

1. INTRODUCTION

1.1 ABSTRACT

The Milk Sales Management System is a junction or place between rural area people and Dairy Management System.

This Project is used at small village dairy. The Rural area people can not fill or send their cattle milk directly to dairy. The Dairy management have many franchisees at all small villages so people can give their milk at franchisees and dairy management collect the milk from franchisees daily. Our software milk management system used at that franchisees for maintain member account and manage inventory and generate Salary and Reports.

The mission of the Milk Production House Project is to create to communication between rural area people and dairy management. Our main goal to develop this application to encourage a dairy industry. MILK SALES MANAGEMENT SYSTEM is a software application to maintain day to day transactions in a Milk Distributor Office. This software help to register all the suppliers, Buyer details, purchase, Sales details etc., The project entitled MILK SALES MANAGEMENT SYSTEM is a pilot project for new Milk Distributor to be start soon in the city. The management planned this Milk Distribution center to operate on the next month. They have a big plan to collect the Milks from many different sources and distribute the same for the Milk buyers. To manage all these they require a full-fledged software which will take care all these.

Main modules of the project

This project has the following modules, to manage all the requirements of the Milk Distributor Office.

- Customer details
- Customer token details

- Supplier details
- Milk purchase
- Daily sales
- Reports
- Main Function of Project:
- The Operator
- Member Account

Project scope

- Rural Area people to give survive option
- Project provide regular basis salary
- Daily Inventory manage option
- Print Detail and reports

Requirement

➤ HARDWARE REQUIREMENTS:

PC with 80GB hard disk and 1GB RAM

➤ SOFTWARE REQUIREMENTS:

Windows 98/XP/Vista/7

Microsoft Visual Studio 2008

- FRONT END: Visual Basic 6.0
- BACK END: MS-Access

Functional component

- To facilitate easily maintenance of records of various Account Members.
- Maintain Daily inventory reports and record of Members.
- Quick access of all records.
- Generate Regular basis Salary
- Reduce manual work
- Prevent and reduce human error

1.2 ORGANIZATION PROFILE

IT Navigatrion Ltd is a leading IT Training company, which is placed in Madurai to provide best training for **Networking, Server Administration, VMWare Administration and Internet Security**. IT Navigation Ltd gives importance to take care of students career and provide high quality training to all class of people. Our organization not only provide the platform to build up the bright professional career in networking, Server Administration, VMWare Administration and Internet Security but also provides the placement support in reputed companies.

We are proud to be the pioneers in "**Hardware and Networking**". Just when everyone was bent upon Software, we foresaw the tremendous potential in Hardware and Networking, and successfully emerged as one of the best IT Company for Hardware and Networking Solutions and the best institute for Hardware and Networking Training. Today the two sides of its business are equally balanced. The expertise of its training is coupled with a strong commitment to provide the best Hardware and Networking solutions. This has put **IT Navigation Ltd in the unique position** of deriving synergies between Network Solutions and IT Training.

IT Navigation Ltd is an educational and professional development organization working on various divisions including Software Development, Training, Web development, Corporate Training, Business process and Consultancy. They strive to excel a quality out-put in training individuals, Organization coders, development and business process with Professionals who are best in the business. They provide industrial exposure by making fresher

work on real time projects. They have world class quality trainers who have the industry exposure of around 8 years. Hence, it provides the best training in .Net Technologies, J2EE Programming, PHP Programming and Web Designing.

IT Navigation Ltd is an innovative company, based in India that provides a series of Web-based and software applications that have helped their customer create successful business ventures through online initiatives. Web provide all the services that a company needs to get online from web designing to web hosting; we design, promote, program and manage leading-edge Web sites and e-business applications. Above all they provide optimized website promotion in major search engines.

Services includes: Professional Web Design, Internet Marketing, Link Building, Ecommerce Solution, Web Application Development, Multimedia Presentations, Customized Software Development, and Business Process Outsourcing- IT/IT

On-line Interactive Learning

We believe in On-line Interactive learning. That is to say, the problems, or doubts which students often face, while sitting before a system, is cleared by our staff as soon as they surface. This way our students learn more.

Get experienced while learning

After extensive learning, we subject our students to some Real Time situations (which is often created by our staff) and student left alone, to handle the situation, to overcome the problem, with his own solutions in this way, he is

getting experienced, even before the completion of course and is very much ready to seek the job with tremendous confidence.

Teaching Strategy

There is a saying, which goes like "It takes lot of beatings to make a pot". here we literally follow this method of beatings; Beatings it is now in the beginning to beat the world later. Our training is vigorous. At IT Core Elite we run strict schedules and conduct several crucial tests so as to prepare you for the challenges you are going to face in the IT world as soon as you step out of IT Core Elite.

1.3 PROJECT OVERVIEW

The Milk sales management system project and it is meant for the those who are maintaining the milk center in the city. The management is meant for process the planning to collect milk from the various sources, distributing the same to the milk buyers. For managing all these new software is required.

This software helps to maintain the daily transaction records in the office of the milk distributor. These offices need to maintain thousand and hundreds of records. It also makes the searching easier and people can get the details as per their requirement. This software is designed in such a manner that all the milk distributors can use it in the other. Every possible effort is provided to make this project successful and on the real success of this software we can target the other distributors of milk that are available in the city. Moreover, it is also used to record the details of sales, purchases returns and other related daily activities of the milk centers.

This project is developed with the help of front end as **Visual Basic 6.0** and Back end as **Ms Access**.

MODULES

This project consists of the following modules

- Customer details
- Customer token details
- Supplier details
- Milk purchase

- Daily sales
- Reports

MODULE DESCRIPTION:

Customer details

New user and existing user are used in this cement dealer management process. User can enter their login id next they can manage administrative process to enter their process to order.

Customer token details

The registered customer has their own tokens for purchasing the milk from milk center. The milk center supply tokens to the customer for both morning and evening purchase. Using the token only the purchase is based on.

Supplier details

This module is used to enter the supplier details like name of the supplier, address, contact person, and contact number.

