COMPUTER AIDED INSTRUCTIONAL

PROJECT WORK DONE AT

NATIONAL INSTITUTE OS FASHION DESIGN.BANGALORE,

(MINISTRY OF TEXTILE,GOVT OF INDIA)

PROJECT REPORT

P-1234

Submitted in partial fulfillment of the requirements for the award of the degree

of

M.Sc Applied Science Software Engineering,

Of Bharathiar University,

Coimbatore.

Submitted By

S.MANIKANDAN

Reg. No. 0137S0037

Guided By

EXTERNAL GUIDE
Mr.U.Prakash, M.E,
Project Manager.

INTERNAL GUIDE
Ms. P.Parameswari,M.C.A
Lecturer.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE – 641 006

SEPTEMBER - 20004

KUMARAGURU COLLEGE OF TECHNOLOGY

(Affiliated to Bharathiar University)

Department of Computer science and Engineering

Coimbatore – 641 006

CERTIFICATE

This is to certify that the project work entitled

COMPUTER AIDED INSTRUCTIONAL PACKAGE

Done By

S.MANIKANDAN

Reg. No. 0137S0037

Submitted in partial fulfillment of the requirements for the award of the degree M.Sc Applied Science Software Engineering of Bharathiar University.

Professor and Head **Internal Guide**

Submitted for the University examination held on 29/9/04

Internal Examiner **External Examiner**

ा फ़ैशन टैक्नालॉजी संस्थान
ालय, भारत सरकार)
मैनेजमेंट तथा टैक्नालॉजी का महाविद्यालय

nal Institute of Fashion Technology
y of Textiles, Government of India)
ege of Design, Management and Technology

September 13, 2004

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. **S. Manikandan (Reg. No.0137S0037)** has successfully undergone the project work titled " **Computer Aided Instructional Package** ", for National Institute of Fashion Technology, (Ministry of Textiles, Govt. of India) and submitted in partial fulfillment of Course of study M.Sc (Applied Science-Software Engineering) Degree under Bharathiar University. This has been carried out under my supervision from June 2004 to September 2004.

The information pertaining to the project is confidential. Hence the students are not permitted to take the source code and database related to the project outside our organization.

The performance and conduct of the candidate during the project was good.

I wish him good luck and success in all his future endeavors.

U. Prakash Kumar

(U. Prakash Kumar)
Assistant Professor-IT
Project Coordinator
NIFT, Bangalore

DECLARATION

I hereby declare that the project entitled "**Computer Aided Instructional Package**" submitted to National Institute Of Technology, Bangalore in partial fulfillment of the requirement for the award of the degree of Master of Science (Applied Science) Software Engineering, is a record of original work done by me, under the supervision and guidance of Mr.U.Prakash (Project Manager), NIFT.

Place: Coimbatore

Date: 27/09/04

Signature of the Student

ACKNOWLEDGEMENT

To add meaning to the perception, it is my indebtedness to honor a few who had helped me in this endeavor, by placing them on record.

With profound gratitude, I am extremely thankful to Dr.K.K.PADMANABAN B.Sc. (Eng), M.Tech, Ph.D., Principal, Kumaraguru College of Technology, Coimbatore for providing me an opportunity to undergo the M.Sc APPLIED SCIENCE (SOFTWARE ENGINEERING) course and thereby this project work also.

I extend my heartfelt thanks to my Computer Science & Engineering Department head, Prof.Dr.S.THANGASAMY B.E (Hons), Ph.D., for his kind advice and encouragement to complete this project successfully.

It's my privilege to express my deep sense of gratitude and profound thanks to Mr.U.Prakash, System Designer, CBK InfoTech India (P) Ltd., Bangalore for having allowed me to do my project work in her esteemed team and for helping me in all means in successful completion of this project work.

Gratitude will find least meaning without thanking my Project coordinator Mr.K.R.BASKARAN, B.E, M.S., Assistant Professor, Dept of Information Technology and my guide Ms. P.Parameswari,M.C.A. Dept of Computer Science & Engineering for the valuable guidance and support throughout my project.

My gratitude is due to all staff members of CSE department, my parents and all my friends for their moral support and encouragement for successful completion of my project.

S.MANIKANDAN

(Reg.No:0137S0037)

SYNOPSIS

The project entitled "Computer Aided Instructional Package" a sub module of "Developing e-Learning and ERP solution to an Educational Institute under intranet platform "is developed for National Institute of Fashion Technology, Ministry Of Textiles, Govt of India, Bangalore..

"Computer Aided Instructional Package" may be defined as in house training, assistance and instructional tool for Educational Institution that includes the intranet site for computer based tutorial and office in-out message board that can be accessed by the student, staffs and employee respectively. This facilitates an efficient and transparent process. which basically includes three modules:

- Computer based tutorial.
- Digital library.
- Office in out message board.

This system helps to simplify the process of learning with greater assistance in searching for the required learning material for the user.

The Cbt provides a more interactive medium of learning through the Illustrative animation for various domains, topics and a character agent.

Digital library provides easy access to the resources in the resource center that can search and downloaded.

The in-out office message board module provides the employee a much easier way to know the availability of the current office employee and also other information.

CONTENTS

1.0 INTRODUCTION

1.1 OVERVIEW OF THE PROJECT

The project entitled "**COMPUTER ADIED INSTRUCTIONAL PACKAGE**" has been developed to simply the overall activities Of the NIFT centers.The CAIP (Computer aided instructional package) is a intranet based application developed for national institute of fashion technology, Bangalore. The package is used for educational ,industrial and office requirement.

The modules of the CAIP are

- Computer based tutorial.

