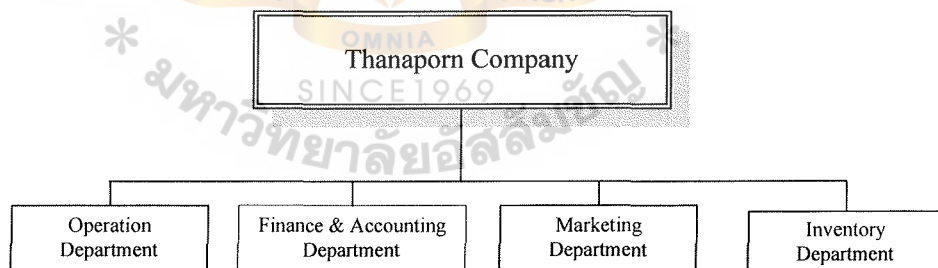


Figure 1-1 Organization Chart

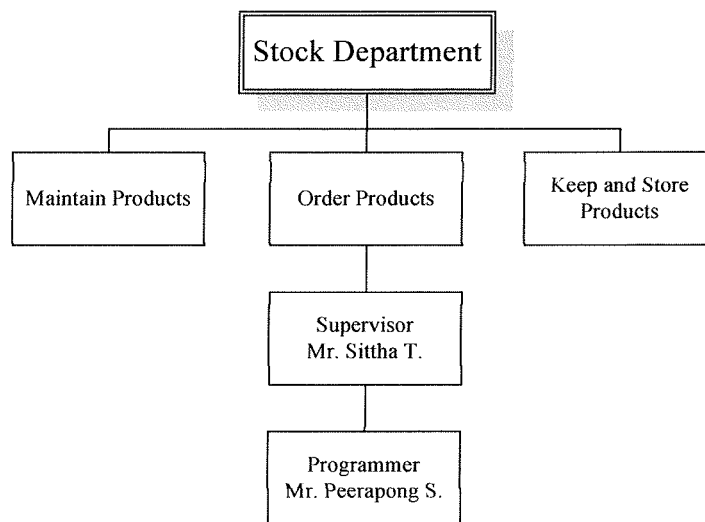


Figure 1-2 Department Chart

1.2 Objectives of the System

- (1) To improve the performance (such as speed of order, time to do the jobs, by reducing operational time and eliminating errors.
- (2) To analyze the causes of problems of the existing system.
- (3) To define users requirement that will support and solve current problems.
- (4) To study the existing system for the understanding on the current operation.
- (5) To implement the new system in the real working.

1.3 Scope of the System

To develop a new system which is capable of:

- (1) Updating the inventory by using FIFO method
- (2) Checking the inventory every month.
- (3) Ordering the product directly to supplier.
- (4) Satisfying the customer needs.
- (5) Collecting and maintaining customer, supplier and product information.
- (6) Generating tailored and necessary transactions.

(7) Performing management reports.

1.4 Project Plan

The tentative plan for this project: “Inventory System for Thanaporn Company.”
is exhibited in Figure 1-3



Task Name		September				October				November				December			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
I.	Analysis of the Existing System																
	Study the Existing System																
	Identify the Existing Problems																
	Existing Data Flow Diagram																
II.	Preliminary Investigation																
	Define the objectives and scope																
	Hardware Requirements																
	Software Requirements																
III.	Analysis and Design of the Proposed System																
	Entity-Relationship Diagram																
	Database Design																
	Data Flow Diagram																
	Process Specification																
	Data Dictionary																
	Interface Design																
	Report Design																
IV.	Implementation of the Proposed System																
	Coding																
	Testing																
	Documentation																

Figure 1-3 Project Plan for Inventory System for Thanaporn Company

II. THE EXISTING SYSTEM

2.1 Background of Existing System

Since 1995, the company has kept all information about suppliers, customers, and transactions manually by recording in paper. Also, each department kept only its own information. All of this information were file of folder and kept in cabinet.

The Inventory System of the company controls the number of products purchased and sold. When products are sold, the clerks manually deduct the quantity sold from the inventory document. When the inventory level is low, a reorder is then made under the manager consideration. And transfer an information to the finance & accounting Department. As such, the quantity purchased and received is manually added to the inventory document.

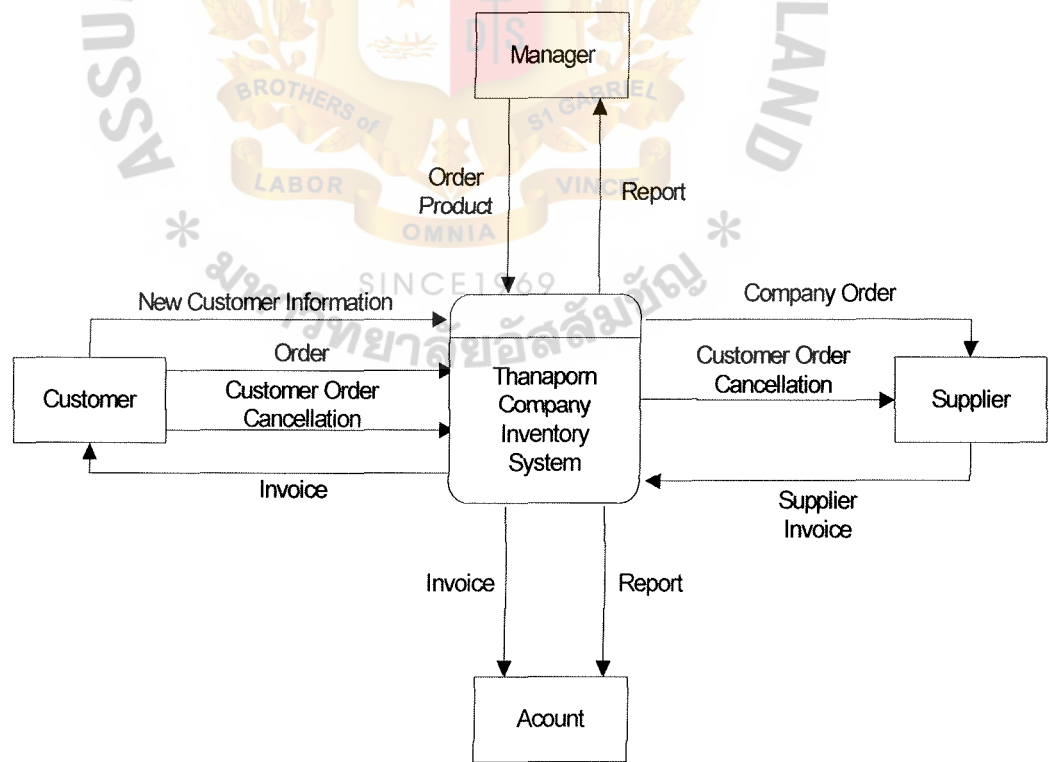


Figure 2-1 Context Diagram of Existing System

2.2 Problem Definition

(1) Ineffective Inventory Management Control

Managing the inventory is a time consuming task as it is done manually. The company has been encountered with the problem of actual inventory not matching the inventory record. This problem is caused by human errors in stock checking or in transactions recording.

There is no efficient tracking system for the quantity ordered, quantity in stock, price per item, which result in an inefficient use of financial resources. Either, company does not have a proper system to signal low inventory.

(2) Difficulties in Retrieving Information

This problem is rooted from the difficulty in searching for documents. It takes a long time to search for documents given to large amount of document and misplacing of information.

(3) Conflict and Unclear of Information

According to the fact that each department creates and keeps its own documents for their internal use is resulted. It is inefficient and costly to handle data separately. Consequently, it leads to inconsistency of information.

III. THE PROPOSED SYSTEM

3.1 System Specification

(1) Hardware Requirements

Table 3-1 Hardware Requirements

HAREWARE	SPECIFICATION
CPU	Intel Pentium III 800 MHz
RAM	SD-Ram 256 MB
Hard disk	100 MB

The reasons that I suggest Hardware Specification as the above are first, speed is the most important for system process. Second, storage requires a little bit high because it need to backup and collector data everyday.

(2) Software Requirements

Table 3-2 Software Requirements

SOFTWARE	SPECIFICATION
Operating System	Microsoft Windows ME
Application	1. Microsoft Office 2000 2. Visual Basic 6.0 3. Norton Anti Virus 2000 or above 4. Crystal Report Version 8.5 or above

As the above Software requirement, all of them suggested mainly due to the skill of the programmer. The company does not require specific program to run their job, they only want it to perform the specific function as they demand.

Therefore, the programmer is the person who selects the proper program and creates the suitable software as user's requirement.