Milk purchase

It stores the details about the purchase date, purchase id, quantity of milk and the person from whom we purchased i.e., supplier details and so on. The quantity of milk purchased and the remaining quantity of milk available at the milk center are kept in details.

Daily Sales

This module maintains every sale in unique way. Day by day sales as well as product wise sales details will be entered with customer details in database. The details consist of token available, customer purchase; milk quantity and total cost are maintained by this module.

Reports

This module helps the higher authority to know the result of the business by generating the reports. The report can also be generated for a stipulated time period from the total description of transaction details.

2. SYSTEM ANALYSIS

2.1 SYSTEM ANALYSIS AND FUNDAMENTALS

What is system?

The term system is derived from the greek work systema, which means an organized relationship among functioning units or component. A system is an orderly grouping of interdependent components' linked together according to a plan to achieve a specific objective. The word component may refer to physical parts, managerial steps or a subsystem in a multilevel structure. The components may be simple or complex, basic or advanced.

Analysis is detailed study of the various operations performed by a system and their relationships within and outside of the system. One aspect of analysis is defining the boundaries off the system and determining whether or not a candidate system should consider other related systems. During analysis, data are collected on the available files, decision points and transactions should handled by the system.

Initial Investigation

This is a user's request to change, improve to enhance an existing system. The initial investigation is likely to be a stream of such requests standard procedures must be established to deal with them. The objectives of the initial investigation is to determine whether the request is valid and feasible before a recommendation is reached to do nothing, improve or modify the existing system or build a new one.

Function requirement

As data are collected, they must be organized and evaluated and conclusions drawn for preparing functional requirement. Many tools are used for data organization and analysis. The function analysis identifies the elements that are related to the inputs and outputs of given system. The functional requirement can be very effective in setting that post of few constraints on the development or modification of the system under study.

Information gathering

Information gathering is an art and a science. The approach and manner in which information is gathered require persons with sensitivity, common sense and knowledge of what and when to gather and what channels to use in securing information. Additionally, the methodology and tools for information gathering require training and experience that the analyst is expected to have. This means that information gathering is neither easy nor routine. Much preparation, experience and training are required.

Feasibility study

An initial investigation culminates in a proposal that determine whether an alternative system is feasible. To do a feasibility study, the analyst needs to consider the economic, technical and operational feasibility.

Economic feasibility

Economic analysis is the most frequently used method for evaluating the effectiveness of a system. More commonly known as cost/benefit analysis, the procedure is to determine and savings that are expected from a proposed system and compare them with costs.

Technical feasibility

Technical feasibility centers around the existing computer system (hardware, software etc.) and to what extent it can support the proposed addition. If the current computer is operating at 80 percent capacity an arbitrary ceiling then running another application could overload the system or require additional hardware. This involves financial considerations to accommodate technical enhancements. If the budget is a serious constraint, then the project is judged not feasible.

Operational feasibility

People or inherently resistant to change and computer have been known to facilitate change an estimate should be made of how strong a reaction the user staff is likely to have toward the development of a computerized system. It is common knowledge that computer installations have something to do with turnover, transfers, retraining and changes in employee job status. Therefore, it is understandable that the introduction of a candidate system requires special effort to educate, sell and train the staff on new ways of conducting business.

2.2 EXISTING SYSTEM

In order to elicit the requirement of the system and to identify the elements, inputs, subsystem, and procedure, the existing system was to be examined and analyzed in detail.

In the existing system, it is not computerized. The Milk booth maintains all their previous works in manual way. Their own customer details, purchase, sales and customer token they are offering all details are maintained in books.

Drawbacks of the existing system

- Lack of data security
- Chance of occurring errors in the manual system is comparatively high
- Use of maintenance of paper files, registers and other written matters were very difficult
- Possibility of ambiguity
- Not an integrated system
- Low level of validation
- Lack of user satisfaction
- Overall efficiency is less

2.3 PROPOSED SYSTEM

The proposed definition in which, if we are not satisfied with the existing system or if not the existing system does fulfil our requirements then we have to find out the problem where the existing system is not functioning well. The concern has to analyse the existing system whether any difficulties in handling the data or string. After finding the problem is to be defined. The concern has to understand the existing problem with difficult types of alternative.

All the drawbacks and limitation are restricted by the proposed system. Since this project is done module-by-module, error rectification and detection becomes Very easy. Easy module can be selected from the main menu. The reports are generated Time based upon the given constraints; this would be very tedious when done manually.

Advantages of the Proposed System

- A proper system need to fulfill the future requirements
- Manual methods absolute nowadays
- Need up-to-date information to manage all their works
- Data tampering is reduced
- Provides security that protect against outsider crime.
- Reduces cost of operations

SCOPE OF THE PROPOSED SYSTEM

- Provides a highly secure environment for carrying out all sales and purchase activities.
- Monitoring the overall order details.
- Keep track of the order information for each customer.

FEATURES OF THE PROPOSED SYSTEM

- User friendly
- Ease of access.
- Fast retrieval.
- Reduce manpower and stationary charges.

3. SYSTEM SPECIFICATION

3.1 HARDWARE SPECIFICATION

Processor	: Core 2 Duo
Speed	: 2 GHz
Hard disk capacity	: 500 GB
RAM capacity	: 2GP RAM
Keyboard	: 104 keys
Mouse	: Logitech
Monitor	: 15" Monitor

3.2 SOFTWARE SPECIFICATION:

Operating system	: Windows -7
Front end	: Visual Basic 6.0
Back End	: MS Access

3.2.1About Windows 7

Windows 7 is a line of operating systems developed by Microsoft for use on general-purpose computer systems, including home and business desktops, notebook computers, and media centers. The name "7" stands for experience. It was codenamed "Whistler", after Whistler, British Columbia, as many Microsoft employees skied at the Whistler-Blackcomb ski resort during its development [citation needed].

Windows 7 is the successor to both Windows 2000 Professional and Windows Me, and is the first consumer-oriented operating system produced by Microsoft to be built on the Windows NT kernel (version 5.1) and architecture. Windows 7 was first released on October 25, 2001, and over 400 million copies were in use in January 2006, according to an estimate in that month by an IDC analyst. It is succeeded by Windows Vista, which was released to volume license customers on November 8, 2006, and worldwide to the general public on January 30, 2007.