The module Computer based tutorial for the trainee students for inhouse training. This module has tutorials on various domain which user can chose from.The operation in the module are listed below

- **Mode**

The tutor can be viewed in one of the following mode:

- Normal mode

In the normal mode tutorial is displayed in the textual format .

- Tour mode.

In the tour mode the selected domain subject is displayed sequentially and the corresponding pages are switched automatically.

- Tutor mode

In the tutor mode a character agent acts as a tutor and teaches the tutorial .

❖ **Domain**

The domain gives the available domain which the user can select from.

- Fashion
- Design
- Management

❖ **Search**

The search provides a complete site search where in a user can search by

- Phrase
- Word

The results of the search is displayed as links to the web pages .

❖ **Jot**

Notes for tutorials date,topics,notes etc.

Features

- Advanced search technique.
- Animated clips and media for illustration.
- Animated character agent.

➢ **Digital library**

The module digital library is package for the nift resource center.it has a large collection of image ,media and text documents.each section has a detailed list of the files of various format that can be searched and can be downloaded .

It has a facility to capture a image or audio and video from webcamm and can be saved in root directory.

❖ **Image gallery**

A large organized collection of image file.

❖ **Media gallery**

A large organized collection of media file

❖ **Documents gallery.**

A large organized collection of text file

❖ **Upload/capture section**

Upload document files and capture stills and clips from webcam.

➢ ## Office in-out board

The module Office in-out message board is for the employee to know the availability status of the other employee. They can know the current status as well as update their status and personal information to reflected in the in-out message board. The main activities of the module

- Perform checkin action of every employee.
- Enter checkin and checkout information.
- Update change of information.

Features

- Current employee status.
- Live update.

The necessary steps that had been followed while starting the project are:

- System study of the requirements
- Reference of the studies made.
- Rough design of the system.
- Testing of the design through the operation.
- Making the necessary changes.
- Obtaining the final design.
- Coding the project.
- Testing the system.
- Implementing the system
- Documenting the project

1.2 Organization Profile

Ministry of Textiles, Government of India promoted a Registered Society in the year 1986 as National Institute of Fashion Technology. popularly known as NIFT established by the Ministry of Textiles, Govt. of India in the year 1986, National Institute of Fashion Technology (NIFT) has emerged as a premier institute in the country to train professionals who can meet the requirements of the Apparel Industry.

National Institute of Fashion Technology is a institute imparting Education and Research in the field of Design, Management and Technology under Ministry of Textiles, Govt. of India. Apart from education, the institute also contributes its expertness to the fashion industry by undertaking various Projects and Consultancies.

The National Institute of Fashion Technology is a college of design. management and technology catering to the needs of the rapidly growing readymade garment industry which has to meet the challenges of the global market. It is established to act as catalyst for the professionals in the Indian fashion industry. It seeks to impart training and skills comparable to prevailing international standards.

administration of the Institute has been entrusted to the Executive Director. NIFT aims to provide the best in international levels of instruction. with regular inputs from industry and technical collaboration with the Fashion Institute of Technology (FIT), New York, the Nottingham Trent University (NTU), U.K and IFM, Paris. The Institute has opened its doors to the best in education, research and training.

The high-values being attached to the NIFT graduates has created its own impact in different parts of the country and led to a demand for the setting up of new centers of NIFT outside Delhi. The demand is legitimate, the requirements are expanding and the environment is also favorable. The Policy makers responded to this situation and new centers were established in July 1995 at Mumbai, Chennai, Calcutta, Hyderabad and Gandhinagar. Bangalore centre has been added to this list since September 1997.

The Board of Governors of NIFT are deeply involved in the growth and development of the Institute. The Academic Council of the Institute provides advice and support in all academic and administrative matters. The Council assists the institute in initiating and evaluating all curricula, setting up research programmes, raising funds for the students' scholarships, faculty development and placements of students, assisting the organization in special events, organising field trips and giving lectures. The overall direction provided by the BOG of NIFT helps in developing a value-system so as to build informal organizational culture to sustain higher levels of education. The day to day

ACADEMIC PROGRAM

The Programmes offered by NIFT are administered by the Academic Standards Committee. The Committee consists of Executive Director. Director. And Chairpersons of the department concerned. The Committee meets regularly to co-ordinate each of the component of the programme i.e. field work, management internship, rules of admission, craft documentation and placement. All matters pertaining to the academic programmes are decided by the Academic Standards Committee.

Evaluation of student's performance in the various programmes offered at NIFT is a continuous process, affording opportunity for frequent

and regular feedback. In all the segments of programmes offered - case study, field work and industry training, are of pivotal importance. The students are expected to meet the standards of performance prescribed by the Academic Standards Committee for each programme being offered by the Institute by the Academic Standards Committee for each programme being offered by the Institute.

NIFT also collaborates with leading educational institutions. The collaboration of NIFT with National Institute of Design - Ahmedabad, Indian Institute of Leather Products - Madras, Central Leather Research Institute - Madras, Jute Manufacturers Development Corporation - Calcutta, Clothing Manufacturers Assocaition of India - Mumbai and Tirupur Exporters Association - Tirupur are mutually beneficial to each other. NIFT has in the past implemented training programmes and participated in exhibitions. fashion shows in collaboration with other educational institutes.

The seven NIFT centers functions at various places are New Delhi. Bangalore, Hyderabad, Chennai, Calcutta, Bombay and Gandhi Nagar with the Head Quarter located at NewDelhi. Further being a professional institute . the institute contributes for Seminars, Workshops , Research and Development activities.

