Final Report of the three-credit course
CS 6998 System Development Project

Submitted in Partial Fulfilment
Of the Requirement for the Degree of
Master of Science in
Computer Information System
Assumption University
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Project Title : Airline Control Baggage

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Academic Year : 1994

The Graduate School had approved this Final Report of the three-credit course, CS.6998 System Development Project, as a partial fulfillment of the requirement for the degree of Master of Science in Computer Information Systems.

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(Assoc. Prof. Somchai Thayarnyong) (Dr. Sudhiporn Pathumtaewapibal) Member Member
ABSTRACT

This system development project cover system analysis, design and implementation for airline control baggage. This project are develop baggage tag to support prevent lose passenger's baggage to the destination and intended to provide a solution to the problem by using a computerized system. The system can provide timely and accurate information to the managements, save time, cost and eliminate the redundancy operations.

Computerized system is proposed to replace the existing manual system it will improve the working method, reduce redundancy process, create better service, and provide more accurate and up-to-date information for management. The system will also reduce the human resource employed about 960,000 baht. From the economic cost comparison, The new system is worth to be implemented. Total cost to implement this proposed system is 1,081,320 baht. Payback Period is 4 years and Net Present Value is 2,751,681 baht. Other intangible is efficiency works is better because it is faster and workers can improve the performance by themself.
ACKNOWLEDGEMENT

The author wishes to express his gratitude to his advisor, Prof. Dr. Srisakdi Charmonman, for his valuable guidance during the period of project. Thanks also grateful to the project committee member of the Graduate School of Computer Information System at Assumption University.

Otherwise, the Airline control baggage is very willing to provide information necessary for requirement development of the project.
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1. INTRODUCTION

According to this present, the all passenger to travel by aircraft and a lot of passenger's baggage to lose but don't found destination. I am develop baggage tag to support lose and found and regarding baggage handling it is responsibility of handling airline to provide facilities for passenger baggage reconciliation. This is in order to prevent the loading of any unauthorized baggage aboard an aircraft. The specific objective is to ensure that the baggage can be identified and removed from an aircraft when the checked-in passenger does not report for embarkation. In addition to conform with the mentioned regulation, Airway international which is the biggest handling airline at Bangkok airport providing check-in service for more than 40 airlines needs to improve the efficiency.

1.1 Objectives Of The Project

The objective of the project on the order processing system in the airline system are as following:

1) To analyse the existing system.
   - To study the internal and environment of the system.
   - To generate the understanding of the existing system.

2) To analyst and design the new system requirement.
   - To design the new system that is suitable with the new technology.
   - To improve the performance of manual system to be the computerized system.
3) To implement the new system,

- Increase reliability to aircraft.
- Prevent to lose baggage destination.
- Provide better service to passenger.
- Increase corporate image by modernization.

Minimize human errors in

- Attaching wrong destination tag.
- Write wrong flight and/or destination.
- Loading baggage to wrong destination.

1.2 Scope Of The Project:

There are two major areas where the proposed system concerns: passenger check-in areas and baggage loading area.

At check-in counter, the baggage tag for each bag and luggage will be automatically issued, instead of manually written, at the time the passenger is accepted and to prevent lose baggage. At this area, a bar-code baggage tag printer is considered.

For baggage loading, THAI STATION AIRLINE in Bangkok need a system to perform the task of passenger and baggage reconciliation. The proposed system has to provide a list of discrepancy baggages of each departure flight as well as a facility to locate them for either onloading or offloading. Apart from this computerised system, THAI STATION in Bangkok also requires new equipments to read the bar-code baggage tag and to transmit the tag data into the system.
1.3 Project Schedule

The project schedule is represented in Gantt Chart as in table 1.

Table 1: Project Plan

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>NOV.</th>
<th>DEC.</th>
<th>JAN.</th>
<th>FEB.</th>
<th>MAR.</th>
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<td>-Analysis the area under of the existing system.</td>
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<td>-Writing the DFD of the existing system.</td>
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<td>DETAIL ANALYSIS AND DESIGN</td>
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<tr>
<td>-Survey the user requirement.</td>
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<td>-Writing the DFD of the new system requirement.</td>
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<td>X</td>
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2. ANALYST OF THE EXISTING SYSTEM

2.1 General information on the Area under Study

Currently, there are various types of baggage tags. All are in pre-printed forms and controlled by tag stock controller. It ever occurred that some tags were stolen for use with the unauthorized baggages.

Information on baggage tag is manually filled in by check-in agent at passenger acceptance. This information is important for baggage sorting but handwriting is frequently unclear and sometime there is human error. These troubles cause baggages misrouted.

If a passenger does not board the aircraft, his/her baggage must be accordingly unloaded.

To solve all these problem, the new Baggage Tag System is then required.

2.2 Summary of Existing System

The new Baggage Tag System can be divided into 2 process:

a) Baggage Tagging

The baggage tag will be automatically printed at the time the passenger is accepted. Tag number will be generate by system and bar-code representation that number will also be on the tag.
b) Passenger & Baggage Reconciliation

Before departure, system will provide list of discrepancy between boarded passengers and loaded baggages together with indication where the unattended baggages are loaded on the aircraft.

In so doing, the new system requires equipment to print bar-code baggage tag, read bar-code baggage tag and transmit the tag data to the system.

2.3 Existing Hardware/Software

2.3.1 Computer System Configuration (Hardware)

Type of computer: IBM PC386
Main Memory: 640 k
Disk: Hard disk with storage capacity of 120 M
Printer: Epson Lx800
Bar-code: Telxon

2.3.2 Software System Configuration (Software)

Operating System: PC DOS VERSION 6, PC TOOLS
Package Software: DBASE III PLUS, WINOWDS 3.1, CW, LOTUS ALLWAY
3. PROPOSE SYSTEM

3.1 System Specification

- Check-in
- Transit check-in
- Boarding
- Baggage Loading
- Passenger Baggage Reconciliation
- Baggage Offloading

System specification of the new system requirement all the system has 6 subsystems as follows.

Process 1.0 : Check-in

This process are receive pax with baggage and edit baggage tag is how many the baggage, passenger name, destination, what flight-number, date, time and separate pax with baggage sent to boarding, and another sent to baggage loading.

Process 2.0 : Transit check-in

This process are receive pax with baggage tag from transit flight and edit pax with baggage tag sent to boarding.

Process 3.0 : Boarding

This process are receive pax with baggage from transit check-in and check-in and identified pax with baggage tag sent to aircraft.
Process 4.0 : Baggage Loading

This process are receive baggage with baggage tag from transit flight and check-in, and loaded baggage with baggage tag to sent passenger baggage reconciliation.