The most common editions of the operating system are Windows 7 Home Edition, which is targeted at home users, and Windows 7 Professional, which has additional features such as support for Windows Server domains and two physical processors, and is targeted at power users and business clients. Windows 7 Media Center Edition has additional multimedia features enhancing the ability to record and watch TV shows, view DVD movies, and listen to music. Windows 7 Tablet PC Edition is designed to run the ink-aware Tablet PC platform. Two separate 64-bit versions of Windows 7 were also released, Windows 7 64-bit Edition for IA-64 (Itanium) processors and Windows 7 Professional x64 Edition for x86-64.

Windows 7 is known for its improved stability and efficiency over the 9x versions of Microsoft Windows. It presents a significantly redesigned graphical user interface, a change Microsoft promoted as more user-friendly than previous versions of Windows. New software management capabilities were introduced to avoid the "DLL hell" that plagued older consumer-oriented 9x versions of Windows. It is also the first version of Windows to use product activation to combat software piracy, a restriction that did not sit well with some users and privacy advocates. Windows 7 has also been criticized by some users for security vulnerabilities, tight integration of applications such as Internet Explorer 6 and Windows Media Player, and for aspects of its default user interface. Later versions with Service Pack 2, and Internet Explorer 7 addressed some of these concerns.

New and updated features:

- Faster start-up and hibernation sequences
- The ability to discard a newer device driver in favor of the previous one (known as driver rollback), should a driver upgrade not produce desirable results
- A new, arguably more user-friendly interface, including the framework for developing themes for the desktop environment
- Fast user switching, which allows a user to save the current state and open applications of their desktop and allow another user to log on without losing that information
- The Clear Type font rendering mechanism, which is designed to improve text readability on Liquid Crystal Display (LCD) and similar monitors

- Remote Desktop functionality, which allows users to connect to a computer running Windows 7 from across a network or the Internet and access their applications, files, printers, and devices
- Support for most DSL modems and wireless network connections, as well as networking over FireWire, and Bluetooth.

User Interface:

Windows 7 features a new task-based graphical user interface. The Start menu and search capability were redesigned and many visual effects were added, including:

- A translucent blue selection rectangle in Explorer
- Drop shadows for icon labels on the desktop
- Task-based sidebars in Explorer windows ("common tasks")
- The ability to group the taskbar buttons of the windows of one application into one button,
- The ability to lock the taskbar and other toolbars to prevent accidental changes
- The highlighting of recently added programs on the Start menu

Shadows under menus (Windows 2000 had shadows under mouse pointers, but not menus) Windows 7 analyses the performance impact of visual effects and uses this to determine whether to enable them, so as to prevent the new functionality from consuming excessive additional processing overhead. Users can further customize these settings. Some effects, such as alpha blending

(transparency and fading), are handled entirely by many newer video cards. However, if the video card is not capable of hardware alpha blending, performance can be substantially hurt and Microsoft recommends the feature should be turned off manually. Windows 7 adds the ability for Windows to use "Visual Styles" to change the user interface. However, visual styles must be cryptographically signed by Microsoft to run. Luna is the name of the new visual style that ships with Windows 7, and is enabled by default for machines with more than 64 MB of video RAM. Luna refers only to one particular visual style, not to all of the new user interface features of Windows 7 as a whole. Some users "patch" the uxtheme.dll file that restricts the ability to use visual styles, created by the general public or the user, on Windows 7.

In addition to the included 7 themes, there is one previously unreleased 7 theme with a black taskbar and window bars similar to Windows Vista titled "Royale Noir" available for download, albeit unofficially. Microsoft officially released a modified version of this theme as the "Zune" theme; the only difference being the color of the start button (from black to orange). Additionally, the Media Center "Royale" theme is also available for download on non-Media Center PCs.

3.2.2 SOFTWARE FEATURES

Visual Basic is a tool that allows you to develop Windows (Graphic User Interface - **GUI**) applications. The applications have a familiar appearance to the user.

Visual Basic is **event-driven**, meaning code remains idle until called upon to respond to some event (button pressing, menu selection,). Visual Basic is governed by an event processor. Nothing happens until an event is detected. Once an event is detected, the code corresponding to that event (event procedure) is executed. Program control is then returned to the event processor.

Some Features of Visual Basic

- Full set of objects - you 'draw' the application

- Lots of icons and pictures for your use

- Response to mouse and keyboard actions

- Clipboard and printer access

- Full array of mathematical, string handling and graphics functions

- Can handle fixed and dynamic variable and control arrays

- Sequential and random access files support

- Useful debugger and error-handling facilities

- Powerful database access tools

- ActiveX support

- Package & Deployment Wizard makes distributing your applications simple

Visual Basic 6.0 versus Other Versions of Visual Basic

The original Visual Basic for DOS and Visual Basic for Windows were introduced in 1991. Visual Basic 3.0 (a vast improvement over previous versions) was released in 1993. Visual Basic 4.0 released in late 1995 (added 32 bit application support). Visual Basic 5.0 released in late 1996. New environment, supported creation of ActiveX controls, deleted 16 bit application support. And, now Visual Basic 6.0 - some identified new features of Visual Basic 6.0:

Faster compiler

New ActiveX data control object

Allows database integration with wide variety of applications

New data report designer

New Package & Deployment Wizard

Additional internet capabilities

16 Bits versus 32 Bits

Applications built using the Visual Basic 3.0 and the 16 bit version of Visual Basic 4.0 will run under Windows 3.1, Windows for Workgroups, Windows NT, or Windows 95.

Applications built using the 32 bit version of Visual Basic 4.0, Visual Basic 5.0 and Visual Basic 6.0 will only run with Windows 95 or Windows NT (Version 3.5.1 or higher).

In this class, we will use Visual Basic 6.0 under Windows 95, recognizing such applications will not operate in 16 bit environments.