2.0 SYSTEM STUDY AND ANALYSIS

2.1 SOFTWARE REQUIREMENT SPECIFICATION

❖ INTRODUCTION

▪ PURPOSE:

The objective of this project is to develop an intranet based application or site to simplify the access to various resources available to the user.

▪ SCOPE

This project is developed in order to help the staff in maintaining the various type of resource and to provide better tutorial that is based on industrial needs.

▪ ABBREVIATIONS

CAIP - Computer Aided instructional Package.

CBT - Computer Based tutorial.

▪ DEVELOPER'S RESPONSIBILITIES OVERVIEW

The developer is responsible for

- Developing the system.
- Installing the software on the clients hardware.
- Conducting any user training that might be needed for using the system.
- Maintaining the system.

❖ GENERAL DESCRIPTION

▪ PRODUCT FUNCTIONS OVERVIEW

CAIP enhances the utilization of the resources in the resource center and in informing the user about the current logged staff. It help in conducting tutorial.

▪ USER CHARACTERISTIC

The main users of this system will be the employees, trainee students industry executive etc who are somewhat literate with computers and can use programs such as editors ,text processors and Browser.

▪ GENERAL CONSTRAINTS

The system will run on PII,PIII workstation running windows environment . the system was developed in and for the win2000 and hence gives results in the win2000 .

❖ SPECIFIC REQUIREMENTS

▪ GENERAL DESCRIPTION

Input is the important data for the system the output depend on the input we feed. Here the inputs are links and textual data converted into

the computer-based format. In the project all the forms design are called as input form design.

The needful data are given and the output is got. The input given should follow some condition for example filename etc.

- **INPUT AND OUTPUT**

There are various tables which provide data to the system. The input to the system are of different kinds links text,audio and video clips. The output of the system from the various given data are Search results , navigation to new web page etc .

The input to the system are of different kinds links text,audio and video clips. The output of the system from the various given data are Search results , navigation to new web page etc .

- **ERROR MESSAGES**

1.invalid user.

2.invalid data.

❖ **EXTERNAL INTERFACE REQUIREMENT**

- **USER INTERFACE:**

The user interfaced is designed in an appealing and elegant way.the interface in kept as simple as possible keeping in mind the user adaptiveness and knowledge .more technical terms are avoided for user understandability.

❖ PERFORMANCE CONSTRAINTS

The performance of the system depend on version of the browser used and the os used.the performance is also dependent om the hardware configuration.

❖ DESIGN CONSTRAINTS

The package in GUIi based and user friendly with a appealing design and look so the system should a good vga and graphics support .

❖ SOFTWARE CONSTRAINTS

The system is to run under the windows operating system.

It can also run on the linux operating system with help of asp chillysoft .

❖ HARDWARE CONSTRAINTS

Intel PIII and 550 MHZ and above.

32 MB RAM and above .

Running Windows.

It will be connected to an 8-page-per-minute printer.

❖ ACCEPTANCE CRITERIA

Before accepting the system, the development must demonstrate that the system works on the given webcam input streamed. The developer will have to show through test cases that all condition are satisfied.

2.2 EXISTING SYSTEM

The existing system has network topology .ie there is a network connection throughout the organization but lacks a proper tool to accomplish the desired activity due to non availability of the proper system or the software.

Most of the information is physical in nature and thus need a user to go through the rigorous process of searching for the required material for study. The print medium of information does not give the clear picture of the concepts that are elaborated and is convenient to access the information.

There is no computerized methodology for conducting tutorial for different users and a mechanism to know the availability of employee and his information and status the resource center resources include physical and hard and soft copies of data in various formats that are not integrated. The designers are frequently access information and files.

2.3 PROPOSED SYSTEM

The objective of the proposed system is to integrate and organize the information and the various files in an easily accessible form .the system is collectively a intranet based site with a a central database and web server which servers the porpose of hosting the pages to accomplish th requests of the various user at different levels.

The proposed system has three modules. The CBT (computer based tutorial) is a completed online intranet based tutorial which has information about various fields and domains. Its feature includes the complete site search based on word or phrase, animated tutor.

The in-out office board in a intranet package that gives the availability information of the employees working in different block.. the module digital library is large collection of files of various formats that are is made easily accessible through the module where the file can be viewed and downloaded if needed.

2.4 REQUIREMENTS OF THE NEW SYSTEM

The new system should overcome the limitations of the existing system. It should provide better options for better data reporting and data comparison. The system should be secure, faster, error free and interactive.
Thus main requirements identified are:

- Good interaction with the user:

The new system should be capable of good interaction with the User. Error and warning messages should be clearly displayed .The system should be menu driven. In case of item selection, a list can be provided for selection. Thus error in entries could be reduced and foreign key references can be maintained without cross checking.

- Centralized Database:

A Database management system should be introduced by which storage and retrieval of data becomes easy. Large amount of data can be managed, data integrity can be ensured and data redundancy could be avoided.

- Security:

Since the storage data includes many details, there should some level of security for the system. Software's in a multi-user environment should use some level of security.

2.4 USER CHARACTERISTICS

User characteristics were analyzed to find the user requirements. Users were consulted for their opinion on the system and their suggestions were recorded.

The user of the system can be broadly classified in the following group

- Industry executive.
- Trainee and students
- Staff
- Designer

The need and the requirements of the above mentioned users were taken into account and the system is designed to cater there needs.

Each user has unique in its requirement and interaction with the system is different for different user.

3.0 PROGRAMMING ENVIRONMENT

3.1 HARDWARE CONFIGURATION

The hardware specification listed is on minimum basis for optimum Performance.