3.2 System Design

(1) Data Flow Diagram

The systems analyst needs to make use of the conceptual freedom afforded by data flow diagrams(DFD), which graphically characterize data processes and flows in a business system. In their original state data flow diagrams depict the broadest possible overview of system inputs, processes, and output, which correspond to those the general systems model. (Kenneth E. Kendall & Julie E. Kendall 1999: 235)

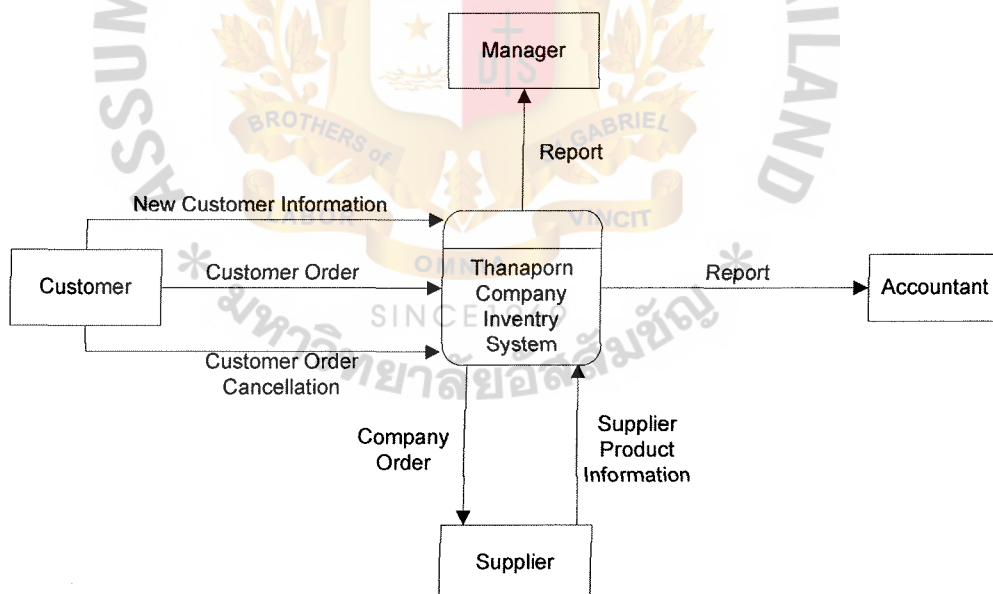


Figure 3-1 Context Diagram

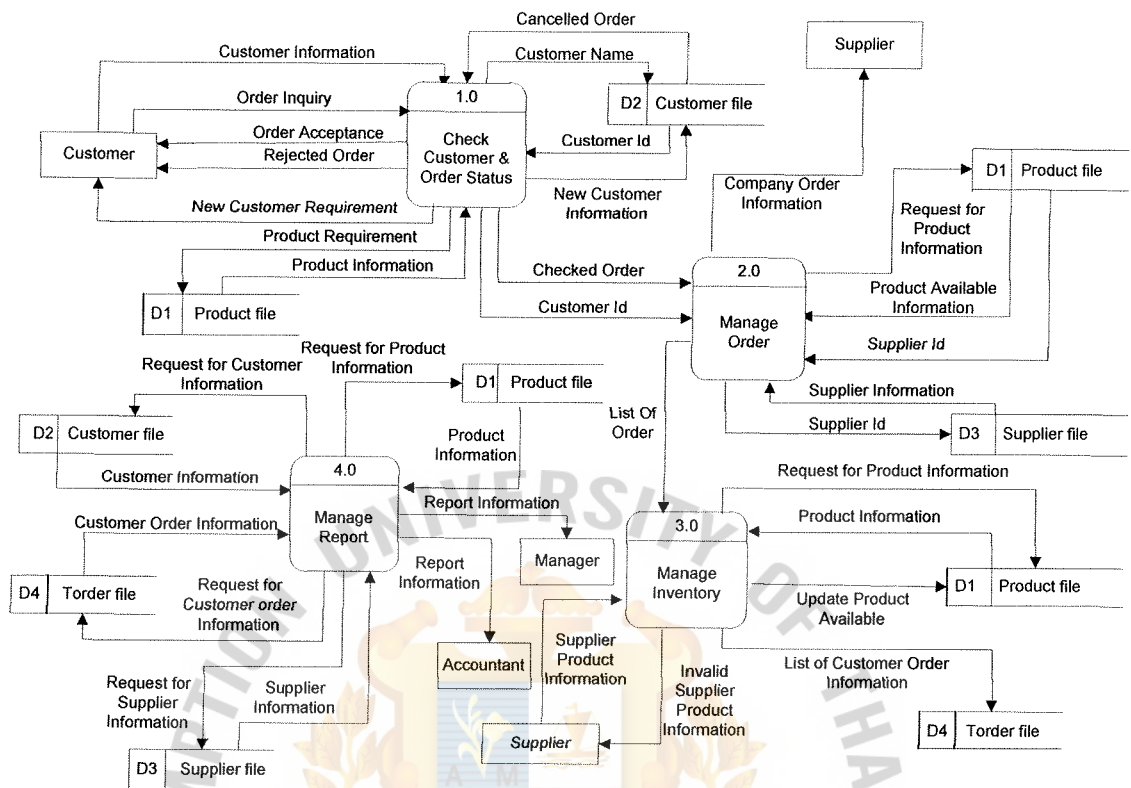


Figure 3-2 Data Flow Diagram – Level 0

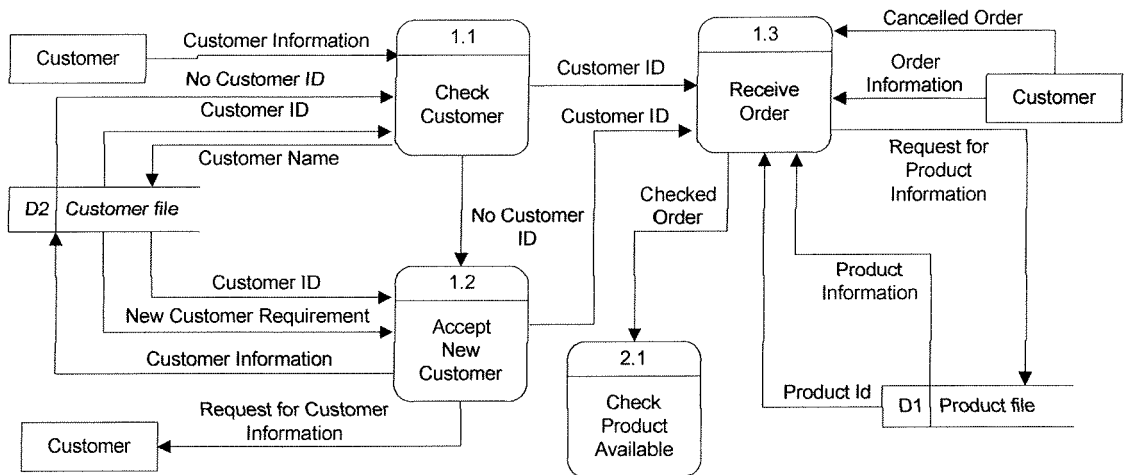


Figure 3-3 Data Flow Diagram – Level 1 for Process 1

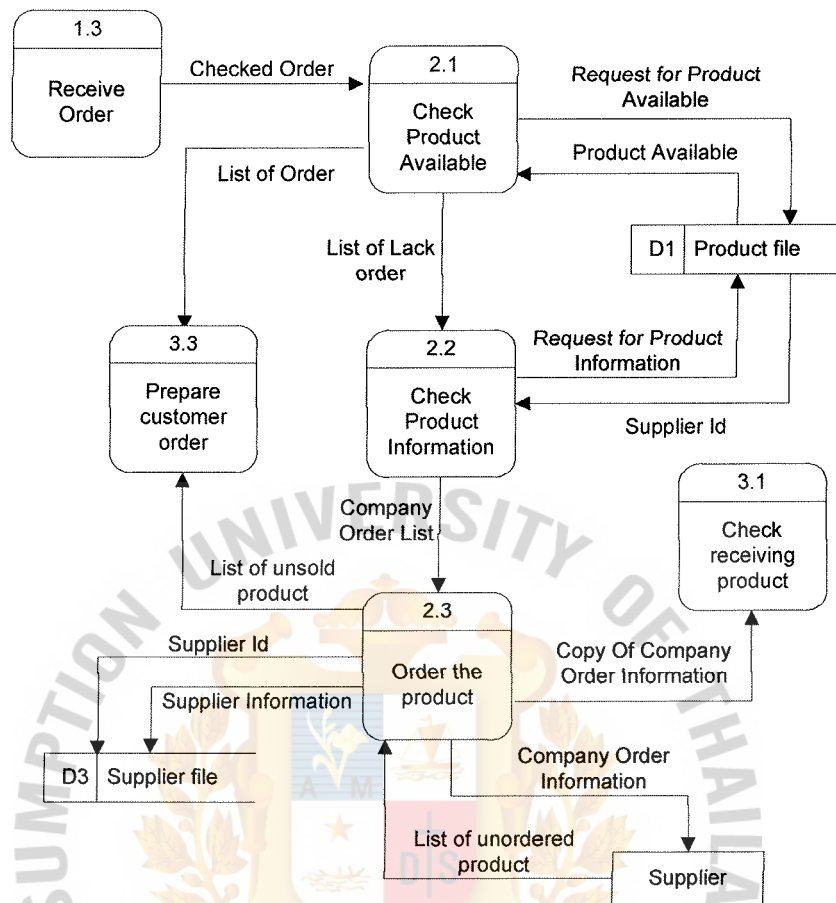


Figure 3-4 Data Flow Diagram – Level 1 for Process 2

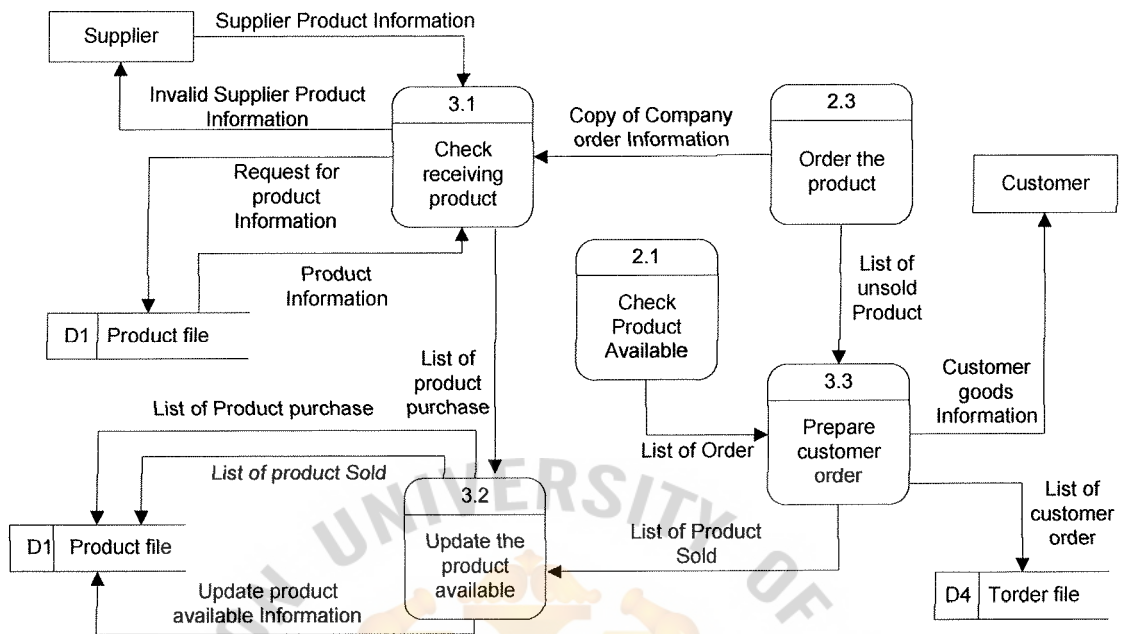


Figure 3-5 Data Flow Diagram – Level 1 for Process 3

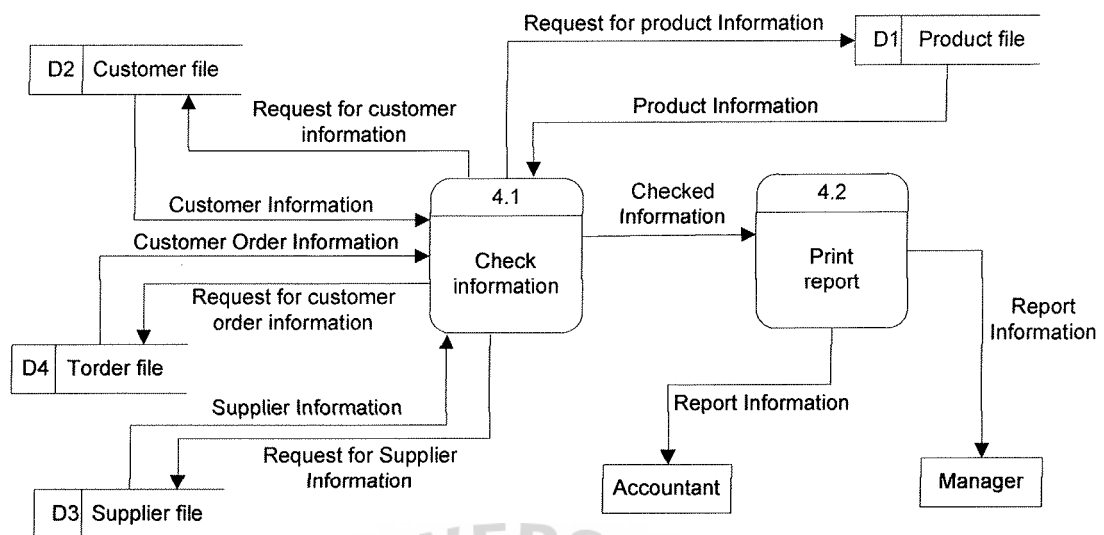


Figure 3-6 Data Flow Diagram – Level 1 for Process 4

(2) Entity-Relationship Diagram

The Entity-Relationship (E-R) model is used to construct a conceptual data model. It is a logical representation of the structure of a database that is independent of the software used to implement the database. An E-R model is expressed as an E-R diagram, which is a graphical representation of the model. (McFadden, et al. 1999)

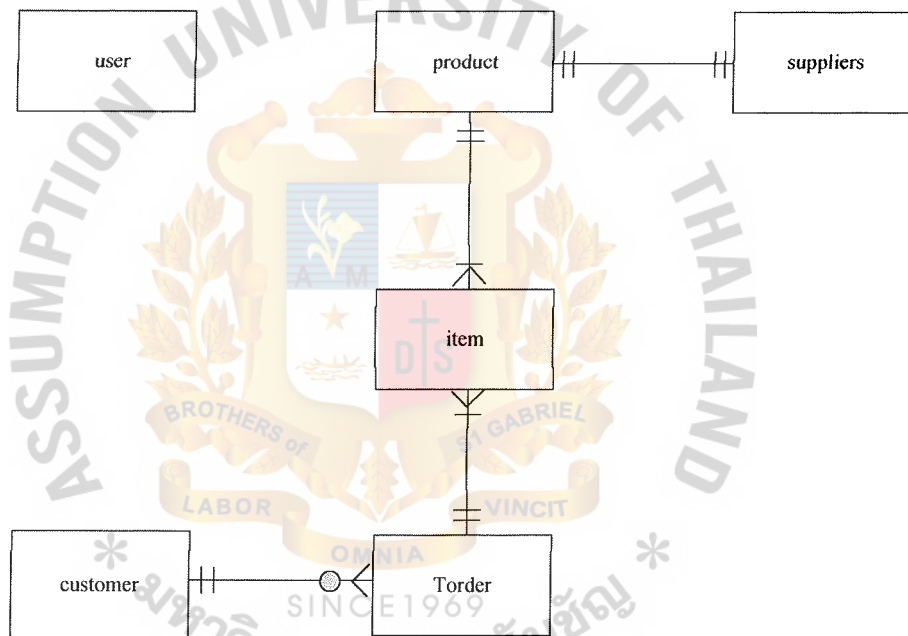


Figure 3-7 Entity-Relationship Diagram

(3) Database Design