Application (Project) is made up of:

Forms - Windows that you create for user interface

Controls - Graphical features drawn on forms to allow user interaction (text boxes, labels, scroll bars, command buttons, etc.) (Forms and Controls are **objects**.)

Properties - Every characteristic of a form or control is specified by a property. Example properties include names, captions, size, color, position, and contents. Visual Basic applies default properties. You can change properties at design time or run time.

Methods - Built-in procedure that can be invoked to impart some action to a particular object.

Event Procedures - Code related to some object. This is the code that is executed when a certain event occurs.

General Procedures - Code not related to objects. This code must be invoked by the application.

Modules - Collection of general procedures, variable declarations, and constant definitions used by application.

Visual Basic Functions

Visual Basic offers a rich assortment of built-in **functions**. The on-line help utility will give you information on any or all of these functions and their use.

Some examples are:

Function	Value Returned
Abs	Absolute value of a number
Asc	ASCII or ANSI code of a character
Chr	Character corresponding to a given ASCII or ANSI code
Cos	Cosine of an angle
Date	Current date as a text string
Format	Date or number converted to a text string
Left	Selected left side of a text string
Len	Number of characters in a text string
Mid	Selected portion of a text string
Now	Current time and date
Right	Selected right end of a text string
Rnd	Random number
Sin	Sine of an angle
Sqr	Square root of a number
Str	Number converted to a text string
Time	Current time as a text string
Timer	Number of seconds elapsed since midnight
Val	Numeric value of a given text string

3.2.3INTRODUCTION TO BACK END

Microsoft Access is a relational database used on desktop computers to manage information on different levels for different purposes. Microsoft Access can be used for personal information management, in a small business to organize and manage all data, or in an enterprise to communicate with servers.

Database Management System:

A database is an organized collection of data. Organization means method, it assumes discipline, it also anticipates efficient manner in using that information. Unless you are creating small applications for your personal use, you will usually need to share your data either with other people (users, database developers, etc) or other machines. To make your job easier, Microsoft Access provides in one package the database information and the tools you need to use your database. To be organized, you will divide your database in different related parts.

When you create a database in Microsoft Access, you create a file that will include different parts of your database. These are referred to as tables queries, forms, reports, etc.

Microsoft Access as a Software Product

Microsoft Access is a classic computer application and it gets launched like the usual products you have probably been using. As such, to start this program, you could click Start -> Program -> Microsoft Access. As a regular member of the Microsoft Office suite of applications, if your installation created a sub-menu on the Start menu, you could click Start -> New Office Application and proceed from the new dialog box.

Although Microsoft Office 97 and Microsoft Office 2000 get installed in the C:\Program Files\Microsoft Office folder, they treat the shortcuts that launch them differently. The applications that are part of Microsoft Office 97 designate their shortcuts with full names and these are installed in the Microsoft Office folder. Microsoft Office 2000 (Premium) uses shortcut names to designate its shortcuts and they are installed in the Microsoft Office\Office folder. This means you could launch an application from Windows Explorer or My Computer. Therefore, in order to launch Microsoft Access, locate its shortcut in Windows Explorer or My Computer and double-click it.

If you have a Microsoft Access database such as an E-Mail attachment, a file on a floppy disk, on the network, or in any other means, once you see its icon, you can double-click it. Not only will this action launch Microsoft Access, but also it will open the file.

You can also launch Microsoft Access from a shortcut. If you happen to use the software on a regular basis, you can create a shortcut on your desktop or on the Quick Launch area. Many users also take advantage of the Microsoft Office Shortcut Bar. Sometimes, the icon you need will not be there; in that case you should insert it manually.

When Microsoft Access starts, you are presented with a special dialog box that inquires about your intentions. From this dialog, you can do one of four things: create a database using one of the sample files, create a database from scratch, open an existing database, or open a "raw" program.

4. SYSTEM DESIGN

FUNDAMENTALS

System design is the process or art of defining the architecture, components, modules, interface, and data for a system to satisfy specified requirements. One could see it as the application of systems theory to product development.

There is some overlap and synergy with the disciplines of system analysis, system architecture and system engineering. System design is therefore the process of defining and developing a system to satisfy specified requirement of the market or a customer.

The system design document describes how to transform the requirements and the functional design into more technical system design specification. This design involves conceiving and planning out in the mind and making a drawing, pattern, or sketch of.

It includes three types of activities: External Design, Architectural Design, and Detailed Design. The architectural design and detailed design collectively referred to as internal design.

The external design involves specifying the externally observable characteristics of a software product and the internal design involves specifying the internal structure and processing details of the system.

The fundamental concepts of the system design include abstraction, structure, information hiding, modularity, concurrency, verification, and design aesthetics.

4.1 Architectural Design

Architectural design involves identifying the software components, decoupling, and decomposing them into processing modules and conceptual data structure, and specifying the interconnection among components.

System architecture is the design or set of relations between the parts of a system. There is no strict definition of which an aspect constitutes system architecture, and various organizations define it in different ways.

System architecture is primarily concerned with the internal interfaces among the system's components or subsystem, and the interface between the system and its external environment, especially the user.

The internal structure of the software product and tests that attempt to break the system are open during implementation. The architectural design is also called as internal design. The goal of this design is to specify the internal structure and processing details, to record design decisions.

4.1.2 INPUT DESIGN

Input designs are done in such a way that it caters to the requirement of the end user. Extensive care has to be taken to ensure the validity of the input data. Error messages will be displayed immediately.

The input design involves providing an interface between the user and the computer system. It is essential to design the interface in such a way that it makes the user entry easy and makes input free from errors.

Most possible errors are avoided by providing warning messages quite frequently. Care has been taken effectively to utilize memory. The input forms are designed using menus, text fields, text area, and buttons.

Input design includes project details like customer information, customer's token like token id, month, amount and purchase details includes the date of purchase, litres of milk, and amount.

4.1.3 OUTPUT DESIGN

Output design is the process that involves designing necessary outputs which helps the user according to their requirements. Efficient output design should improve the system relationship with the user and help in decision-making.