Processor	- celeron
Frequency	-600 Mhz
Main Memory	- 64 MB
Secondary Memory	- 10 GB
Floppy drive	- 3 ½ (1.44 MB)
Network card	- Needed
Webcam	-needed
Headphone	-needed

3.2 DESCRIPTIONS OF S/W AND TOOLS USED

The "**Computer Aided Educational Package** " is developed to simply the work involved in the existing system .The system is fully computerized using "ASP 3.0" as front-end and " MS-Access " as back - end.

Software specification:

Platform -Windows 98

Browser - Explorer 5.0

Web server - Personal web server ,iis.

Front-end - Visual basic 6.0,ASP 5.0

Back-end -MS-Access

Script language -VB script, JavaScript.

Testing tool -Silktest 2.0.

Platform:

The platform under which the system is developed using windows 2000.Being one of the popular operating system available today. gives the use of touch and look making the application developed under its base graceful. The window helps the users to navigate and explore throughout the system in friendly fashion.

About the software

About Asp 3.0

Dynamic HTML provides the primary client-side programming tool Internet Explorer 4.0. But the client-side functionality supported by various browsers that work in cross-platform are very little. An Active Server Page is a standard HTML file with additional features. An ASP contains tags similar to HTML tags and also contains Java applets, client side Active X controls and blinking text. Microsoft Active Server Page allows us to create server-side applications that can be used in many Explorer 4.0. But the client-side functionality supported by various browsers that work in cross-platform are very little.

An Active server programming Allows us to create server-side applications that can be used in many different browsers. ASP is basically VB Script or J Script that runs on the server. By using ASP we can create Web pages with dynamic content.

MS-Access products are based on "Client/Server Technology". It offers capabilities of both relational and object-oriented database systems. A client or front-end database application also interacts with the database by requesting and receiving information from the 'database server'. It acts as an interface between the user and the database. Further, it also checks for validation against the data entered by the user.

Introduction to ASP

The best way to introduce ASP is to give a little background on the technologies that existed before ASP, why new capabilities were needed, and how ASP meets those needs.

Beyond HTML

Hyper Text Markup Language (HTML) is a tagged text file format used to format Web content for display usually in a browser. HTML is a very simple language with only a few commands. That's part of the reason HTML instantly became popular. Until HTML, the only way for a nonprogrammer to display text and graphics easily was to use a What- You-See- Is- What- You-Get (WYSIWYG) word processor.

Unfortunately, every body had to have the same operating system, the same word processor, and sometimes even the same version of the word processor to view your documents. HTML changed all that, and changed the world as well. Today, even though HTML is considerably more complex than it was originally, a few hours of instruction still suffices to train people well

enough so they can create fairly complicate.

HTML's simplicity was one important factor in its rapid adoption; another equally important factor is its ability to navigate easily between files. By pointing and clicking with a mouse, a user can move between files without knowing where those files are located. Such navigation is called hypertext, a concept invented by Ted Nelson over 30 years before HTML brought hypertext navigation to the world.

Despite, or perhaps because of its simplicity, HTML rapidly became the display language of choice for the World Wide Web (WWW). Paeans were written describing how the web would become the new panacea for delivering timely information to millions of eager readers all over the world. But that scenario wasn't quite right.

Sure, people formatted millions of pages of text and graphics and placed them on the Web, but those eager readers immediately started complaining that the information wasn't specific enough for them. They wanted personalized pages that acted like their favorite Windows programs, sites that remembered their personal preferences, communications, interactivity in short they wanted, applications, not just information.

Benefits of ASP

There are many benefits in ASP, however the following are a couple of general reasons why ASP is the choice for so many.

ASP is Language-Independent

The ASP engine does not depend on a single language. In fact, the ASP engine doesn't actually execute the code you write. Instead, ASP is a language-independent scripting host. The ASP engine works with any scripting language that is compatible with the Microsoft Scripting Host requirements. It can even work with code written in multiple scripting languages on the same page.

The ASP engine differentiates scripting code from HTML, and then asks the appropriate scripting engines to execute it. .

About MS-Access

Microsoft Access is a relational database management system (DBMS). At the most basic level, a DBMS is a program that facilitates the storage and retrieval of structured information on a computer's hard drive.

The many faces of Access

Microsoft generally likes to incorporate as many features as possible into its products. For example, the Access package contains the following elements:

• A **relational database system** that supports two industry standard query languages: Structured Query Language (SQL) and Query by Example (QBE);

• A full-featured **procedural programming language**—essentially a subset of Visual Basic,

• A simplified procedural **macro language** unique

To Access;

• A **rapid application development environment** complete with visual form and report development tools;

• A sprinkling of **objected-oriented extensions** and,

• Various **wizards and builders** to make development Easier.

For new users, these "multiple personalities" can be a source of enormous frustration. The problem is that each personality is based on a different set of assumptions and a different view of computing. For instance,

• The relational database personality expects you to view your application as sets of data;

• The procedural programming personality expects you to view your application as commands to be executed sequentially;

• The object-oriented personality expects you to view your application as objects which encapsulate state and behavior information.

4.0 SYSTEM DESIGN AND DEVELOPMENT

4.1 Input design

Input design or form design consists of designing the screens for accepting the input. The user inputs are collected as screen entries. The screen has been designed in such a way to provide GUI features to the user. The input screens are designed in a way as to control the amount of input required, avoid delay and keep processing simple.

The form layout is designed to be user friendly. Layout labels are made self-explanatory. Common set of entries is grouped into a frame for easy identification. Drop down lists are provided in the case of item selection .The user can choose from the valid data from the list provided for all activities that takes place through the form such as additions, deletions etc.Input data is validated in the screen itself. Appropriate error message and warnings are displayed for the user's convenience.