Process 5.0 : Passenger baggage reconciliation

This process are receive baggage with baggage and pax from baggage loading and boarding to identified baggage with baggage tag sent to aircraft, and discrepancy baggage with baggage tag sent to baggage offloading.

Process 6.0 : Baggage Offloading

This process are receive discrepancy baggage with baggage tag from passenger baggage reconciliation and offloaded baggage sent to passenger.
3.2 System Design

The system architecture of new system show in the figure 3.2.

REMARK :

T = INTELLIGENT TERMINAL 6 UNIT
B = BAR-CODE 3 UNIT
PS = PRINT SERVER 6 UNIT
M = MODEM 2 UNIT

Figure 3.2 : System Architecture
3.3 Hardware and Software Requirement

3.3.1) Hardware requirement

1) UPS - online system 1 k
2) Ethernet link (Cable)
3) Ethernet card
4) Workstation PC 386 SX 200 MB
5) Dot Matrix Printer EPSON LX800
6) Bar-code TELXON
7) Lease line
8) HUB

3.3.2) Software requirement

1) Software system requirement
   DBMS Ingres 10 users Run-time version
2) Network Software and terminal software
   Emulator "KERMIT"
3) Software application requirement

3.3.3) Computer Equipment

6 set

3.3.4) Human requirements

10 persons
3.4 Security and Controls

3.4.1) Security hardware equipments

The security hardware equipment has the component of device to helping operational security as follows:

1) Tape back up
2) UPS
3) Hardlock
4) HUB

1) Tape backup

The tape backup is the hardware helping the record data all the time after the user has commit process. It is operated in the parallel process and saving between tape backup of user and diskette of user.

2) UPS (Uninterruptible Power Source)

The UPS helps the protection of electric that might be off immediately. So the user might lost the data if the system has not it.

3) Hardlock

The hardlock is the hardware device to helping lock the program which unauthorized people can not see in the source code of program and can not edit them.
4) Hub

The hub is the hardware to helping the ports distributed for user sharing in each workstation when if one port might be down, the another workstation can be still worked to continuous.

3.4.2) Security software equipment

The security software equipment has the component of security operating system as following:

1) Ingres is provide the manpower which is a supervisor, a DBA, and many users.

2) The supervisor can create to identify which the user can be a DBA. That is only one person.

3) The DBA can create to identify the program or data which is granted to the group of user or each user. They access the database and program.

4) The password is identified for of the each user who can use the database for each table or program.

5) The integrity of data can be right because Ingres has the master key table that might be constraint of file or those field.

6) The user cannot access the file which the user is not in the function owner. It means lock file that other user cannot access them.

7) The database server can help distributed database for each user or group user to easily and quickly.
3.5 Hardware and Software Cost

1) Hardware Cost

- UPS (SINDROM-THAI) 1 K On-line system 42,000 Baht
- Ethernet line (Cable) 15,000 Baht
- Ethernet Card 3C503-16-TF(7000 x 6) 42,000 Baht
- HUB 33,000 Baht
- Workstation PC 386 SX COMPAQ 200 MB (45,000 x 6) 270,000 Baht
- Dot matrix printer 1x 800 (4,500 x 6) 27,000 Baht
- Bar-code TELXON (20,000 x 3) 60,000 Baht
- Leased line deposit
- Modem V32 speed 9600 bps (20,000x2) 40,000 Baht
- Installation leased line 6,700 Baht

TOTAL 535,700 Baht

2) Software Costs

2.1) Software System Costs

DBMS Ingres 10 User run-time Version 412,620 Baht

Network Software and Terminal Software

Emulator (10,000 x 6) 60,000 Baht

472,620 Baht
### 2.2) Software Application Costs

2.2.1 CHECK-IN

2.2.2 TRANSIT CHECK-IN

2.2.3 BOARDING

2.2.4 BAGGAGE LOADING

2.2.5 PASSENGER BAGGAGE RECONCILIATION

2.2.6 BAGGAGE OFFLOADING

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost</th>
<th>Unit</th>
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<tr>
<td>1. Hardware Requirement</td>
<td>534,700</td>
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<tr>
<td>2. Software Requirement</td>
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<td></td>
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<tr>
<td>- Software System</td>
<td>472,620</td>
<td>Baht</td>
</tr>
<tr>
<td>3. Computer Equipment</td>
<td>24,000</td>
<td>Baht</td>
</tr>
<tr>
<td>(6 x 4,000)</td>
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<td></td>
</tr>
<tr>
<td>4. Overhead Costs</td>
<td>50,000</td>
<td>Baht</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>1,081,320</td>
<td>Baht</td>
</tr>
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Assumption University Library

Assumption University of Thailand

SINCE 1969

BROTHERS OF LABOR OMNIA VINCIT

มหาวิทยาลัยธัญบุรี
3.6 Cost and Benefit Analysis

3.6.1 Tangible Benefit:

1. The direct cost is reduced by the human resource employed in the organized system which is about 960,000 Baht. When comparison with the employ vendrom which is about 2,000,000 Baht.

2. The indirect cost is reduced by employee cost because it has computers control and It can check by bar-code all the time.

3. The revenue increase more because the service has impression from customer higher.

3.6.2 Intangible Benefit:

1. The worker in the company works comfortable data and document flows.

2. The efficiency works is better because it is faster.

3. The workers can improve the performance by themself.

4. The document can reduce the amount of paper and reports.

5. The company can expand capacity by forseen planing in the future to the right way.
3.6.2.1 Payback Period To Install The New System

The payback period is the number of years that can return within amount of money investment.

Formula of payback period:

\[ P = \frac{I}{(1-T)R} \]

Where:

- \( I \) = Investment or Capital expenditure
- \( T \) = Tax Rate (Use 30%)
- \( R \) = Annual saving realized by investment

Annual saving realized by investment:

Salary = 960,000 Baht

\[ I = 1,081,320 \text{ Baht} \]

\[ T = .30 \]

\[ R = 960,000 \text{ Baht} \]

\[ \text{Payback Period} = \frac{1,081,320}{(1-.30)(960,000)} \]

\[ = 4.19 \]

\[ = 4 \]
3.6.2.2 Net Present Value Analysis (NPV)

The investment proposals in the method of net present value.