The output of this software produces the backup for files and folders. These backup are stored in the server, which may be used whenever it is necessary.

Every single activity by the office members should be reported to their higher official. For that they need clear reports and in customized format. Every above technique is built with this project for their official use.

4.2 SYSTEM FLOW CHART

DATA FLOW DIAGRAM

A **data flow diagram (DFD)** is a graphical representation of the "flow" of data. DFD can also be used for the visualization of data processing (structured design).

A DFD shows what kinds of data will be input to and output from the system, where the data will come from and go to, and where the data will be stored. It does not show information about the timing of processes or information about whether processes will operate in sequence or in parallel (which is shown on a flowchart).

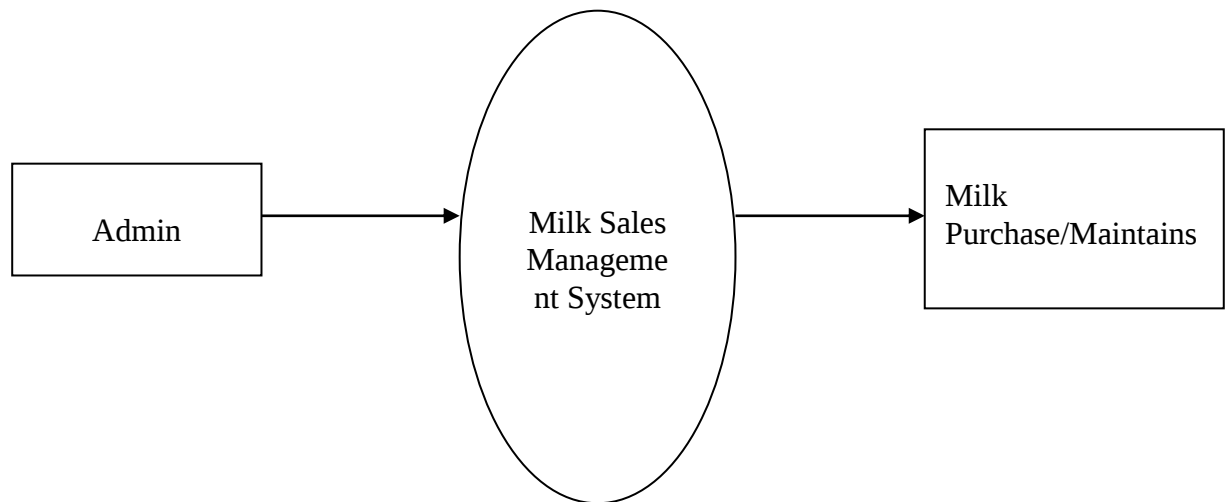
Dataflow diagram is also known as bubble chart that has the purpose of clarifying system requirements and identifying major transformations in system design. It is a starting point of the design phase that functionality decomposes the requirements specification down to the lowest level of detail. It is the pictorial way of showing the flow of data into, around and out of system.

Dataflow diagram is easily understood to the user and is less prone to misinterpretation than textual description. A complete set of data flow diagram provides a compact top down representation of a system, which makes it easier for users and analysts to understand the system as a whole.

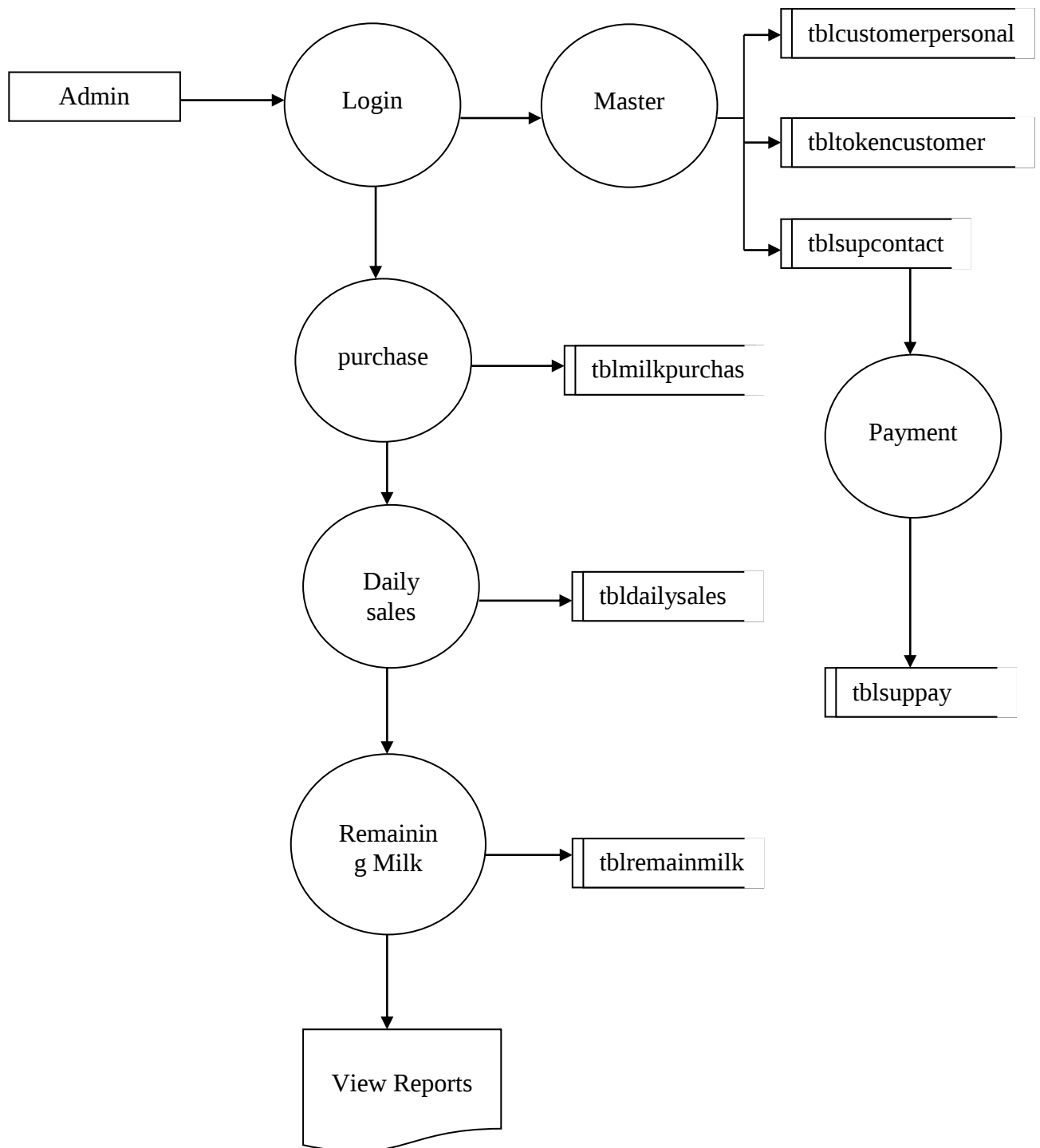
Dataflow diagram is used as a graphical tool to depict information flow. There are two different types in the data flow diagram. They are *transform flow* and *transaction flow*. The transform flow is used to give the initial idea of the flow of the program. The transaction flow is used to give the detail idea of the flow of the control.