Databases are not merely a collection of files. It is a central source of data meant to be shared by many users for a variety of applicants. The objectives of designing database are to provide data when user wants to use it and provide efficient storage of data as well as efficient updating and retrieval. (Kenneth E.Kendall & Julie E. Kendall 1999: 603, 606)

Table Name	Purpose
customer:	Keep record of customer information
product:	Keep information of product purchased from supplier and also product available
Torder:	Keep information of customer order information
item:	Keep information of product sold and quantity sold
supplier:	Keep information of supplier
user:	Keep information of user name, password and authorization

Database Design is exhibited in APPENDIX A

(4) Process Specification

Table 3-3 Process Specification for Process 1.0

Process Name:	Check Customer & Order
Data In:	(1) Customer Information (2) Order Inquiry (3) Cancelled Order (4) Customer Id. (5) Product Information
Data Out:	(1) Order Acceptance (2) Rejected Order (3) Product Requirement (4) New Customer Requirement (5) New Customer Information (6) Checked Order (7) Customer Id. (8) Customer Name
Process:	(1) Get customer data and assign new customer id (2) Get customer data and check whether customer already exist in the database (3) Check whether there is existing product (4) Response the customer order that acceptance or unacceptance
Attachment:	(1) Customer (2) Data Store D1 (3) Data Store D2 (4) Process 2.0