Formula of Net Present Value (NPV)

\[
\text{NPV} = \left[ \sum R_t \right] - PV
\]

\[
= \left[ \frac{R_1}{(1+k)^1} + \frac{R_2}{(1+k)^2} + \ldots + \frac{R_n}{(1+k)^n} \right] - PV
\]

Where:

NPV = Net Present Value
PV = Cost of New System
\( R \) = Cash Flow (saving)
\( K \) = Cost of money or interest rate
\( N \) = Number of year the saving is available

\[
\begin{align*}
\text{PV} &= 1,081,320 \text{ Baht} \\
\text{\( R \)} &= 960,000 \text{ Baht} \\
\text{\( K \)} &= 8 \% \\
\text{\( N \)} &= 5 \text{ Years}
\end{align*}
\]
NPV = 960,000 + ... + 960,000 - 1,081,320
\[(1+0.08)^1 \quad (1+0.08)^5\]

= 3,833,001 - 1,081,320

= 2,751,681 Baht
4. Project System Design and Implementation

4.1 Context Diagram

The context Diagram of the Proposed System shows the flows of data and information between the Airline Control Baggage and external entities with it interacts as show in Figure 4.1.1.
4.2 Data Flow Diagram

The Graphic representation and analysis of data movement processing transformation functions and the data store of the proposed system as shown in Figure 4.2.
Figure 4.2.1: Data Flow Diagram
Figure 4.2.2: Check-in Level 0
Figure 4.2.3: Transit Check-in Level 0
Figure 4.2.4: Boarding Levels
Figure 4.2.5: Baggage Loading Level 0
LEVEL 0
PASSENGER BAGGAGE - RECONCILIATION

Figure 4.2.6: Passenger Baggage Reconciliation Level 0
Figure 4.2.7: Baggage Offloading Level 0
4.3 Data Dictionary

A set of definitions of Data Flows, Data Stores, Data file, Database and process of the Proposed System. The Data Dictionary is used the symbols as follows:

= is composed of

+ and

() optional (may be present or absent)

{} iteration

** comment

[] select one of several alternation choices

@ identifier for a store

; separates alternative choices in the [] construct
Data Dictionary

Baggage = * Passenger’s baggage *

Baggage Tag = * The detail of baggage from passenger to airline control system *
(Passenger’s name + flight_no.+ date+time+destination+how many baggage)

Ticket = * Passenger’s ticket *

Boarding = * Passenger check-in and receive boarding pass *

Pax = * Passenger’s bag and luggage *

Baggage Loading = * Passenger’s baggage go to another *

Discrepancy baggage with baggage tag = * Passenger’s baggage not match baggage tag *

Identified baggage with baggage tag = * Passenger’s baggage match baggage tag *

File correct baggage tag = * Passenger’s baggage are match to edit file *
File process baggage = *Passenger's baggage to execute the baggage and list to file*

Correct baggage tag = *Passenger's baggage are match to baggage tag*

Correct destination = *Passenger's baggage are match to baggage tag destination*

Baggage with baggage tag transit = *Passenger's baggage with baggage tag are transit from another destination*

Correct loading baggage = *Passenger's baggage are match baggage tag to loading*

Document passenger's baggage = *Detail passenger's baggage*

Found baggage = *Passenger's baggage to find by ground*

Lose baggage = *Passenger's baggage do not found*
Online_check_baggage = * Passenger's baggage to show list by terminal *

Receive process baggage = * Passenger's baggage are file correct *

Baggage information = * Information to detail baggage lose or found *

Document passenger's baggage = Detail passenger's baggage *

Accept process = * Already to process passenger's baggage *

Offload baggage = * Passenger's baggage is wrong destination *

Identified pax with baggage tag = * Passenger's pax match baggage tag *

Transit pax with baggage tag = * Passenger's pax and baggage tag to come from transit another flight *

Accepted transit pax with baggage tag = * Passenger's transit pax wit baggage tag are edit to boarding *
4.4 Process Specification

The process specification has the purpose of a process specification is quite straightforward and it defines what must be done in order to transform input into outputs. It is a detailed description of the user's business policy that each bubble carries out as follows in the Figure 4.4.1-4.4.20.
# 4.4 Process Specification

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<td><strong>process no.</strong> : 1.1</td>
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<tr>
<td><strong>Process name</strong> : PROCESS BAGGAGE</td>
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<tr>
<td><strong>Description</strong> : create file passenger's baggage</td>
</tr>
<tr>
<td><strong>Input</strong> :</td>
</tr>
<tr>
<td>1. Flight number</td>
</tr>
<tr>
<td>2. Date, time, destination</td>
</tr>
<tr>
<td>3. Passenger's name</td>
</tr>
<tr>
<td>4. How many baggage and pax</td>
</tr>
<tr>
<td><strong>Output</strong> :</td>
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<tr>
<td>1. File passenger's baggage</td>
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<tr>
<td><strong>Process</strong> :</td>
</tr>
<tr>
<td>1. Edit passenger's baggage</td>
</tr>
<tr>
<td><strong>Attachment</strong> :</td>
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Figure 4.4.1 : Process Specification 1.1
**Process Specification**

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</tr>
<tr>
<td>Description</td>
<td>process file passenger's baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th>1. Flight number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Date, time, destination</td>
</tr>
<tr>
<td></td>
<td>3. Passenger's name</td>
</tr>
<tr>
<td></td>
<td>4. How many baggage and pax</td>
</tr>
</tbody>
</table>

| Output | 1. Baggage tag |

| Process | 1. Edit boarding pass |

| Attachment | Process 1.3 |

| File (s) |

---

**Figure 4.4.2** : Process Specification 1.2
### Process Specification

<table>
<thead>
<tr>
<th>process no.</th>
<th>2.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>AUDITOR PASSENGER</td>
</tr>
<tr>
<td>Description</td>
<td>Auditor Passenger's baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th>1. Passenger's baggage transit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Baggage tag transit</td>
</tr>
<tr>
<td></td>
<td>3. Passenger's name, time, date</td>
</tr>
<tr>
<td></td>
<td>flight no., destination to transit</td>
</tr>
<tr>
<td></td>
<td>4. Boarding pass</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>1. List passenger's flight transit to match ticket</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Process</th>
<th>1. Detail passenger transit</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Attachment</th>
<th>Process 2.2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>File(s)</th>
<th></th>
</tr>
</thead>
</table>

Figure 4.4.3 : Process Specification 2.1
### Process Specification

<table>
<thead>
<tr>
<th>Process no.</th>
<th>2.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>PROCESS BOARDING PASS</td>
</tr>
<tr>
<td>Description</td>
<td>Check Passenger’s baggage</td>
</tr>
</tbody>
</table>

#### Input
1. Passenger’s baggage transit
2. Baggage tag transit
3. Passenger’s name, time, date, flight_no., destination to transit
4. Boarding pass