4.2.1 DATAFLOW DIAGRAM

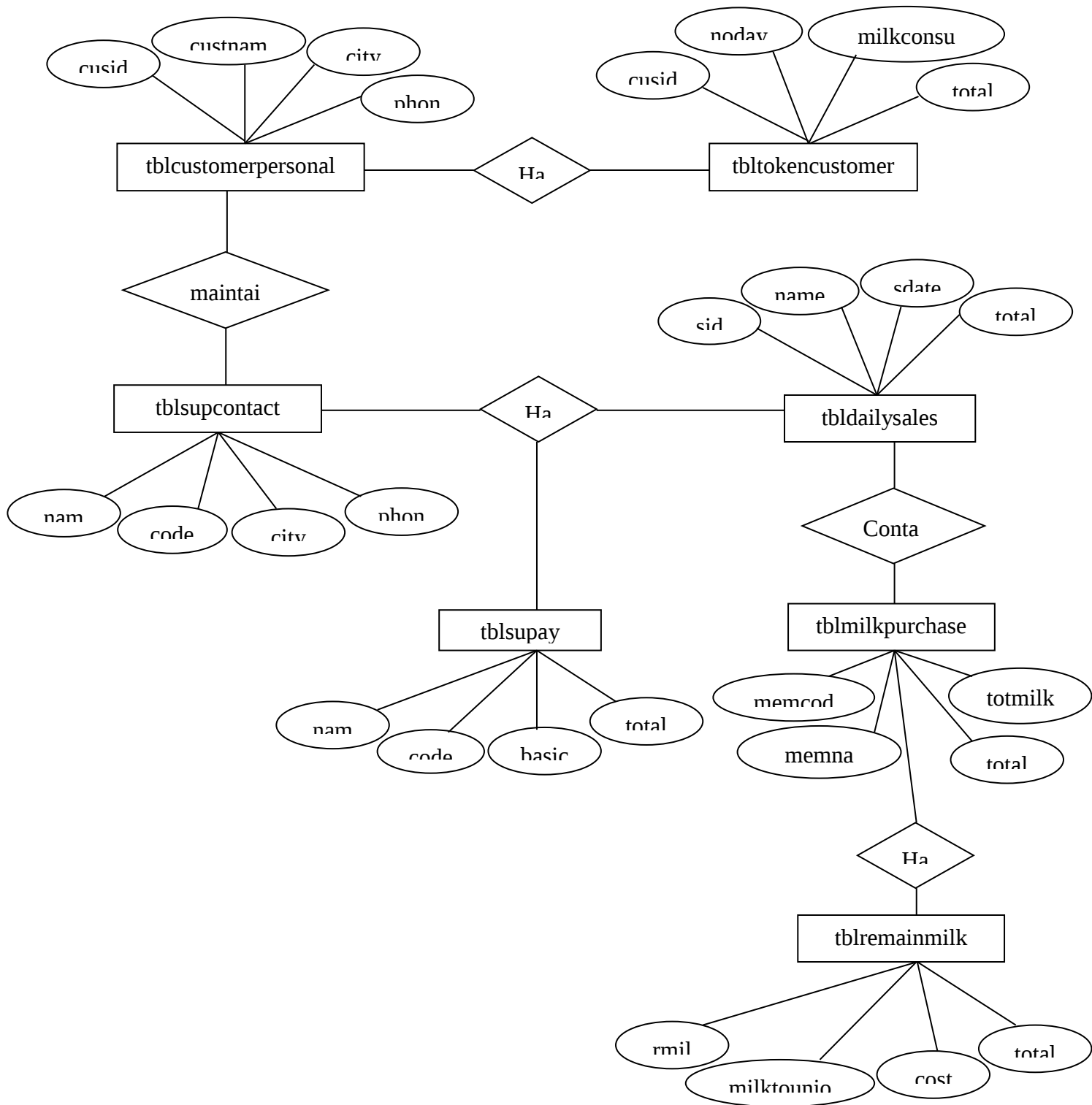
Level 0:



Level 1:



4.2.2 ER DIAGRAM



4.3 DATA BASE DESIGN

A database is a collection of stored data organized in such a way that all the data requirements are satisfied. In order to design the database and the tables used in the system, MS Access provides extra optional facilities which aid and control each user's access to use the database for adding, modifying and retrieving data and facilitate data independence, integrity and security.

Data Co-ordination

In a database, information from several files are coordinated, accessed and operated upon as though it is in a single file. Logically the information is centralized. Physically the data may be located on different devices and in widely scattered geographically locations, connected through data communication facilities.

Data Integrity

This ensures the correctness and completeness of the data in the database. When the contents of the database are modified the integrity of the database is lost. To maintain the consistency of data integrity of constraints is required.