Table 3-4 Process Specification for Process 1.1

Process Name:	Check Customer
Data In:	(1) Customer Information (2) No Customer Id (3) Customer Id.
Data Out:	(1) Customer Name (2) Customer Id (3) No Customer Id
Process:	(1) Check customer for new or existing customer (2) Assign for not existing customer
Attachment:	(1) Customer (2) Data Store D2 (3) Process 1.2

Table 3-5 Process Specification for Process 1.2

Process Name:	Accept New Customer
Data In:	(1) No Customer Id (2) Customer Id. (3) New Customer Requirement
Data Out:	(1) Customer Information (2) Customer Id
Process:	(1) Receive customer information (2) Assign new customer id
Attachment:	(1) Customer (2) Data Store D2 (3) Process 1.3

Table 3-6 Process Specification for Process 1.3

Process Name:	Receive Order
Data In:	<ul style="list-style-type: none"> (1) Customer Id. (2) Product Id. (3) Order Information (4) Cancelled order (5) Product Information
Data Out:	<ul style="list-style-type: none"> (1) Request for product available (2) Checked order
Process:	<ul style="list-style-type: none"> (1) Receive order and customer information (2) Check product information (3) Cancel customer order
Attachment:	<ul style="list-style-type: none"> (1) Customer (2) Data Store D1 (3) Process 2.1

Table 3-7 Process Specification for Process 2.0

Process Name:	Process The Order
Data In:	<ul style="list-style-type: none"> (1) Customer Id. (2) Checked order (3) Product available Information (4) Supplier Information (5) Supplier Id.
Data Out:	<ul style="list-style-type: none"> (1) Company order Information (2) Request for product information (3) Request for supplier Information (4) Supplier Id. (5) Lists of order
Process:	<ul style="list-style-type: none"> (1) Check whether there is enough stock on hand (2) Check supplier information before make order (3) Order the product from Supplier (4) Send the order that have enough stock on hand to next process
Attachment:	<ul style="list-style-type: none"> (1) Supplier (2) Data Store D1 (3) Data Store D3 (4) Process 3.0

Table 3-8 Process Specification for Process 2.1

Process Name:	Check Product Available
Data In:	(1) Checked order (2) Product available
Data Out:	(1) Request for product available (2) List of order (3) List of lack order
Process:	Check for product available
Attachment:	(1) Data Store D1 (2) Process 1.3 (3) Process 2.2 (4) Process 3.3

Table 3-9 Process Specification for Process 2.2

Process Name:	Check Product Information
Data In:	(1) List of lack order (2) Supplier Id.
Data Out:	(1) Request for Product information (2) Company order list
Process:	Check for Supplier of each product and send to next process
Attachment:	(1) Data Store D1 (2) Process 2.1 (3) Process 2.3

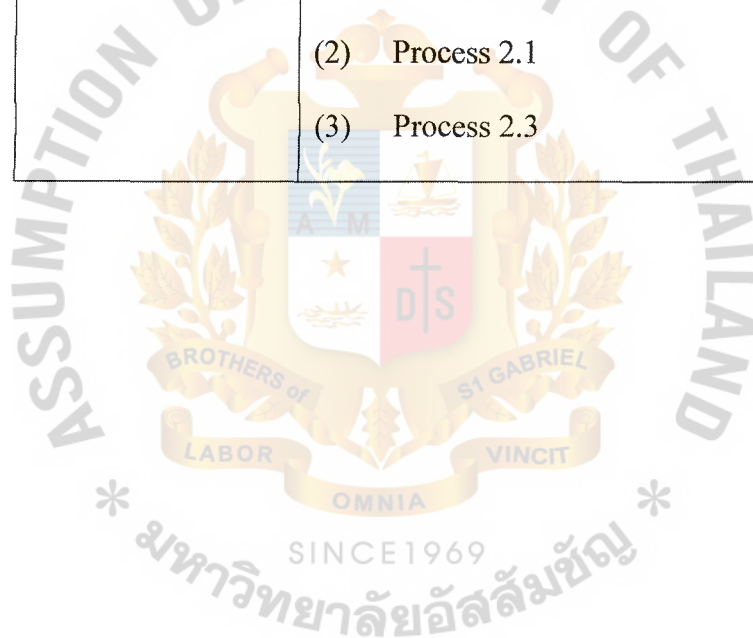


Table 3-10 Process Specification for Process 2.3

Process Name:	Order the product
Data In:	(1) Company order list (2) List of unordered product
Data Out:	(1) Company order information (2) Copy of Company order information (3) List of unsold product (4) Supplier Id. (5) Supplier Information
Process:	(1) Order lacked product from supplier (2) Check Supplier information before make order
Attachment:	(1) Supplier (2) Data Store D3 (3) Process 3.1 (4) Process 3.3

Table 3-11 Process Specification for Process 3.0

Process Name:	Inventory Management
Data In:	<ul style="list-style-type: none"> (1) Product information (2) Supplier product information (3) List of order
Data Out:	<ul style="list-style-type: none"> (1) Request for Product information (2) Update product available (3) Update company order information (4) Invalid supplier product information
Process:	<ul style="list-style-type: none"> (1) Process the order from Process 2.0 (2) Check whether there is valid product according to the company order (3) Update product available information after receiving product
Attachment:	<ul style="list-style-type: none"> (1) Supplier (2) Data Store D1 (3) Data Store D4

Table 3-12 Process Specification for Process 3.1

Process Name:	Check receiving Product
Data In:	<ul style="list-style-type: none"> (1) Copy of Company order information (2) Supplier product information (3) Product information
Data Out:	<ul style="list-style-type: none"> (1) Invalid supplier product information (2) Request for product information (3) List of product purchase
Process:	<ul style="list-style-type: none"> (1) Check product from Supplier (2) Record order information
Attachment:	<ul style="list-style-type: none"> (1) Supplier (2) Data Store D1 (3) Process 2.3 (4) Process 3.2

Table 3-13 Process Specification for Process 3.2

Process Name:	Update the product available
Data In:	(1) List of product purchase (2) List of product sold
Data Out:	(1) Update product available information (2) List of product purchase (3) List of product sold
Process:	Adjust product available after sold or purchased
Attachment:	(1) Supplier (2) Data Store D1 (3) Process 3.3

Table 3-14 Process Specification for Process 3.3

Process Name:	Prepare Customer Order
Data In:	(1) List of unsold product (2) List of order
Data Out:	(1) Customer goods information (2) List of product sold (3) List of customer order
Process:	(1) Prepare order to send to customer (2) Record customer order information
Attachment:	(1) Customer (2) Data Store D4

Table 3-15 Process Specification for Process 4.0

Process Name:	Manage Report
Data In:	<ul style="list-style-type: none"> (1) Product information (2) Customer information (3) Supplier information (4) Customer order information
Data Out:	<ul style="list-style-type: none"> (1) Request for Customer information (2) Request for Product information (3) Request for Customer order information (4) Request for Company order information (5) Request for Supplier information (6) Report information
Process:	Prepare report to Manager and Accountant
Attachment:	<ul style="list-style-type: none"> (1) Manager (2) Accountant (3) Data Store D1 (4) Data Store D2 (5) Data Store D3 (6) Data Store D4

Table 3-16 Process Specification for Process 4.1

Process Name:	Check Information
Data In:	(1) Product information (2) Customer information (3) Supplier information (4) Customer order information
Data Out:	(1) Request for Customer information (2) Request for Product information (3) Request for Supplier information (4) Request for Customer order information (5) Checked information
Process:	Prepare report
Attachment:	(1) Data Store D1 (2) Data Store D2 (3) Data Store D3 (4) Data Store D4 (5) Process 4.2

Table 3-17 Process Specification for Process 4.2

Process Name:	Print report
Data In:	Checked information
Data Out:	Report information
Process:	(1) Send report to Manager (2) Send report to Accountant
Attachment:	(1) Manager (2) Accountant (3) Process 4.1



(5) Data Dictionary

Table 3-18 Data Dictionary of Inventory System Database

Field Name	Meaning
Cancelled Order	Order which is cancelled from customer supplier
Checked Information	Company Information delivered to managing reports
Checked Order	Order that have to check of product available
Company order list	List of ordering product from company to supplier
Company order Information	Information of ordering product from supplier
Copy of company order Information	Same Information of ordering product from supplier to checking of company receiving product
Customer file	Keep Information of customer of company
Customer goods Information	Information of each customer that ordering product to company
Customer Id	Specific Identity of each customer
Customer Information	Information of customer which is Id, Name, Address, and Telephone
Customer Name	Name of the customer recorded to company file
Customer Order Information	Information of customer ordering each product to company
Invalid Supplier Product Information	Give back information that is not important to the company