#### Output
1. List passenger’s baggage tag to transit

#### Process
1. Detail passenger’s baggage tag to transit

#### Attachment
Process 2.3

---

**Figure 4.4.4**: Process Specification 2.2
<table>
<thead>
<tr>
<th>Process Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>process no.           : 2.3</td>
</tr>
<tr>
<td>Process name          : VERIFY DESTINATION</td>
</tr>
<tr>
<td>Description           : Check Passenger’s baggage destination</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Passenger’s baggage transit</td>
</tr>
<tr>
<td>2. Baggage tag transit</td>
</tr>
<tr>
<td>3. Passenger’s name, time, date, flight no., destination to transit</td>
</tr>
<tr>
<td>4. Boarding pass</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List passenger’s baggage tag to transit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Detail passenger’s baggage tag to transit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attachment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File (s)</th>
</tr>
</thead>
</table>

Figure 4.4.5 : Process Specification 2.3
<table>
<thead>
<tr>
<th>process no.</th>
<th>1.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>VERIFY BAGGAGE MANAGEMENT</td>
</tr>
<tr>
<td>Description</td>
<td>verify file passenger's baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th>1. Boarding pass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Baggage tag</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>1. Baggage tag</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Correct baggage tag</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
<th>1. Verify boarding pass</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Attachment</th>
<th>Process 1.5</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>File (s)</th>
<th></th>
</tr>
</thead>
</table>

**Figure 4.4.6** : Process Specification 1.3
### Process Specification

<table>
<thead>
<tr>
<th>process no.</th>
<th>3.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>CHECK PASSENGER</td>
</tr>
<tr>
<td>Description</td>
<td>Check Passenger's baggage destination</td>
</tr>
</tbody>
</table>

#### Input
- 1. Passenger's baggage
- 2. Baggage tag
- 3. Passenger's name, time, date, flight no., destination to transit
- 4. Boarding pass

#### Output
- 1. Transmit passenger's baggage tag and list passenger's baggage

#### Process
- 1. Detail passenger's baggage tag to transmitted

#### Attachment
- Process 3.2

---

**Figure 4.4.7**: Process Specification 3.1
### Process Specification

<table>
<thead>
<tr>
<th>Process no.</th>
<th>3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>VERIFY TRANSMITTED BAGGAGE</td>
</tr>
<tr>
<td>Description</td>
<td>Transfer baggage on aircraft</td>
</tr>
</tbody>
</table>

| Input | 1. Passenger's baggage  
2. Baggage tag  
3. Passenger's name, time, date of flight, no., destination to transit  
4. Boarding pass |
|-------|------------------|
| Output| 1. Detail passenger's baggage tag with baggage on aircraft  
2. Baggage with baggage tag to transmitted aircraft |
| Process| None |
| Attachment| None |

| File(s) | None |

**Figure 4.4.8** : Process Specification 3.2
### Process Specification

<table>
<thead>
<tr>
<th>Process no.</th>
<th>1.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>LOADED BAGGAGE</td>
</tr>
<tr>
<td>Description</td>
<td>Loaded passenger's baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th>1. Flight number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Date, time, destination</td>
</tr>
<tr>
<td></td>
<td>3. Passenger's name</td>
</tr>
<tr>
<td></td>
<td>4. How many baggage and pax</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>1. Baggage with baggage tag</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Process</th>
<th>1. Transfer passenger's baggage</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Attachment</th>
<th>Process 1.5</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>File (s)</th>
<th>Figure 4.4.9 : Process Specification 1.4</th>
</tr>
</thead>
</table>

41
### Process Specification

<table>
<thead>
<tr>
<th>Process no.</th>
<th>4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>VERIFY LOADING BAGGAGE</td>
</tr>
<tr>
<td>Description</td>
<td>Verify baggage with baggage tag</td>
</tr>
</tbody>
</table>

| Input | 1. Passenger's baggage  
2. Baggage tag  
3. Passenger's name, time, date  
   flight_no., destination to transit  
4. Boarding pass |
| Output | 1. List passenger's baggage tag with baggage |
| Process | 1. Check correct passenger's loading baggage |
| Attachment | Process 3.2 |
| File(s) | |

Figure 4.4.10 : Process Specification 4.1
### Process Specification

<table>
<thead>
<tr>
<th>Process no.</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>PROCESS BAGGAGE RECONCILIATION</td>
</tr>
<tr>
<td>Description</td>
<td>Same passenger's baggage</td>
</tr>
</tbody>
</table>

#### Input
1. Flight number
2. Date, time, destination
3. Passenger's name
4. How many baggage and pax

#### Output
1. Identify baggage tag & baggage with baggage tag

#### Process
1. Transfer passenger's baggage

#### Attachment
Process 1.6

#### File (s)
Figure 4.4.11 : Process Specification 1.5
### Process Specification

<table>
<thead>
<tr>
<th>Process no.</th>
<th>5.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>PROCESS BAGGAGE MANAGEMENT</td>
</tr>
<tr>
<td>Description</td>
<td>Management passenger’s baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th>1. Passenger’s baggage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Baggage tag</td>
</tr>
<tr>
<td></td>
<td>3. Passenger’s name, time, date</td>
</tr>
<tr>
<td></td>
<td>flight_no., destination to transit</td>
</tr>
<tr>
<td></td>
<td>4. Boarding pass</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th>1. Identify baggage with baggage tag and baggage, Discrepancy baggage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>1. Management to separate baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attachment</th>
<th>Process 3.2, 5.2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>File(s)</th>
<th>Figure 4.4.12 : Process Specification 5.1</th>
</tr>
</thead>
</table>

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Process Specification

<table>
<thead>
<tr>
<th>process no.</th>
<th>5.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>INFORMATION BAGGAGE</td>
</tr>
<tr>
<td>Description</td>
<td>Passenger’s baggage information</td>
</tr>
</tbody>
</table>

| Input | 1. Passenger’s baggage |
|       | 2. Baggage tag |
|       | 3. Passenger’s name, time, date |
|       |     flight no., destination to transit |
|       | 4. Boarding pass |

| Output | 1. Identify lose or found passenger’s baggage |
|        | 2. Boarding pass |
|        | 3. Passenger’s name, time, date |
|        | 4. Flight no., destination to transit |

| Process | 1. Information passenger’s baggage |
|         | 2. Identification lose or found passenger’s baggage |
|         | 3. Passenger’s name, time, date |
|         | 4. Flight no., destination to transit |

| Attachment | Process 5.3,6 |

| File(s) | |

Figure 4.4.13 : Process Specification 5.2
<table>
<thead>
<tr>
<th>Process Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>process no.            : 5.3</td>
</tr>
<tr>
<td>Process name           : VERIFY PASSENGER LOSE BAGGAGE</td>
</tr>
<tr>
<td>Description            : Lose passenger’s baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Passenger’s baggage lose</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Document passenger’s baggage</td>
</tr>
<tr>
<td>2. Online check baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List passenger’s lose</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attachment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process 5.4, 5.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File (s)</th>
</tr>
</thead>
</table>