Input design is the process of converting user-oriented inputs to a computer-based format. Errarous data entered by the user can be controlled by the input design. If the input data given to the system is wrong, then the processing may lead to incorrect output.

Input design is the link that entities of the database to the real world guidelines are as follows:

- Formats of same data in different screen are the same.
- Only register data is collected and similar data are grouped.

- Exception handling is properly provided.
- Screen design should be clear.
- Input through keyboard should be minimal.

The user can make desired changes before the data is sent for processing .Screens have been designed using Visual Basic and ASP forms .On these forms we draw graphical objects called controls that includes textboxes, command buttons, list boxes ,timer etc.

The following are some of the constraints used in input design.

1. Specifying maximum length of each field.
2. Specify the format for the data field, which are entered.
3. Listing the values, where necessary.

LIST OF INPUTS:

❖ **Computer based tutorial module**

- Selection of various domains.
- Selection of the tutorial mode.
    i. Normal
    ii. Tour
    iii. Tutor.
- Entering text for the search.
    i. Search by word.
    ii. Search by phrase.
- Entering notes in personal area
    i. Domain,Subjects, Notes. Other

❖ **Digital library**

- Select type of file to be searched form the list
- Enter the search text for various file in different gallery.
- Enter source and type of nw .
- Enter the image profile.
- Enter media profile.

❖ **Office in-out message board module**

- Location details - detp, blo]ck.
- Personal details - name, detp, desig.
- In-out details - check in time, check out time, comment.

Apart from above listed some inputs the system has inputs in the form of the links etc.

FORMS:

❖ **Computer based tutorial**

The Cbt has various pages for the to select from.

Home

The home page give a launch pad to all other pages and is the main page .

Search

This page is used to search the entire site for the search word and the results are displayed as links to that pages that matches the search result.

Mode

It is used to set a tutorial mode.

Domain

This page gives user the various choice or topics that are available in each domain for the tutorial.

Jot

The jot page is used to enter notes and personal deatials.

❖ Digital library

home page .

Links to various other pages is provided in thi page .

Image gallery.

In this page the various image files can be searched ,viewed and downloaded.

Media gallery.

In this page various media files can be searched ,played and downloaded.

Doc gallery

In this page variouos document and text files can be searched by either file name or by text.

Captrue

This page can be used to grap a still and a clip.

❖ Office in-out message board

main page

The page shows the message board frame that show the current status of the employees.

Checkin and checkout page

This page is used to enter the checkin and checkout details.

Personal area page

This page is used is used to enter the personal details of the employee and also to update the information.

4.4 Database design

The database approach to system design places great emphasis on integration, integrity and independence of data. The master table contains the data that are fixed and do not change frequently. The transaction tables are maintained to record daily transactions. Tables have been normalized to avoid data redundancy. Primary key and foreign key are provided for integrity.

Before the database concepts become operational, user had programs that handled their own data independent of other users. It was a conventional file environment with on data integration or saving of common data source application. In a database environment, common data are available across several applications and are used by several users.

Instead of each program managing its own data, authorized users share data across application with a database software managing the database as an entity.

Data structuring is refined through a process called Normalization. Data are grouped in the simplest way possible, so that later changes can be made with a minimum of impart on the data structure.

Normalization is the process of simplifying the relation between data elements in a record. Through normalization, a collection of data in a record structure is replaced by successive record structures. They are simple and more predictable and therefore more manageable.

Various objectives are considered for designing the database such as,

- Control of data integrity
- Control of redundancy
- Control of data security
- Data independence
- System performance
- System compatibility

It was a conventional file environment with on data integration or saving of common data source application. In a database environment, common data are available across several applications and are used by several users.

Some sample tables are shown below:

Tables:

Table name: User details:

Table fields

uid	pwd	name	location	comment	exptime

Table name:Log_details

Table fields

uid	name	logintime	logout time

Table name:note_details

Table fields

uid	domain	topic	date	note	commen

Table name: session details

Table fields

uid	S_dat	stime	domain	topic	chapter

Office inout message board

Table name:User_details

Table fields

uid	pwd	name	location	comment	exptime

Table name:Location_details

Table fields

lid	location	block

Table name: Log_details

Table fields

uid	name	logintime	logouttime

4.3 Process design

A Computer procedure is a series of operations designed to manipulate data to produce output from a computer system. Data flow diagrams are used for representing data flow to represent the complete system.