Filed Name	Meaning
List of customer order	List of the product that order from customer
List of lack Order	Name list of product that below that minimum stock
List of order	List all of order of customer to mange inventory process
List of product purchase	Name list of product that company purchase from supplier
List of product sold	Name list of product that sold to customer
List of unordered Product	Supplier give back name list of unordered product
List of unsold product	List of product that will be sell in ordering process
New customer requirement	Information that company want from new customer
No customer Id	Verification of Customer to company accept new customer
Order Information	Order information of product sold
Product available	Number of product information available of company
Product file	File that kept in formation of each product
Product Id.	Specific number to each product to be Cleary verifying
Product Information	Information of each product detail

Filed Name	Meaning
Request for Customer Information	Request of company to receive each customer Information
Request for product available	Request of company to know product available in stock
Request for product information	Request of company to receive each product information
Supplier File	File that kept company's supplier information
Supplier Id	Number that company give to each supplier to clearly specification
Supplier Information.	Information of company's supplier
Supplier product Information	Information of each supplier's product
Torder file	File that kept order transaction of the company
Report information	Report Information that provide from company

(6) Interface Design

The purposes of Interface design are first to allow users to access the system in a way that is congruent with their individual needs. Second, to increase the speed of data entry and reduce errors. Third, to provide appropriate feedback to users from the systems. Last, to ergonomical sound principal of design for user interfaces and workspaces. (Kenneth E.Kendall & Julie E. Kendall 1999: 663)

Interface Name	Purpose
Addcustomerorder	In order to add, edit customers transaction
Auser	In order to add new username.
Changelockin	In order to change piority of employee
CompInv	In order to add transaction of company
Cpass	In order to change password.
Credit	In order to show credit of program.
Cuser	In order to change username.
Customer	In order to show customer detail.
CustOrder	In order to view Customer's transaction.
Login	In order to allow the user access to the program.
Product	In order to show product detail.
Report	In order to view report.
Select Product	In order to view and select product
Stock	In order to show product on hand.
View Customer	In order to show all customer information
View Product	In order to show all product information
View Product List	In order to show all product information

View Supplier	In order to show all supplier information
View Supplier Name	In order to show all supplier information
Supplier	In order to show supplier detail.
MdiMain	In order to show menu of the program.

Interface Design is exhibited in APPENDIX B



(7) Report Design

Report design is the form of providing information to managers using a pre-specified format designed to provide managers with information on a regular basis. Information is available when a manager demands it. (O'Brien 1999: 458-459)

Name of report	Purpose
Customer Report	Show customer information.
Inventory Report	Show product available information.
Order Report	Show order daily detail.
Order Report (select date)	Show order detail by selected date.
Product Report	Show product information.
Supplier Report	Show supplier information.
Top Sale Report	Show Top quantity product sale
Top Sale Customer Report	Show Customer sale by selecting ID and Date
Top Sale Supplier Report	Show Supplier sale by selecting ID and Date

Report Design is exhibited in APPENDIX C

IV. SYSTEM IMPLEMENTATION

4.1 Overview of the System Implementation

The way to implement the software is Direct Cutover method. For Direct Cutover method, it helps the company save cost because the company can run the new system only one system. That's why it fit with small company. Next, there will no effect when the company implements this approach because the old system is operated as manually, the new system operated by computing system. So, there is no relation between these two systems. Moreover, the output of the old and new one can not compare to each other due to the output from new system generated by computer, which is different from the old one. Last, the reason for choosing this approach is the old system is not support the new one, so they can apply this system easily. (Kenneth E. Kendall & Julie E. Kendall 1999)

4.2 Test Plan

There are several methods for testing the software and one of the several is Bottom-up testing. This is the popular method that software designer use for testing. They start test the Lowest levels of a system before testing its detailed components. Then the software designer test sub-system until completely tested. If this method is used, unnoticed design errors may be detected at an early stage in the testing process. Early detection means that they can be corrected without undue costs. The steps of Bottom-up testing are first, the user will test from the Small function or the Sub process which is the process that the users require. So, if there is anything wrong with the Sub process, software designer can immediately correct it for the users. The testing system that the Low levels before testing its detailed components. By using actual operating data, I tested the software after finished sourcing all code in program and I tested with real information. I started testing from Inventory system because it is the main function

that involve with main program and it is the essential function that user required. Then I tested the other High systems in order to verify all system. I checked all transaction of the program whether it done its function correctly. And I also tested input data whether wrong data can be inputted. After tested, there was no critical error occur and also no minor error. Because this method is help the software designer detect an unnoticed design error at an early stage in the testing process. From the result, every error can be discovered by using Bottom-up testing. (Lan Sommerville 1998:452-454)



V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

From my point of view, I think that the new system will be benefited for the company. First, the company can operate their job faster. They need not to write anything on the paper and need not to keep their paper work in the file anymore. Next, they can operate job effectively. The staff can finish many jobs in the short time. They just input the data into the screen and the rest of jobs the computer will operate for them. That's help the staffs save time for complete their jobs. In additional, The new system reduces the error from the user. As the user need not to use handwriting, the error can be reduced. The new system will be automatically appearing the message box for them when the errors occur. Last, the company can satisfy their customer. The staff can respond to a customer quickly and not keep them wait so long time.

5.2 Recommendations

For my recommendation, I suggest that the company should extend more functions on the system. In order to utilize the system resource, they ought to add the other sub-systems for the user. They should add Accounting system to help they manage their money or to know the profit and lost of the company. Next, if the company wants to expand their branch in the future, they can use LAN to connect the main shop to the other shops. So, that may help they work faster and smoothly for their communication.



APPENDIX A
DATABASE DESIGN

Table A-1 Customer Table

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key	Check	Key Type
1	CustID	text (6)	Y	Y				Primary Key
2	Cname	text (50)	Y					Attribute
3	Caddress	text (200)			Y			Attribute
4	Ctel	text (50)						Attribute
5	Cfax	text (50)						Attribute

Table A-2 Item Table

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key	Check	Key Type
1	Ordered	text (6)		Y				Primary Key
2	ProdID	Text (6)		Y				Primary Key
3	Quantity	number (6)						Attribute
4	sellingprice	number (15)						Attribute

Table A-3 Product Table

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key	Check	Key Type
1	ProdID	Text (6)	Y	Y				Primary Key
2	SupID	Text (6)	Y			Supplier		Foreign Key
3	PName	Text (50)						Attribute
4	PType	Text (50)						Attribute
5	PBrand	Number (20)						Attribute
6	buyingprice	Number (20)						Attribute
7	sellingprice	Number (20)						Attribute
8	Available	Number (20)						Attribute
9	MinS	Number (20)						Attribute

Table A-4 Supplier Table

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key	Check	Key Type
1	SupID	Text (6)	Y	Y				Primary Key
2	SName	Text (50)						Attribute
3	SAddress	Text (100)						Attribute
4	STel	Text (50)						Attribute
5	SFax	Text (50)			Y			Attribute

Table A-5 Torder Table

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key	Check	Key Type
1	Ordered	Text (6)	Y	Y				Primary Key
2	CustID	Text (6)	Y			Customer		Foreign Key
3	orderDate	Text (50)						Attribute
4	TotalPrice	Currency (20)						Attribute
5	DiscPercent	Number (3)			Y			Attribute
6	Discount	Currency (20)			Y			Attribute
7	Payment	Currency (20)			Y			Attribute
8	Vat	Currency (10)			Y			Attribute
9	TotalPayment	Currency (20)			Y			Attribute

Table A-6 User Table

No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key	Check	Key Type
1	UserN	Text (10)	Y	Y				Primary Key
2	UserP	Text (10)						Attribute
3	Prio	number (6)						Attribute