Figure 4.4.14 : Process Specification 5.3
<table>
<thead>
<tr>
<th>Process Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>process no.            : 5.4</td>
</tr>
<tr>
<td>Process name           : CHECK-IN PROCESS</td>
</tr>
<tr>
<td>Description            : Online check-in baggage lose</td>
</tr>
</tbody>
</table>

| Input                  : 1. Passenger's baggage lose |
| Output                 : 1. Document passenger's baggage |
| Process                : 1. List passenger's lose |
| Attachment             : Process 5.3 |
| File (s)               : |

Figure 4.4.15 : Process Specification 5.4
<table>
<thead>
<tr>
<th>Process Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>process no.            : 5.5</td>
</tr>
<tr>
<td>Process name           : SECURITY BAGGAGE</td>
</tr>
<tr>
<td>Description            : Passenger's security baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Document passenger's baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Document passenger's baggage with baggage tag to found</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List passenger's found</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attachment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process 5.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File (s)</th>
</tr>
</thead>
</table>

Figure 4.4.16 : Process Specification 5.5
<table>
<thead>
<tr>
<th>Process Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>process no. : 5.6</td>
</tr>
<tr>
<td>Process name : SERVICE BAGGAGE PASSENGER</td>
</tr>
<tr>
<td>Description : Passenger's baggage service</td>
</tr>
</tbody>
</table>

| Input : 1.Document passenger's baggage with baggage tag to found |
| Output : 1.Found passenger's baggage with baggage tag |
| Process : 1.Transfer passenger's baggage with baggage tag to information baggage |
| Attachment : Process 5.2 |

Figure 4.4.17 : Process Specification 5.6
\begin{tabular}{|l|}
\hline
**Process Specification**
\hline
process no. : 1.6 \\
Process name : ON LOAD BAGGAGE \\
Description : On load baggage to aircraft \\
\hline
Input : 1. Passenger’s baggage \\
        2. Baggage tag \\
        3. Passenger’s name \\
\hline
Output : 1. List how many passenger’s baggage \\
         to match baggage tag \\
Process : 1. Transfer passenger’s baggage \\
         to aircraft \\
Attachment : None \\
\hline
File (s) : \\
\hline
\end{tabular}

**Figure 4.4.18** : Process Specification 1.6
<table>
<thead>
<tr>
<th>Process Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>process no.            : 6.1</td>
</tr>
<tr>
<td>Process name           : VERIFY SAFETY BAGGAGE</td>
</tr>
<tr>
<td>Description            : Passenger's baggage safety</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Passenger's baggage</td>
</tr>
<tr>
<td>2. Baggage tag</td>
</tr>
<tr>
<td>3. Passenger's name, time, date, flight no., destination to transit</td>
</tr>
<tr>
<td>4. Boarding pass</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List lose or found passenger's baggage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transmitted passenger's baggage found to process passenger</td>
</tr>
</tbody>
</table>

| Attachment             : Process 6.2 |

<table>
<thead>
<tr>
<th>File(s)</th>
</tr>
</thead>
</table>

Figure 4.4.19 : Process Specification 6.1
### Process Specification

<table>
<thead>
<tr>
<th>process no.</th>
<th>6.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process name</td>
<td>PROCESS PASSENGER</td>
</tr>
<tr>
<td>Description</td>
<td>Passenger's baggage found</td>
</tr>
</tbody>
</table>

| Input | 1. Passenger's baggage  
2. Baggage tag  
3. Passenger's name, time, date, flight no., destination to transit  
4. Boarding pass |
|--------|

| Output | 1. Accept process from verify safety baggage |
|--------|

| Process | 1. Transmitted passenger's baggage found to passenger |
|--------|

| Attachment | None |
|------------|

<table>
<thead>
<tr>
<th>File (s)</th>
</tr>
</thead>
</table>

**Figure 4.4.20** : Process Specification 6.2
4.5 Structure Chart

The Structure Chart is a graphic tool for depicting the partitioning of a system into modules, the hierarchy and organization of those modules, and the communication interfaces between the module. The Airline Control Baggage show as follows Figure 4.5.
Figure 4.5.1 : Structure Chart
4.6 Module Specification

The Module specification is a collection of program statements with four basic attributes, input and output, function, mechanic and internal data. The Airline control baggage show in figure 4.6.
Module : ADD RECORD NEW PASSENGER'S BAGGAGE

Purpose : To add the record of detail of passenger's baggage to the master passenger's baggage file

Uses : New passenger's baggage

Return : Accept new passenger's baggage

Functional details :
1. to read the passenger's baggage file (baggage.dbf)
2. to increased the new passenger's baggage record
3. to write in the passenger's baggage file

FIGURE 4.6.1 : Module Specification
Module: DELETE RECORD PASSENGER'S BAGGAGE

Purpose: To delete record leave out of passenger's baggage to the master passenger's baggage file(baggage.dbf)

Uses: 1. New passenger's baggage

Return: Accept passenger's baggage delete

Functional details:
1. to read the passenger's baggage file(baggage.dbf)
2. delete the passenger's baggage record required
3. to write in the passenger's baggage file

FIGURE 4.6.2: Module Specification
Module : PASSENGER’S BAGGAGE REPORT

Purpose : To printe record leave out of passenger’s baggage to the master passenger’s baggage file(baggage.dbf) report

Uses : 1. New passenger’s baggage

Return : Accept passenger’s baggage printe

Functional details:
1. to read the passenger’s baggage file(baggage.dbf)
2. printe the passenger’s baggage record required
3. write in the passenger’s baggage file to report

FIGURE 4.6.3 : Module Specification
Module : SEARCH PASSENGER'S BAGGAGE FOUND

Purpose : To find record passenger's baggage lose
          to show message found passenger's baggage
          file(plose.dbf)

Uses : 1. New passenger's baggage found

Return : Accept passenger's baggage found

Functional details :
1. to read the passenger's baggage file(plose.dbf)
2. found the passenger's baggage record required

FIGURE 4.6.4 : Module Specification
Module: PASSENGER'S BAGGAGE LOSE REPORT

Purpose: To print record leave out of passenger's baggage lose to the master passenger’s baggage file(lose.dbf) report

Uses: 1. New passenger's baggage lose

Return: Accept passenger's baggage lose

Functional details:
1. to read the passenger's baggage file(lose.dbf)
2. printe the passenger's baggage record required
3. write in the passenger's baggage file to report