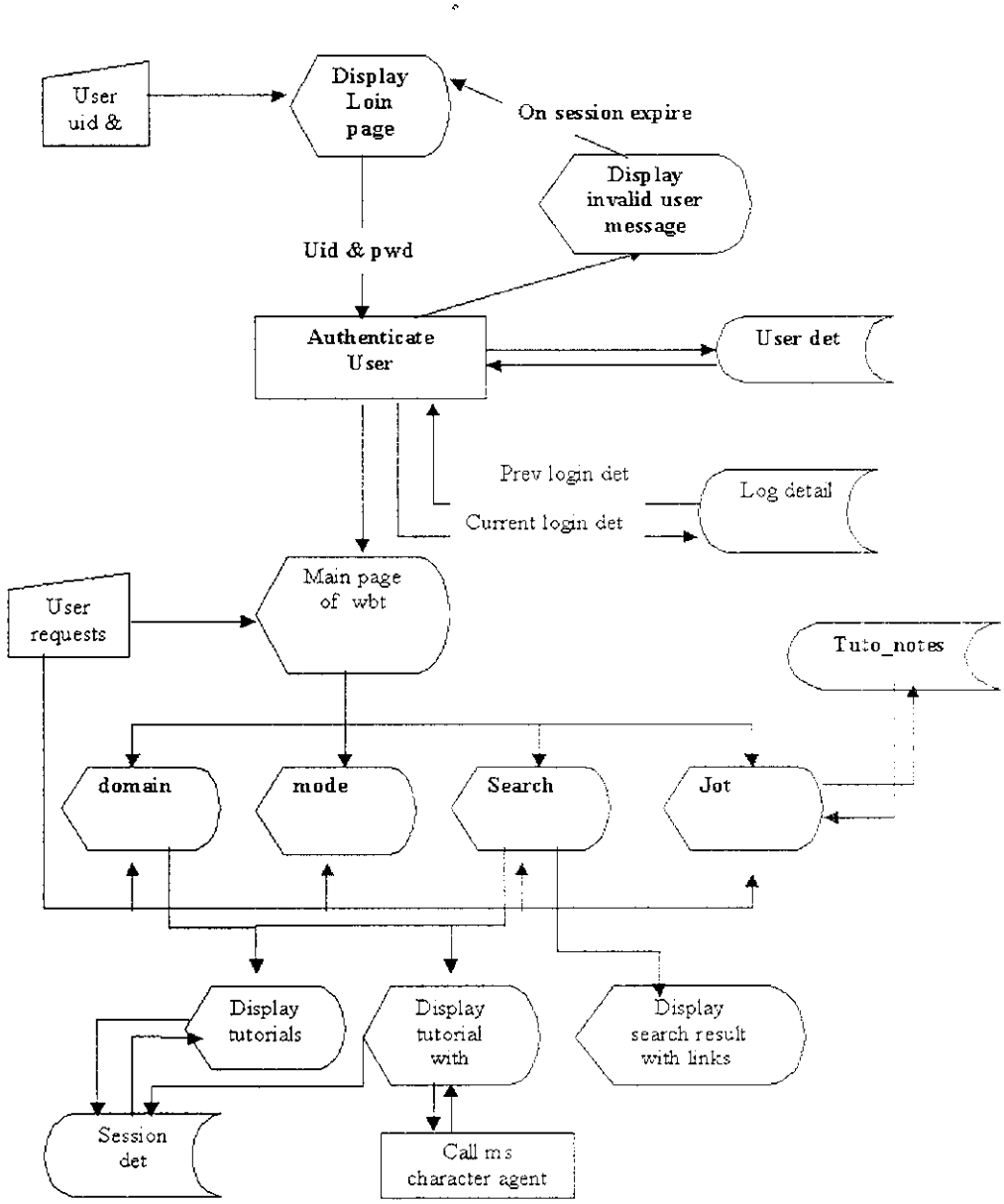
The process design includes elements that are both internal and external to the system .The external elements includes mainly of the user or the entity that gives input to the system.

The processing is determined and is dependent on the input .the input data or the input information is transformed into various intermediate forms before the final result.

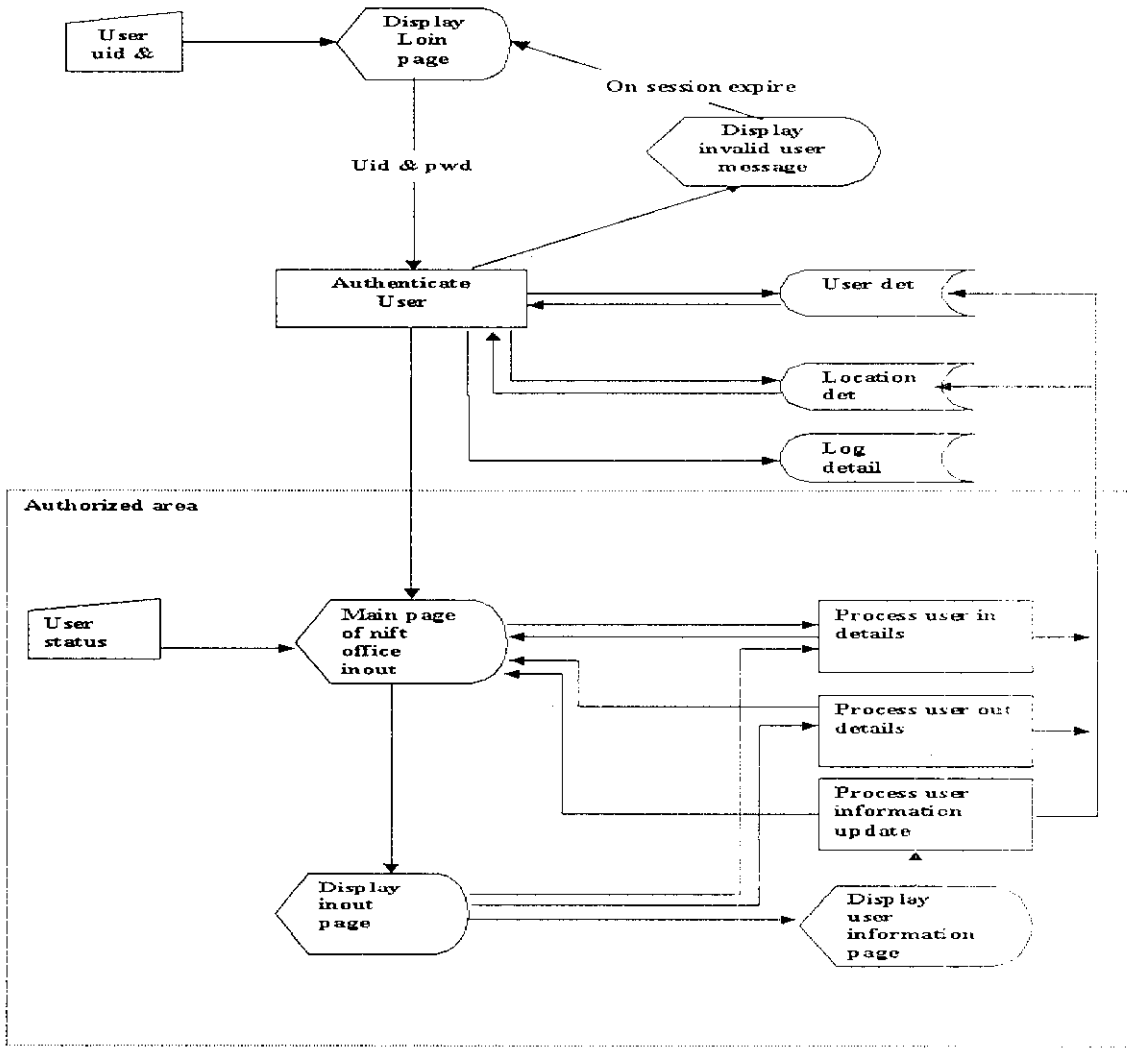
In this package which is a web based application the flow is mainly determined by the links that a user chooses at various levels int the package under normal execution