APPENDIX B
INTERFACE DESIGN

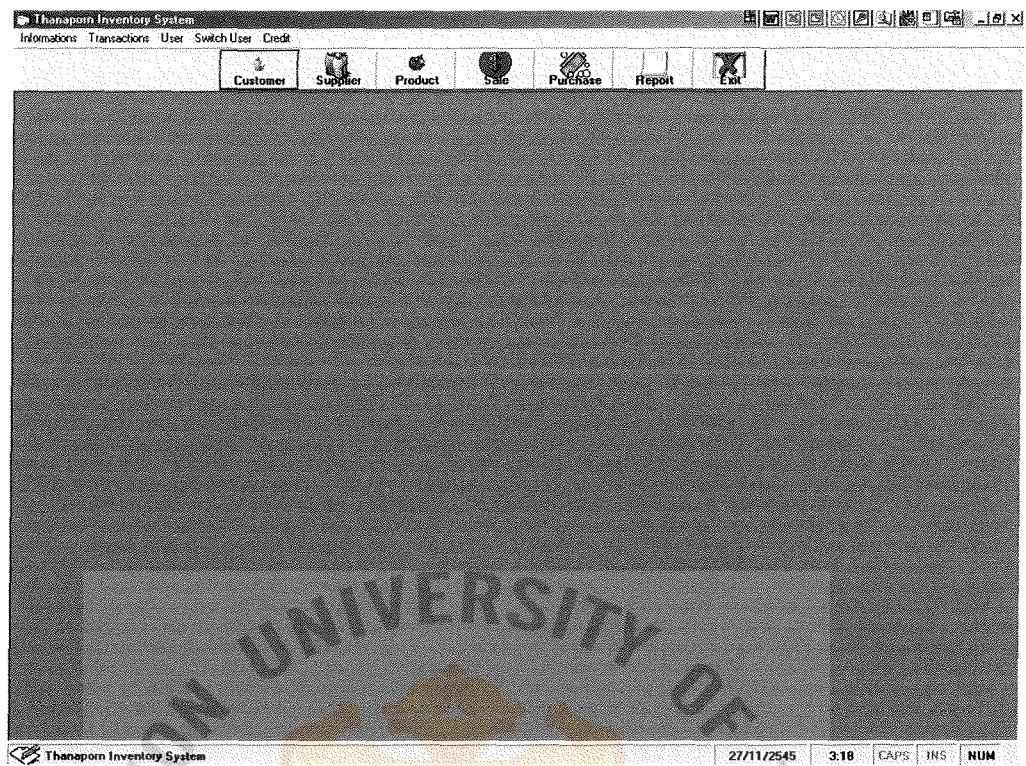


Figure B-1 Main Menu Form

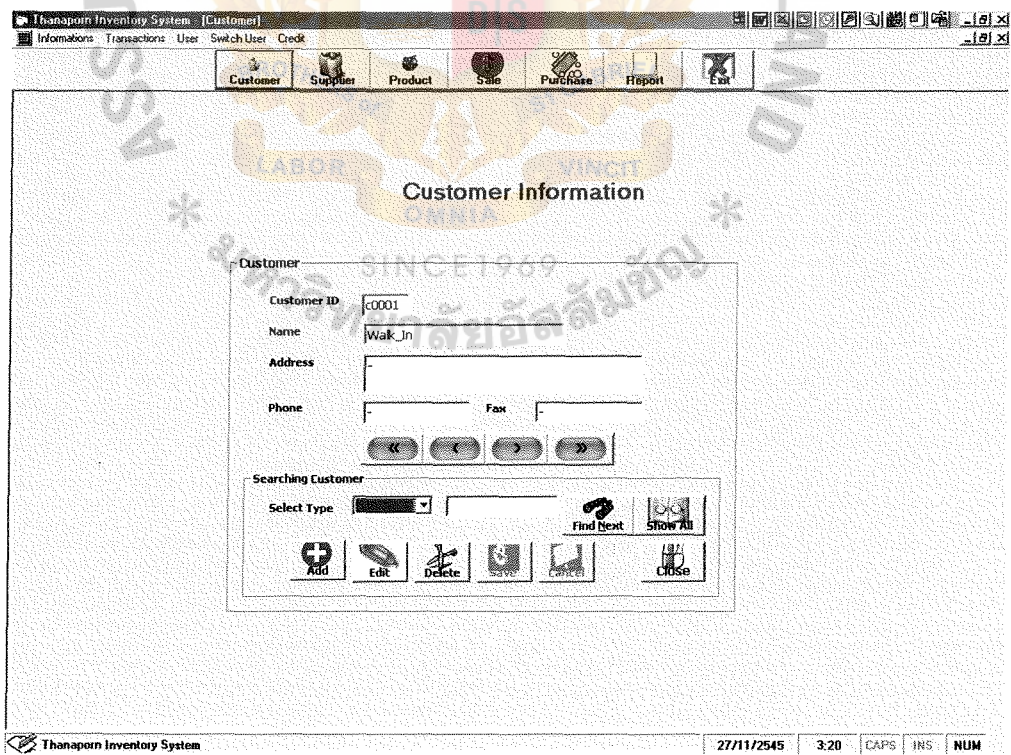


Figure B-2 Customer Information Form

Thanaporn Inventory System - [on]
Informations Transactions User Switch User Credit
Customer Supplier Product Sale Purchase Report Exit

View All Customers

ID	Name	Address	Telephone	Fax
c0001	Wak_In	-	-	-
c0002	Viroon Jirapojaporn	3311/8 Ramkhamhaeng 83/1, Bangk	3778488	8995621
c0003	Suvitcha Panapongpaisarn	95/69 Rama II Road, Bangmod, Bang	4126701	4126701
c0004	Palapong Jiramong	99 Ramkhamhaeng Road, Huamark, B	3339999	3338888

Thanaporn Inventory System
27/11/2545
3:59
CAPS
INS
NUM

Figure B-3 View All Customer Form

Thanaporn Inventory System - [Supplier]
Informations Transactions User Switch User Credit
Customer Supplier Product Sale Purchase Report Exit

Supplier Information

Supplier
Supplier ID: s0001 View
Name: Than Hut P. C.P.
Address: 5 Danerong Road, Bangkok 10100
Phone: 0819733 Fax: 0819744

Searching Supplier
Select Type:
Find Next Show All
Add Edit Delete Save Cancel Close

Thanaporn Inventory System
27/11/2545
3:22
CAPS
INS
NUM

Figure B-4 Supplier Information Form

Thanaporn Inventory System - [View All Suppliers]
Informations Transactions User Switch User Credit
Customer Supplier Product Sale Purchase Report Exit

View All Suppliers

Supplier ID	Name	Address	Telephone	Fax
s0001	Thai Huat R.O.P.	5 Damrongrak Road, Bangkok 10100	2819733	2819744
s0002	Nippon Paint(Thailand) Co.,Ltd.	101 M00 3 Soi Sukrawat 76 Bangkok 10110	4630032	4632214

Thanaporn Inventory System
27/11/2545
4.02
CAPS
INS
NUM

Figure B-5 View All supplier Form

View Product List

View Product List

Product ID	Name	Type	Buying price	Selling price	Available	Minimum
p0001	Crystal White	special	170	200	89	20
p0002	Mirine Blue	normal	185	215	60	20
p0003	Twinkle Blue	special	180	225	52	20
p0007	Glacier Silver Met.	special	190	210	24	10
p0009	Dyna Blue	normal	190	230	24	15
p0011	Metalic	Normal	0	200	10	5

Close

Figure B-6 View Product list Form

Thanaporn Inventory System - [Product]

Informations Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

Product Information

Information

Product ID: p0001

Name: Crystal White Brand: Nissan

Type: special Supply ID: s0001 View Supplier Name

Selling Price: 200

Buying Price: 170

Available: 29 Minimum Stock: 20

Searching Product

Select Type: [v] Find Next Show All

Add Edit Delete Save Cancel Close

Thanaporn Inventory System 27/11/2545 3:24 CAPS INS NUM

Figure B-7 Product Information Form

Thanaporn Inventory System - [View All Products]

Informations Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

View All Products

ID	supID	Name	Type	Buying Price	Selling Price	Available	Minimum	Brand
p0001	s0001	Crystal White	special	170	200	29	20	Nissan
p0002	s0001	Mine Blue	normal	195	215	60	20	Mitsubishi
p0003	s0001	Twinkle Blue	special	180	225	52	20	Mazda
p0004	s0002	Vouge Silver met	special	200	250	54	10	Isuzu
p0005	s0002	Sky Silver Met	special	200	250	87	10	Honda
p0006	s0002	Heather Mist Met	normal	210	260	8	20	Honda
p0007	s0001	Glacier Silver Met	special	190	210	24	10	Hyundai
p0008	s0002	Highlight Silver	special	180	220	19	10	Ford
p0009	S0001	Dyna Blue	normal	190	230	24	15	Toyota
p0010	s0002	Midnight Blue	Normal	0	200	0	10	Toyota
p0011	s0001	Metalic	Normal	0	200	10	5	honda

Thanaporn Inventory System 27/11/2545 4:04 CAPS INS NUM

Figure B-8 View All Product Form

View Supplier

View Supplier Name

Supplier Id	Name	Address	Telephone	Fax
00001	Thai Hual R.O.P.	5 Danongrak Road, Bangkok 10100	2619733	2619744

Close

Figure B-9 View Supplier Name Form

Thanaporn Inventory System - Add Customer Order

Information Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

Sale

Customer Detail

ID: Name: Address: Order No: Date: 27/11/2545 (dd/mm/yy) New Order

orderID	Name	Product ID	quantity	sellingPrice

Product Order

Product ID: Name: Available: Unit Price: View Products: Type: Amount: Cost: Product:

Payment

Total Price: baht
Discount %: %
Discount: baht
Payment: baht
VAT (7 %): baht
Total Payment: baht

Confirm Close

Thanaporn Inventory System 27/11/2545 3:26 CAPS INS NUM

Figure B-10 Sale Form

Thanaporn Inventory System - [Add Customer Order]

Information Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

Select Product

Product Id	Name	Type	Selling price	Available
p0001	Cystal White	special	200	89
p0002	Mine Blue	normal	215	60
p0003	Twinkle Blue	special	225	52
p0004	Vouge Silver met	special	250	54
p0005	Sky Silver Met	special	250	87
p0006	Heather Mist Met.	normal	260	8
p0007	Glacier Silver Met.	special	210	24
p0008	Highlight Silver	special	220	19
p0009	Dyna Blue	normal	230	24
p0010	Midnight Blue	Normal	200	0
p0011	Metalc	Normal	200	10

Thanaporn Inventory System 27/11/2545 4:20 CAPS INS NUM

Figure B-11 Select Product Form

Thanaporn Inventory System - [View Customer Order]

Information Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

View Sale

Customer Detail

ID: [] Name: [] Address: [] Search: []

Order No.: [] Date: 27/11/2545 (dd/mm/yy)

Ordered Product		
Product Id	Quantity	Selling Price

Payment

Total Price: 0 baht

Discount %: 0 %

Discount: 0 baht

Payment: 0 baht

VAT (7 %): 0 baht

Total Payment: 0 baht

Close

Thanaporn Inventory System 27/11/2545 3:28 CAPS INS NUM

Figure B-12 View Sale Form

Thanaporn Inventory System - [Report]

Information Transactions User Switch User Credit

Customer Supplier Product Sale Product IN Report Exit

View Report

Report Type

- ☐ General Report
- ☐ Top Report
- ☒ Top Report By Id

General Report

- ☐ Customer Report
- ☐ Product Report
- ☐ Supplier Report
- ☐ Inventory Report
- ☐ Order Report (Daily)
- ☐ Order Report (Select by Date)

Top Report

- ☐ Top Sale Report

Top Report By Id

☒ Customer Id Starting Date

☐ Supplier Id Ending Date

Show Close

View

custID	cName
c0001	Walk_In
c0002	Vicon Jirapoppon
c0003	Suwicha Panapongparian
c0004	Palaspong Jemlongsi
c0005	Sittha Tanasattikul
c0006	Sarinya Julari
c0007	Chonicha Paresini
c0008	Nareerat Poomkum
c0009	Kasinkom Visetkula
c0010	Charvakom Sritatanapasa

Thanaporn Inventory System 13/12/2545 4:18 CAPS INS NUM

Figure B-15 View Report Form

Thanaporn Inventory System - [User]

Information Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

Add New User

Username

Password

Confirm Password

Priority ☐ Manager ☐ Employee

Thanaporn Inventory System 27/11/2545 3:35 CAPS INS NUM

Figure B-16 Add New User Form

Thanaporn Inventory System - [Change Password]

Information Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

Change Password

Old Password

New Password

Confirm Password

Thanaporn Inventory System 27/11/2545 3:49 CAPS INS NUM

Figure B-17 Change Password Form

Thanaporn Inventory System - [Change Username]

Information Transactions User Switch User Credit

Customer Supplier Product Sale Purchase Report Exit

Change Username

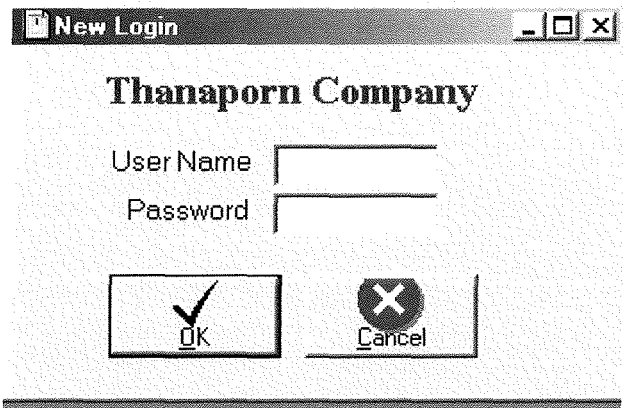
Old Username

New Username

Confirm Username

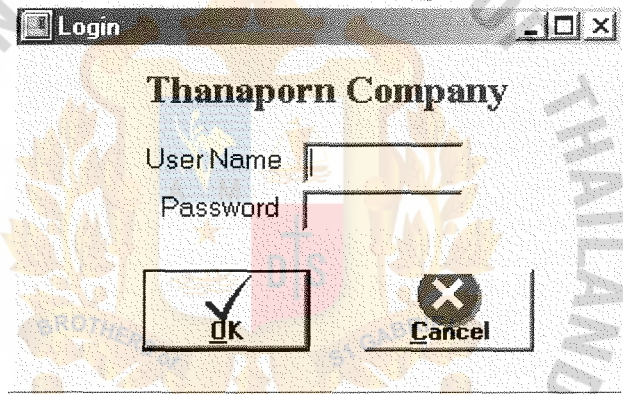
Thanaporn Inventory System 27/11/2545 3:50 CAPS INS NUM

Figure B-18 Change Username Form



A screenshot of a Windows-style window titled "New Login". The window has a standard title bar with minimize, maximize, and close buttons. The main content area has a light gray background. At the top, the text "Thanaporn Company" is displayed in a bold, black, serif font. Below this, there are two labels: "User Name" and "Password", each followed by a white rectangular text input field. At the bottom of the window, there are two buttons: "OK" with a checkmark icon and "Cancel" with an 'X' icon. Both buttons have a 3D effect with a gray border and a lighter center.

Figure B-19 Switch User Form



A screenshot of a Windows-style window titled "Login". The window has a standard title bar with minimize, maximize, and close buttons. The main content area has a light gray background. At the top, the text "Thanaporn Company" is displayed in a bold, black, serif font. Below this, there are two labels: "User Name" and "Password", each followed by a white rectangular text input field. At the bottom of the window, there are two buttons: "OK" with a checkmark icon and "Cancel" with an 'X' icon. Both buttons have a 3D effect with a gray border and a lighter center.

Figure B-20 Login Form

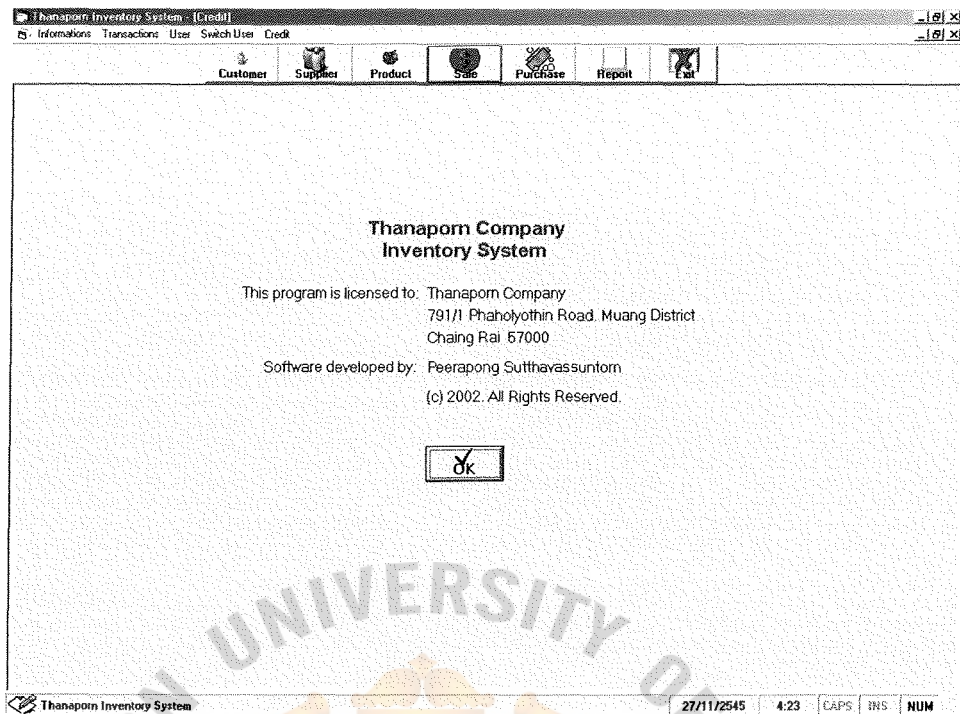


Figure B-21 Credit Form



APPENDIX C
REPORT DESIGN

Thanaporn Company

791/1 Pahonyotin Rd. Weiang, Muang, Chiang Rai 57000

Tel: 053-711-293 Fax: 053-711-299

Page No. :1

Printing Time: 4:27:40

Customer Report

Printing Date: 27/11/2002

<u>Customer ID.</u>	<u>Name</u>	<u>Address</u>	<u>Telephone No.</u>	<u>Fax No.</u>
c0001	Walk_In	-	-	-
c0002	Viroon Jirapojaporn	3311/8 Ramkhamhaeng 83/1, Bangkok 10240	3778488	8995621
c0003	Suwitchai Panapongpaisarn	55/69 Rama II Road, Bangkok 10150	4126701	4126701
c0004	Patarapong Jirmtongsi	99 Ramkumheang Road, Huamark, Bangkok 10240	3339999	3338888