FIGURE 4.6.5: Module Specification
Module : SEARCH PASSENGER'S BAGGAGE

Purpose : To find record passenger’s baggage
to show message passenger’s baggage
file(baggage.dbf)

Uses : 1. New passenger’s baggage

Return : Accept passenger’s baggage

Functional details :
1. to read the passenger’s baggage file(baggage.dbf)
2. show the passenger’s baggage record required

FIGURE 4.6.6 : Module Specification
Module : EXIT FROM MENU

Purpose : To exit record leave out of passenger’s baggage to the dbase iii plus menu

Uses : 1. New passenger’s baggage

Return : Accept passenger’s baggage exit

Functional details :
1. to exit the passenger’s baggage file
2. go to the menu dbase iii plus

FIGURE 4.6.7 : Module Specification
Module : EXIT FROM PROGRAM

Purpose : To exit to quit the program dbase iii plus

Uses : 1. New passenger's baggage

Return : Accept passenger's baggage quit

Functional details :
1. to quit the passenger's baggage file
2. quit the program dbase iii plus

FIGURE 4.6.8 : Module Specification
4.7 File Design

1. Check-in
2. Transit check-in
3. Boarding
4. Baggage loading
5. Passenger baggage reconciliation
6. Baggage offloading
TABLE 2: Data Store: Check-in

Name of data store: CHECK-in.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Type</th>
<th>Width</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>CHARACTER</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>FLIGHT</td>
<td>CHARACTER</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>CHARACTER</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>NUMERIC</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>DESTINATION</td>
<td>CHARACTER</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BAGGAGE</td>
<td>NUMERIC</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
TABLE 3: Data Store: Transit check-in

Name of data store: Transit check-in

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Type</th>
<th>Width</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>CHARACTER</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>FLIGHT</td>
<td>CHARACTER</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>CHARACTER</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>NUMERIC</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>DESTINATION</td>
<td>CHARACTER</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BAGGAGE</td>
<td>NUMERIC</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
TABLE 4: Data Store: Boarding

Name of data store: Boarding

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Type</th>
<th>Width</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>CHARACTER</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>FLIGHT</td>
<td>CHARACTER</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>CHARACTER</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>NUMERIC</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>DESTINATION</td>
<td>CHARACTER</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BAGGAGE</td>
<td>NUMERIC</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
### TABLE 5: Data Store: Baggage offloading

Name of data store: **Baggage offloading**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Type</th>
<th>Width</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>CHARACTER</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>FLIGHT</td>
<td>CHARACTER</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>CHARACTER</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>NUMERIC</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>DESTINATION</td>
<td>CHARACTER</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BAGGAGE</td>
<td>NUMERIC</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
TABLE 6: Data Store: Passenger’s baggage reconciliation

Name of data store: Passenger’s baggage reconciliation

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Type</th>
<th>Width</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>CHARACTER</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>FLIGHT</td>
<td>CHARACTER</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>CHARACTER</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>NUMERIC</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>DESTINATION</td>
<td>CHARACTER</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BAGGAGE</td>
<td>NUMERIC</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
TABLE 7: Data Store: Baggage loading

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Type</th>
<th>Width</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>CHARACTER</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>FLIGHT</td>
<td>CHARACTER</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>CHARACTER</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>NUMERIC</td>
<td>6 2</td>
<td></td>
</tr>
<tr>
<td>DESTINATION</td>
<td>CHARACTER</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BAGGAGE</td>
<td>NUMERIC</td>
<td>4 0</td>
<td></td>
</tr>
</tbody>
</table>
4.8 Report Form

New system requirement report

1. Baggage tag (Bar-code tag)

2. List passenger's baggage

3. Passenger's baggage found

4. Passenger's baggage lose
4.9 Project Implementation Schedule

Table 8: Project Implement Schedule

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>JAN.</th>
<th>FEB.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>PROCESS 1, 2, 3, 4, 5, 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>X X X</td>
<td>X</td>
</tr>
<tr>
<td>Testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>X X</td>
<td></td>
</tr>
</tbody>
</table>
4.10 Testing

4.10.1 Testing data

The testing data ensures that Database system will be consistability and stability when the user inputs data that parameter working to corrected according with the logistic results.

4.10.2 Test program

The testing program ensures that all modules will be worked and related among them self.

System structure configuration for testing will be completed to integration using "Airline control baggage".

4.10.3 Testing objectives

The testing objectives ensure that program could be accepted by users that means the operation function is right their requirements.
4.11 Training

The new system for training is divided to be 3 time in the project training plan as follows:

1. Computer literacy
   To provide computer knowledge and familiarity with the installed system.

   **Participants**: general staff
   **Topic**: Introduction to computer
   **Duration**: 1 day

2. Operation procedure
   To train the operation staff on the computerized job procedure of the order software (Dbase iii plus).

   **Participants**: the operation staff
   **Topic**: operation procedure of order software
   **Duration**: 5 days
3. Order software overviews

To provide overview of the design and operation of order software.

Participants: Management

Topic: overview of new system

Duration: 1 day
5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The objective of the order processing system is to want developing manual system to be the computerized system for the operation effectively.

The airline control baggage are process of system which is the passenger to check in (transit check-in) and sent passenger’s baggage tag with baggage to baggage loading (boarding), baggage loading sent passenger’s baggage with baggage tag to passenger baggage reconciliation if the same passenger’s baggage with baggage tag go to aircraft but not same sent to offloading to passenger.

The result of system that help to make the solution of problem in the existing system to be the computerized system.
5.2 Recommendations

The airline control baggage has been implemented under operating system because is open and communicate with another network easily.

The users has been trained to use the software package and may later study the user manual by themselves. The user may be classified three levels are a supervisor, a database administrator, and users.