Some of the integrity constraints are

- Domain constraints specify NULL or NOT NULL.
- Validity integrity - checks for data type and range.
- Entity integrity - uniqueness and primary key.
- Reference integrity - foreign key relation

Data Independence

Data independence is the insulation of application programs from changing aspects of physical data organization. This objective seeks to allow changes in the content and organization of physical data without reprogramming of applications and to allow modifications to application programs without reorganizing the physical data.

TABLE DESIGN

Table Name: **tblcustomerpersonal**

Primary Key: cusid

Field name	Data type	Size	Description
cusid	Number	6	Customer ID
custname	Text	20	Customer name
add1	Text	15	Address 1
add2	Text	15	Address 2
city	Text	15	City
pincode	Number	7	Pincode
phone	Number	10	Phone no

Table Name: **tblcusttoken**

Field name	Data type	Size	Description
cusid	Number	6	Customer ID
custname	Text	20	Customer name

tokenmnth	Text	15	Token month
date	Text	15	Date
tokentype	Text	15	Token type
nodays	Number	5	No Of Days

Table Name: **tbldailysales**

Primary Key: sid

Field name	Data type	Size	Description
sid	Number	6	Sales ID
name	Text	20	Supplier name
sdate	Text	15	Sales date
mcarry	Number	5	Milk carry
msold	Number	5	Milk sold
mavailable	Number	5	Milk available
cost	Number	5	Milk cost
total	Number	5	Total cost

Table Name: **tblmilkpurchase**

Foreign Key: memcode

Field name	Data type	Size	Description
Datepur	Text	15	Purchase date
memname	Text	20	Member name
memcode	Number	6	Member code

totmilk	Number	5	Total milk
cost	Number	5	Milk cost
total	Number	5	Total cost

Table Name: **tblremainmilk**

Field name	Data type	Size	Description
date	Text	15	Date
rmilk	Number	5	Remaining milk quantity
milktounion	Number	5	Milk quantity to union
cost	Number	5	Milk cost
total	Number	5	Total cost

Table Name: **tblsupcontact**

Field name	Data type	Size	Description
name	Text	15	Supplier name
code	Number	5	Member code
add1	Text	15	Address1
add2	Text	15	Address2
city	Text	15	City
pin	Number	7	Pincode
phone	Number	10	phone

Table Name: **tblmemberdet**

Primary Key: memcode

Field name	Data type	Size	Description
memcode	Number	5	Member code
memname	Text	15	Member name
add1	Text	15	Address1
add2	Text	15	Address 2
city	Text	15	City
pincode	Number	7	Pincode

Table Name: **tblsuppay**

Foreign Key: code

Field name	Data type	Size	Description
date	Text	15	Date
name	text	15	Supplier name
code	Number	5	Supplier code
basic	Number	5	Basic pay
spl	Number	5	Special allowance
trav	Number	5	Travel allowance
medall	Number	5	Medical claim
total	Number	5	Total pay

Table Name: **tbltokencustomer**

Foreign Key: cusid

Field name	Data type	Size	Description
custid	Number	5	Customer id
date	Text	15	Date
nodays	Number	5	No of days
remain	Number	5	Remaining days
tokmorn	Number	5	Morning token
tokeven	Number	5	Evening token
milkconsume	Number	5	Total Milk consume
costmilk	Number	5	Cost of milk
total	Number	5	Total amount

5. SYSTEM TESTING AND IMPLEMENTATION

5.1 SYSTEM STRATEGY

After each program passes its own test, it is linked to together program and scrutinized with a program integration test. This ensures that the program work together as intended. Before implementation phase the designed system should be tested with raw data to ensure that all modules of the system work correctly and satisfactorily. If some bug is found they can be removed before the implementation phase. The testing has four kind of testing that is as follows:

White box testing

White box testing, sometimes called glass-box testing is a test case design method that uses the control structure of the procedural design to design to derive test cases. Using white box testing methods, the software engineer can derive test cases.

1. Guarantee that all independent paths within a module have been exercised at least once.
2. Exercise all logical decisions on their true and false sides.
3. Execute all loops at their boundaries and within their operational bounds.
4. Exercise internal data structures to ensure their validity.

Black box testing

Black box testing, also called behavioral testing, focuses on the functional requirements of the software. That is, black box testing enables the software engineer to derive sets of input conditions that will fully exercise all functional requirements for a program. Black box testing is not an alternative to white box

techniques. Rather it is a complementary approach that is likely to uncover a different class of errors than white box methods.

Black box testing attempts to find errors in the following categories.

- a. Incorrect or missing functions
- b. Interface errors
- c. Errors in a data structures or external database access
- d. Behavior or performance errors
- e. Initialization and termination errors.

5.2 SYSTEM TEST PROCESS

It is the stage of implementation, which ensures that system works accurately and effectively before the live operation commences. It is a confirmation that all are correct and opportunity to show the users that the system must be tested with test data and show that the system will operate successfully and produce expected results under expected conditions.

Software testing is a crucial element of software quality assurance and represents the unlimited review of specification, design and coding. Testing represents an interesting anomaly for the software. During earlier definition and development phase, it was attempted to build software from an abstract concept to a tangible implementation.

The testing phase is responsible for ensuring that the system performs the way that the detailed design documentation specifies. Testing involves testing of developed system using various test data. Preparation of test data plays a vital role in system testing. After preparing the test data, the system under study was tested using those test data. During this stage, the errors are detected and corrected.

Before implementation, the proposed system must be tested with raw data to ensure that the modules of the system work correctly and satisfactorily. The system must be tested with valid data to achieve its objective.

Thus a series of tests are performed for the proposed system before the system is ready for implementation. The various **types of testing** involved are:

- Unit testing
- Validation testing
- Output testing
- Integration testing

UNIT TESTING

Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each path of a business process performs accurately to the documented specifications, functionality and contains clearly defined inputs and expected and expected results.

The unit testing is conducted by preparing the following reports

UTP – unit test plan

UTP Preparation (Test Scenarios)

UTP Review

UTP Results

For example we can take the login page and test by unit testing.

In UTP Preparation Test Scenarios all the links in the page is taken for test. In UTO review all the links are tested for its target page or the result. In UTP result the testing results for all the links tested is given as passed or failed and if any error then it is noted to the particular developer and corrected.