Figure C-1 Customer Report

Thanaporn Company

Page No. :1

791/1 Pahonyotin Rd. Weiang, Muang, Chiang Rai 57000

Tel: 053-711-293 Fax: 053-711-299

Printing Time: 4:40:35

Product Report

Printing Date: 27/11/2002

<u>Product Id.</u>	<u>Supplier Id.</u>	<u>Name</u>	<u>Type</u>	<u>Brand</u>	<u>Buying Price</u>	<u>Selling Price</u>
p0001	s0001	Crytal White	special	Nisson	170.00	200.00
p0002	s0001	Mrine Blue	normal	Mitsubishi	185.00	215.00
p0003	s0001	Twinkle Blue	special	Mazda	180.00	225.00
p0004	s0002	Vouge Silver met.	special	Isuzu	200.00	250.00
p0005	s0002	Sky Silver Met	special	Honda	200.00	250.00
p0006	s0002	Heather Mist Met.	normal	Honda	210.00	260.00
p0007	s0001	Glacier Silver Met.	special	Hyundai	190.00	210.00
p0008	s0002	Hightlight Silver	special	Ford	180.00	220.00
p0009	S0001	Dyna Blue	normal	Toyota	190.00	230.00

Figure C-2 Product Report

Thanaporn Company

791/1 Pahonyotin Rd. Weiang, Muang, Chiang Rai 57000
Tel: 053-711-293 Fax: 053-711-299

Page No. :1
Printing Time: 4:49:35

Supplier Report

Printing Date: 27/11/2002

<u>Supplier Id.</u>	<u>Name</u>	<u>Address</u>	<u>Telephone</u>	<u>Fax</u>
s0001	Thai Huat R.O.P.	5 Damrongrak Road, Bangkok 10100	2819733	2819744
s0002	Nippon Paint(Thailand) Co.,Ltd.	101 M00 3 Soi Suksawat 76 Bangjak Papradang Samutprakarn 10130	4630032	4632214

Figure C-3 Supplier Report

Thanaporn Company

Page No. :1

791/1 Pahonyotin Rd. Weiang, Muang, Chiang Rai 57000
Tel: 053-711-293 Fax: 053-711-299

Printing Time: 4:53:10
Printing Date: 27/11/2002

Inventory Report

<u>Product Id.</u>	<u>Name</u>	<u>Type</u>	<u>Brand</u>	<u>Available</u>
p0001	Crytal White	special	Nisson	89
p0002	Mrine Blue	normal	Mitsubishi	60
p0003	Twinkle Blue	special	Mazda	52
p0004	Vouge Silver met.	special	Isuzu	54
p0005	Sky Silver Met	special	Honda	86
p0006	Heather Mist Met.	normal	Honda	8
p0007	Glacier Silver Met.	special	Hyundai	24
p0008	Hightlight Silver	special	Ford	19
p0009	Dyna Blue	normal	Toyota	24
p0010	Midnight Blue	Normal	Toyota	0
p0011	Metalic	Normal	Honda	10

Figure C-4 Inventory Report

Thanaporn Company

Page No. :1

791/1 Pahonyotin Rd. Weiang, Muang, Chiang Rai 57000

Tel: 053-711-293 Fax: 053-711-299

Order Report

Printing Time: 10:51:12
Printing Date: 27/11/2002

<u>Order Id.</u>	<u>Customer Id.</u>	<u>Order Date</u>	<u>TotalPayment</u>
or0026	c0004	27/11/2002	\$267.50
or0027	c0004	27/11/2002	\$278.20

Figure C-5 Order Report (Daily)

Thanaporn Company

Page No. :1

791/1 Pahonyotin Rd. Weiang, Muang, Chiang Rai 57000

Tel: 053-711-293 Fax: 053-711-299

Order Report:

Printing Time: 10:56:10

Printing Date: 27/11/2002

<u>Order Id.</u>	<u>Customer Id.</u>	<u>Order Date</u>	<u>TotalPayment</u>
or0015	c0003	25/11/2002	\$1,150.25
or0016	c0003	25/11/2002	\$5,114.60
or0017	c0001	26/11/2002	\$5,410.00
or0018	c0001	26/11/2002	\$540.00
or0019	c0001	26/11/2002	\$280.00
or0020	c0001	26/11/2002	\$481.50
or0021	c0001	26/11/2002	\$230.00
or0022	c0001	26/11/2002	\$2,560.00
or0023	c0001	26/11/2002	\$278.20
or0024	c0001	26/11/2002	\$973.70
or0025	c0001	26/11/2002	\$722.25
or0026	c0004	27/11/2002	\$267.50
or0027	c0004	27/11/2002	\$278.20

Figure C-6 Order Report (Select Date)

Thanaporn Company

791/1 Pahonyotin Rd. Weiang,
Muang, Chiang Rai 57000
Tel: 053-711-293 Fax: 053-711-299

Page No: 1
Printing Date: 28/11/2002
Printing Time: 3:05:50

Top Sale Report

<u>Order ID</u>	<u>Product ID</u>	<u>Product Name</u>	<u>Type</u>	<u>Selling Price</u>	<u>Quantity</u>
or0004	p0006	Drak Green	Normal	500.00	25
or0016	p0010	Midnight Blue	normal	200.00	20
or0031	p0005	Sky Silver Met	special	250.00	12
or0005	p0003	Twinkle Blue	special	70.00	10
or0005	p0004	Grey	normal	200.00	10
or0005	p0006	Silver	special	500.00	5
or0010	p0002	Mrine Blue	normal	60.00	5
or0015	p0002	Mrine Blue	normal	215.00	5
or0035	p0012	Black	Normal	150.00	5
or0029	p0004	Vouge Silver met.	special	250.00	5
or0029	p0002	Mrine Blue	normal	215.00	5
or0016	p0006	Heather Mist Met.	normal	260.00	3
or0028	p0004	Vouge Silver met.	special	250.00	3
or0001	p0003	Twinkle Blue	special	70.00	3
or0007	p0003	Twinkle Blue	special	70.00	3

Figure C-7 Top Sale Report

791/1 Pahonyotin Rd. Weiang,
Muang, Chiang Rai 57000
Tel: 053-711-293 Fax: 053-711-299

Thanaporn Company

From : 10/12/2545 To : 13/12/2545

Topsale's Customer Report

Page No. :1

Printing Time: 4:20:13

Printing Date: 13/12/2545

<u>Customer Id.</u>	<u>Customer Name</u>	<u>Order Id.</u>	<u>Order Date</u>	<u>Product Name</u>	<u>Quantity</u>	<u>TotalPayment</u>
c0002	Viroon Jirapojapom	or0001	12/12/254	Mrine Blue	2	430.00
				Hightlight Silver	2	440.00
				Total Price		870.00
				Vat		60.90
				Total Payment :		930.90
c0002	Viroon Jirapojapom	or0002	12/12/254	Crytal White	1	200.00
				Mrine Blue	1	215.00
				Twinkle Blue	1	225.00
				Total Price		640.00
				Vat		44.80
				Total Payment :		684.80
c0002	Viroon Jirapojapom	or0003	12/12/254	Mrine Blue	3	645.00
				Crytal White	3	600.00
				Total Price		1,245.00
				Vat		87.15
				Total Payment :		1,332.15

Figure C-8 Top Customer Sale Report By Selecting ID and Date

791/1 Pahonyotin Rd. Weiang,
Muang, Chiang Rai 57000
Tel: 053-711-293 Fax: 053-711-299

Thanaporn Company

From : 11/12/2545 To : 13/12/2545

Topsale's Supplier Report

Page No. :1

Printing Time: 4:27:10

Printing Date: 13/12/2545

<u>Supplier Id.</u>	<u>Supplier Name</u>	<u>Purchase Id.</u>	<u>Purchase Date</u>	<u>Product Name</u>	<u>Quantity</u>	<u>TotalPayment</u>
s0001	Thai Huat R.O.P.	pu0001	12/12/2545	Mrine Blue	15	2,775.00
				Total Price		2,775.00
				Vat		194.25
				Total Payment :		2,969.25

Figure C-9 Top Supplier Sale Report By Selecting ID and Date



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