4.3 Flowchart.

- **Module CBT**



- **Module office in-out message board**



SYSTEM IMPLEMENTATION AND TESTING

5.0 SYSTEM IMPLEMENTING AND TESTING

5.1 SYSTEM IMPLEMENTATION

A crucial phase in the systems lifecycle is the successful implementation of the new system design. Implementation is the stage of project when the theoretical design is turned into a working system. Implementation involves creating computer compatible files, training the operating staff, installing hardware before the system is up and running. A critical factor in conversion is not disrupting the functioning of the organization.

In system implementation, user training is crucial for minimizing resistance to change and giving the new system a chance to prove its worth. The training aids include user manuals, help screens, data dictionary, job aids, etc.

There are three types of implementation:

- Implementation of a computer system to replace a manual system.
- Implementation of a new computer system to replace an existing one.
- Implementation of a modified application to replace an existing one, using the same computer.

Software development is incomplete without any documentation. Documentation for the newly developed system is provided to satisfy the following needs.

- Protect the system when personnel are promoted, transferred or leave.
- Represents long-term money saving because it reduces the cost of training.
- Eases system maintenance by centralizing materials describing the system
- Provides a permanent reference of the system.

System Maintenance

The process of changing a system after it has been delivered and is in use is called software maintenance. There are three types of system maintenance.

- Corrective Maintenance

  It is concerned with fixing reported errors in the software.

- Adaptive Maintenance

  It means changing the software to some new environment such as

  a hardware platform for use with a different operating system

- Perfective Maintenance

  It involves implementing new functional or non-functional system requirements.

5.2 System Testing

Software testing is an important element of software quality assurance and represents the ultimate review of specification, design and coding. System testing makes a logical assumption that if all parts of the system are correct, the goal will be achieved easily. The logical design and the physical design should be thoroughly and continually examined on paper to ensure that they will work when implemented.

When the programmers have tested each program with the test data designed by them, and have verified that these programs link together in the way specified in the computer run chart to produce the output specified in the program suite specification, the complete system and its environment must be tested to the satisfaction of the system analyst and the user.

Objectives of testing

Testing is a process of executing a program with the intent of finding an error. A good test case is one that has high probability of finding a yet undiscovered error. Testing demonstrates that software functions work according to specifications. In addition, data collected from testing provides a full indication of software reliability and some indication of software quality. Testing results in the deduction of a number of errors. Critical modules are tested as early as possible.

Software testing for Inventory Control System has been done during the pre-implementation stage using various software testing strategies and they are discussed below.

TESTING METHODS

Testing is a vital process to the success of any system. At first, the system is tested to see whether it produces correct outputs .Then ,the system is tested for volume of transactions, stress and recovery from failure and usability.

The testing tool used here is silktest2.0.

5.2.1 Functional Testing

Functional testing is performed to specify the operating conditions, Output values and expected results. All the functions in the system are tested with required parameters.

5.2.2 Stress Testing

The purpose of stress testing is to determine the limitation of the system. Stress testing is performed to identify whether the pacakage is able to handle the entire abnormal situation.

5.2.2 Performance Testing

Performance testing is done with this system to verify the response Time,throughput,and primary and secondary memory utilization and traffic rate on data channel and communication links.

The performance of the modules where enhanced with the use of index variables and than checking the load time of the pages.

5.2.3 Structural Testing

Structural testing is performed to examine the internal processing logic of the system in each and every phase.

5.2.4 White Box Testing

White box testing is done with system ,which derives test cases that do the following:

- Guarantee that all the independent paths within a module have been exercised at least once in the package.
- Exercise all logical decisions on their true and false sides.
- Exercise all loops at their boundaries and within their operation grounds.
- One of the test case tools of white box testing is control structure testing.

6. 0 CONCLUSIONS AND SUGGESTIONS

We take immense pleasure in telling you that, 'COMPUTER AIDED Instructional PACAKAGE' was a successful venture. The development of 'COMPUTER AIDED Instructional PACKAGE has made us dwell into the intricacies of software engineering and software development.

We have tried to implement the latest practices in software engineering and have undertaken various testing paraphernalia's. 'COMPUTER AIDED Instructional PACKAGE' has lead us to take deeper insights into Analysis, Design, Coding, Testing, Implementation and Maintenance.