The advantages the system are the follow:

- Make a baggage tag by barcode to modernization.
- Prevent passenger’s baggage lose to destination.
- Integrate the information to be centralization.
- Increase reliability to aircraft caused by unauthorized baggage.
- Provide better service to passenger.
- Increase corporate image by modernization.
REFERENCES:

1. FITZGERALD, JERRY AND FITZGERALD, ARDRA F.


APPENDIX A : INPUT FORMS

The input form of the airline control baggage are shows in figure A.1.
THAI INTERNATIONAL COMPANY BANGKOK

PASSENGER'S BAGGAGE MENU

1. ADD RECORD NEW PASSENGER'S BAGGAGE

2. DELETE RECORD PASSENGER'S BAGGAGE

3. PASSENGER'S BAGGAGE REPORT

4. SEARCH PASSENGER'S BAGGAGE FOUND

5. PASSENGER'S BAGGAGE LOSE REPORT

6. SEARCH FOR PASSENGER'S BAGGAGE

7. EXIT FROM MENU

8. EXIT FROM PROGRAM

Choose one of these:

Figure A.1: Menu Passenger's Baggage
APPENDIX B : REPORT FORM

The report forms of the airline control baggage are shown in figure B.
ADD RECORD NEW PASSENGER’S BAGGAGE

| NAME : | FLIGHT NO. : |
| DATE <MM/DD/YY> : | TIME : |
| DESTINATION : |
| HOW BAGGAGE : |

Figure B.1: Add Record New Passenger’s Baggage
ADD RECORD NEW PASSENGER'S BAGGAGE

ADD DATA PASSENGER'S BAGGAGE

NAME : FLIGHT NO. :

DATE <MM/DD/YY> : TIME :

DESTINATION :

HOW BAGGAGE :

Figure B.1: Add Record New Passenger's Baggage
DELETE RECORD PASSENGER’S BAGGAGE

ENTER EMPLOYEE’S NAME TO BE DELETE

NO SUCH NAME... PLEASE REENTER

ARE YOU SURE? <Y/N>

Figure B.2: Delete Record Passenger’s Baggage
SEARCH PASSENGER'S BAGGAGE FOUND

ENTER NAME OR PART OF NAME

ARE OTHER NAME ? <N/Y>

Figure B.3 : Search Passenger's Baggage Found
SEARCH FOR PASSENGER'S BAGGAGE

ENTER NAME OR PART OF NAME....... 

ARE OTHER NAME? <N/Y>

Figure B.4 : Search For Passenger's Baggage
Figure B.5: Passenger’s Baggage Lose Report
This project airline control baggage are used program dbase iii plus to design menu, add, delete, search, are shows in program dbase iii plus.
* MENU*

* MAIN MENU FOR EMPLOYEE RECORD

SET BELL OFF
SET STATUS OFF
SET SCOREBOARD OFF
SET TALK OFF
USE C:EMPLOYEE
CLEAR
DO WHILE .T.
SET COLOR TO R/N

THAI INTERNATIONAL COMPANY BANGKOK

PASSENGER'S BAGGAGE MENU

ENDTEXT
SET COLOR TO W/N

1. ADD RECORD NEW PASSENGER'S BAGGAGE

2. DELETE RECORD PASSENGER'S BAGGAGE

3. PASSENGER'S BAGGAGE REPORT

4. SEARCH PASSENGER'S BAGGAGE FOUND

5. PASSENGER'S BAGGAGE LOSE REPORT

6. SEARCH FOR PASSENGER'S BAGGAGE

7. EXIT FROM MENU

8. EXIT FROM PROGRAM

ENDTEXT
@ 0,16 TO 24,61 DOUBLE
@ 5,17 TO 5,60
ANSWER=SPACE(1)
@ 23,25 SAY 'Choose one of these:' get ANSWER
READ
CLEAR
DO CASE
CASE ANSWER='1'

88
Edit c:main.prg

DO C:ADONEW
CASE ANSWER='2'
   DO C:DELETE
   CASE ANSWER='3'
   DO C:REPO
   CASE ANSWER='4'
   DO C:LOSE
   CASE ANSWER='5'
   DO C:REPO
   CASE ANSWER='6'
   DO C:PERSON
   CASE ANSWER='7'
      EXIT
   CASE ANSWER='8'
      QUIT
ENDCASE
ENDDO

SET BELL ON
SET STATUS ON
SET SCORERBOARD ON
SET TALK ON
RETURN

assist
Edit: c:addnew.prg

ADDNEW

SET TALK OFF
USE C:BAGGAGE
CLEAR
STORE .T. TO START
DD WHILE START
APPEND BLANK
@ 2,10 SAY ADD DATA PASSENGER'S BAGGAGE
@ 6,10 SAY 'NAME : ' GET NAME
@ 6,40 SAY 'FLIGHT NO. : ' GET FLIGHT
@ 8,10 SAY 'DATE <YM/DD/YY> : ' GET DATE
@ 6,40 SAY 'TIME : ' GET TIME
@ 10,10 SAY 'DESTINATION : ' GET DESTINATION
@ 12,10 SAY 'HOW BAGGAGE : ' GET BAGGAGE
@ 1,8 TO 15,72 DO READ
ACCEPT 'ANOTHER RECORD? [Y/N] : ' TO Ans
IF UPPERCASE(Ans) = Y
  CLEAR
ELSE
  STORE .F. TO START

Edit: c:addnew.prg
CLEAR
ENDIF
ENDDD
SET TALK ON
RETURN
EDIT: C:DELETE.PRG

* * * * *
% DELETE *
* * * * *
SET TALK OFF
USE C:BAGGAGE
CLEAR
STORE .T. TO START
DO WHILE START
   DELNAME=SPACE(15)
   @ B,13 TO 16,70 DOUBLE
   @ 10,15 SAY "ENTER PASSENGER'S BAGGAGE DELETED" GET DELNAME
   READ
   LOCATE FOR NAME=DELNAME
   @ 18,22
   IF .NOT. FOUND()
      @ 18,22 SAY 'NO SUCH NAME.. PLEASE REENTER'
      LOOP
   ENDIF
   DELETE FOR NAME=DELNAME
   ANS=SPACE(1)
   @ 14,25 SAY 'ARE YOU SURE? <Y/N>' GET ANS
   READ
   IF UPPER(ANS)='Y'
      Edit: C:DELETE.PRG
      PACK
      ELSE
      RECALL ALL
      ENDIF
      @ 14,17
      REPLY=SPACE(1)
      @ 14,25 SAY 'ANYMORE? <Y/N>' GET REPLY
      READ
      IF UPPER(REPLY)='Y'
         CLEAR
         LOOP
      ELSE
         CLEAR
         EXIT
      ENDIF
      ENDDO
      SET TALK ON
      RETURN

91
Edit: c:repo.prg

* * * * *
# REPO #
* * * * *
# To display payroll report
USE C:PASSAGE
CLEAR
ANS=SPACE(1)
DO WHILE .NOT. ANS$='YYNn'
   ANS=SPACE(1)
   @ 10,20 SAY 'Do you want to print it out? <Y/N> ' GET ANS
   READ
ENDDO
IF UPPE(ANS)='Y'
   SET PRINT ON
ENDIF
REPORT FROM C:PAYLIST
SET TALK ON
SET PRINT OFF
CLEAR
RETURN
Edit: close.prg