A program represents the logical elements of a system. For a program to run satisfactorily, it must compile and test data correctly and tie in properly with other programs. Achieving an error free program is the responsibility of the programmer. Program testing checks for two type of errors: syntax and logical.

Syntax error is a program statement that violates one or more rules of the language in which it is written. An improperly defined field dimension or error messages were generated by the computer.

Logic error deals with incorrect data fields, out-of range items, and invalid combinations. Since diagnostics do not determine logic errors the programmer must examine the output carefully.

The modules covered under Unit Testing are

- Login testing
- User creation testing
- Setup testing
- Task entry testing
- Timesheet testing
- Test Reports

Validation testing

Validation succeeds when the developed system functions as per the requirements of the customer. Software validation is achieved through a series of black box that demonstrate the conformity with the requirements. Deviations or errors in this step are corrected.

The validation testing is performed for all the data in the system. The data are completely validated according to the companies requested and requirement.

In these testing, software is completely assembled as package, interfacing errors have been uncovered and correction testing begins after each one of the two possible conditions exists.

OUTPUT TESTING

Various outputs have been generated by the system. The system generated output and the desk-calculated values have been compared. All the output is perfect as the company desires. It begins with low volumes of transactions based on live tone. The volume is increased until the maximum level for each transaction type is reached. The total system is also tested for recovery and fallback, after various major failures to ensure that no data are lost during the emergency time.

INTEGRATION TESTING

Integration tests are done to test integrated software components were individually satisfactory, as shown by successful unit testing; the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

The same procedure as the unit testing is followed for integration testing. After completing the unit testing successful, the components are integrated into one system and tested for success. All the functional features of the modules are tested. Since the project involves tacking and maintenance, the overall structure of the functionality is taken in to consideration. The focus is on valid and invalid

users and special cases. All possible combinations of the input data have been taken in to consideration.

5.2 VERIFICATION AND VALIDATION

This system has been verified and validated by using the

- ❖ Test Data

- ❖ Live Data

Verified with Test Data

In this case of testing, the data were developed artificially and these data are applied to the system. The result of the system was checked, whether it satisfies the specification of the system. Each module in this system has been tested independently and finally tested as a package.

Verified with live data

In this case, the real data are applied to the system and its result was checked with original results that was calculated manually.

The goals of verification and validation activities are to access and improve the quality of the work products generated during development and modification of software. Quality attributes of interest include correctness, completeness, consistency, reliability, usefulness, usability, efficiency to standards and overall cost effectiveness.

Verification is a rigorous mathematics demonstration that source code confirms to its specification. Validation is the process of evaluating software at the end of the software development process to determine the compliance with requirements.

5.3 SYSTEM IMPLEMENTATION

System implementation is the stage of the project that the theoretical design is turned into a working system. If the implementation stage is not properly planned and controlled, it can cause error. Thus it can be considered to be the most crucial stage in achieving a successful new system and in giving the user confidence that the new system will work and be effective.

Normally this stage involves setting up a coordinating committee, which will act as a sounding board for ideas; complaints and problem. The first task is implementation planning; i.e., deciding on the methods and time scale to be adopted. Apart from planning two major task of preparing for implementation are, education takes place much earlier in the project; at the implementation stage the emphasis must be on training in new skills to give staff confidence they can use the system. Once staff has been trained, the system can be tested.

After the implementation phase is completed and the user staff is adjusted to the changes created by the candidate system, evaluation and maintenance is to bring the new system to standards. The activities of the implementation phase can be summarized as,

- ◆ Implementation planning
- ◆ Education planning
- ◆ System planning

6. MAINTENANCE

6.SYSTEM MAINTENANCE

The maintenance phase of the software cycle is the time in which a software product performs useful work. After the system is successfully implemented, it should be maintained in a proper manner.

6.1 Corrective Maintenance

Even with the best quality assurance activities, it is likely that they customer will uncover defects in the software. Corrective maintenance changes the software to correct defects.

6.2Adaptive Maintenance

System maintenance is an important aspect in the software development life cycle. The need for system maintenance is for it to make adaptable to the changes in the environment. There may be social, technical and other environmental changes that affect the system, which is being implemented.

6.3 Enhancement Maintenance

Software product enhancements may involve providing new functional capabilities, improving user displays and mode of interaction, upgrading the performance characteristics of the system. Only through proper system maintenance procedures, the system can be adopted to cope up with these changes.

This project is also requires maintenance on the system side. These should be analyzed for the correctness of its interaction among themselves.

Utmost in the software maintenance is an understanding of program variables. The software maintenance cannot be performed without a complete understanding of program variables. PAT processes to locate and highlight the variables used in the source code. This process is extended to all variables. PAT output includes system configuration details variables impact analysis and can save valuable resources (time).

7. FUTURE ENHANCEMENT

SCOPE FOR FUTURE DEVELOPMENT

The project entitled “**Milk Sales Management System**” is developed successfully from all the modules. The main advantage of the implementation of this project reduces the time consumption during the manual work. Further; it is very faster and economical to the concern based on the computerization process. It is very economical due to the time saving and quicker process. The process done based on our project is very easier for the users to access it. The calculations done at the computer is very accurate and reliable. It may be stored and referred in the future for the development of the concern with the modern technological enhancements.

- In Future this application is converted into online application. It will allow the user to use this application in anywhere at any time.
- The online booking system will be added in future for booking cement order through online.

8. CONCLUSION

The “**MILK SALES MANAGEMENT SYSTEM**” programming has made possible for the accessing of data relating to automate manual work of milk dealer maintenance and employee’s of the organization. The system has developed in Visual Basic as front end and Microsoft Access as back end.

Top down programming technique has been adopted while developing the project. Each task is divided into separate modules. Hence modification and enhancement can be easily made without affecting any other part of the program.

The system was tested with all possible sample data and was found to have an effective planning of the functions or process with a high degree of accuracy and user friendliness. The newly developed system overcomes all the drawbacks of the existing system.

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