% TO SEARCH FOR SPECIFIC PERSON
SET TALK OFF
USE C:CLOSE
CLEAR
STORE .T. TO CONT
DO WHILE CONT
NA=SPACE(20)
CLEAR
@ 6,20 SAY "ENTER NAME OR PART OF NAME" GET NA
READ
DISPLAY ALL OFF FOR TRIM(NA) GNAME
WAIT
CLEAR
ANS=SPACE(1)
DO WHILE .NOT. (ANS=EQAQ)
ANS=SPACE(1)
@ 10,20 SAY "ANY OTHER NAME? <NA>" GET ANS
READ
ENDDO
IF UPPER(ANS)="Y"
ELSE
ENDIF
ELSE
EXIT
ENDDO
CLEAR
SET TALK ON
EDIT: colrep.pro

* REPORT *

$TO DISPLAY PAYROLL REPORT

USE G123
CLEAR
ANB=SPACE(1)
DO WHILE .NOT. ANB='Y/N'
   ANB=SPACE(1)
   @ 10:20 SAY "DO YOU WANT TO PRINT IT OUT ? <Y/N> " GET ANB
ENDO
IF UPPR(ANB)='Y'
   SET PRINT ON
REPORT FROM G12PAYLIST
SET TABS ON
SET PAGE OFF
CLEAR
RETURN

ASSUMPTION UNIVERSITY OF THAILAND

BROTHERS OF GABRIEL
LABOR OMNIA VINCIT

* มาประกบขาดดิบอธิสัมพันธ์ *

SINCE 1969
Edit: c:person.prg

% Definition of Person
% To search for specific person
SET TALK OFF
USE C:BAGGAGE
CLEAR
STORE .T. TO CONT
DO WHILE CONT
NA=SPACE(20)
CLEAR
@ 6,20 SAY "ENTER NAME OR PART OF NAME" SET NA
READ
DISPLAY ALL OFF FOR TRIM(NA) NAME
READ
CLEAR
ANS=SPACE(1)
DO WHILE NOT (ANS=NA)
ANS=SPACE(1)
@ 10,15 SAY "OTHER NAME OR ADD FOR ANS"
READ
END
IF NOT ANS=NA

EDIT: LICENSE.prg
LOOP
ELSE
EXIT
ENDIF
ENDDO
CLEAR
SET TALK ON
APPENDIX D: List Report Data

This Airline Control baggage to shows list report database are baggage.dbf, lose.dbf, plose.dbf to shows follows:
**LIST TO NEW PASSENGER’S BAGGAGE (BAGGAGE.DBF)**

<table>
<thead>
<tr>
<th>RECORD#</th>
<th>NAME</th>
<th>FLIGHT</th>
<th>DATE</th>
<th>TIME</th>
<th>DESTINATION</th>
<th>BAGGAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MISS.DAMPONGSRI</td>
<td>TG.256</td>
<td>12/01/84</td>
<td>15.00</td>
<td>SONGKHLA</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>MISS.JAN DODO</td>
<td>TG.214</td>
<td>04/01/84</td>
<td>09.00</td>
<td>HADYAI</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>MR.ANUFONG P.</td>
<td>TG.215</td>
<td>06/01/84</td>
<td>09.15</td>
<td>HADYAI</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>MR.PORNSAK V.</td>
<td>TG.215</td>
<td>24/01/84</td>
<td>07.00</td>
<td>TOKYO</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>MR.KUN B.</td>
<td>TG.223</td>
<td>13/01/84</td>
<td>15.00</td>
<td>GUAM</td>
<td>1</td>
</tr>
<tr>
<td>RECORD#</td>
<td>NAME</td>
<td>FLIGHT</td>
<td>DATE</td>
<td>TIME</td>
<td>DESTINATION</td>
<td>LOSEBAGGAGE</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>--------</td>
<td>----------</td>
<td>-------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1</td>
<td>MR. Somsak</td>
<td>TG.256</td>
<td>01/01/84</td>
<td>12.00</td>
<td>HADYAI</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Mr. Lee</td>
<td>TG.217</td>
<td>01/01/84</td>
<td>12.00</td>
<td>KOREA</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Jay J</td>
<td>TG.325</td>
<td>12/01/84</td>
<td>09.45</td>
<td>NEW YORK</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Mr. Feng</td>
<td>TG.227</td>
<td>26/01/84</td>
<td>14.20</td>
<td>HADYAI</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Mr. Jun M.</td>
<td>TG.243</td>
<td>20/01/84</td>
<td>09.00</td>
<td>HADYAI</td>
<td>1</td>
</tr>
<tr>
<td>RECORD#</td>
<td>NAME</td>
<td>FLIGHT DATE</td>
<td>TIME</td>
<td>DESTINATION</td>
<td>BAGGAGE DATEFOUND</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>-------------</td>
<td>--------</td>
<td>-------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>MR. SOMSAK</td>
<td>TG.256</td>
<td>01/01/84</td>
<td>12.00</td>
<td>HADYAI</td>
<td>1 04/01/84</td>
</tr>
<tr>
<td>2</td>
<td>MR. LEE</td>
<td>TG.217</td>
<td>26/01/84</td>
<td>12.00</td>
<td>KOREA</td>
<td>2 31/01/84</td>
</tr>
<tr>
<td>3</td>
<td>MR. JAY J.</td>
<td>TG.323</td>
<td>12/01/84</td>
<td>08.45</td>
<td>NEW YORK</td>
<td>2 20/01/84</td>
</tr>
<tr>
<td>4</td>
<td>MR. FONGFEN</td>
<td>TG.237</td>
<td>26/01/84</td>
<td>14.20</td>
<td>HADYAI</td>
<td>2 27/01/84</td>
</tr>
<tr>
<td>5</td>
<td>MR. JUN H.</td>
<td>TG.243</td>
<td>20/01/84</td>
<td>08.00</td>
<td>HADYAI</td>
<td>1 21/01/84</td>
</tr>
</tbody>
</table>
This Airline Control Baggage to shows bar-code to uses about passenger's baggage tag to check run number sequence on passenger's baggage and list detail passenger's baggage. Flight number, Time, Date, Destination on baggage tag.
BAR-CODE

1. Use bar-code to edit record number of sequence detail passenger’s baggage at check-in and transit check-in.

2. Search bar-code to match list report passenger’s baggage (baggage.dbf) at passenger baggage reconciliation before to load on aircraft.

3. Bar-code is a passenger’s baggage tag to image corporate modernization.

4. Airline Control Baggage used to hand held scanner to read bar-code (Baggage tag).

Example: Baggage Tag (Bar-code)

```
TG.256 Date.01/01/94
Time.12.00 KADYAL
01(record no.)
```