'COMPUTER AIDED Instructional PACKAGE' by and large will satisfy the requirements of the various items as one of the major tasks. This will facilitate easier performing of tasks on the whole.

7. 0 Scope for future development:

The schedule of the project of the project being 2 and month the package developed are a not complete itself though fully functional. there is a great scope for future enhancement and development.

The module computer based can be developed into a complete **"knowledge environment for a web based learning"** online assignments ,worksheets,

Online examination and aptitude testing and with communication tools such as messaging, chat and video conferencing.

The module in-out office message board can be enhanced with a mechanism to automatic detection on computer connected at the terminals and with the facility of web page based online fax and sms.

The module digital library can be enhanced with increased no of inputs through scanning, tv in etc.

8.0 BIBILIOGRAPHY

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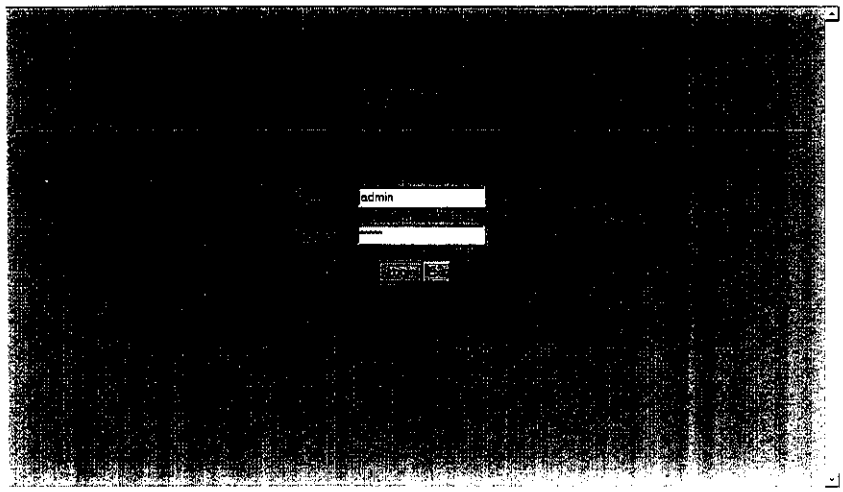
- Alex homer and David Sussman,Professional active server page 3.0. , first edition, 2003,512,616,712.

- Elijah lovejoy,"essential asp for web professionals",pearson education asia ,first edition ,2001,39-78,85-185.

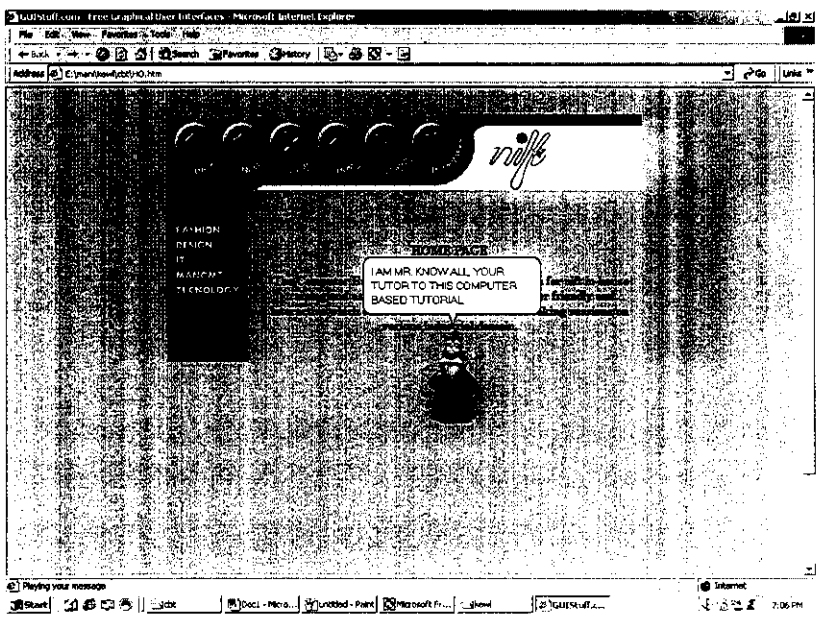
9.0 Appendix

9.1 Sample Screens

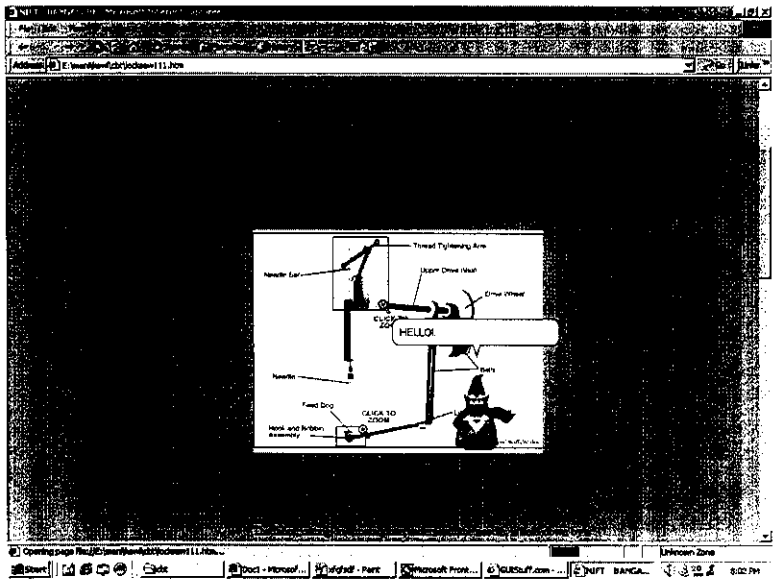
- Login screen



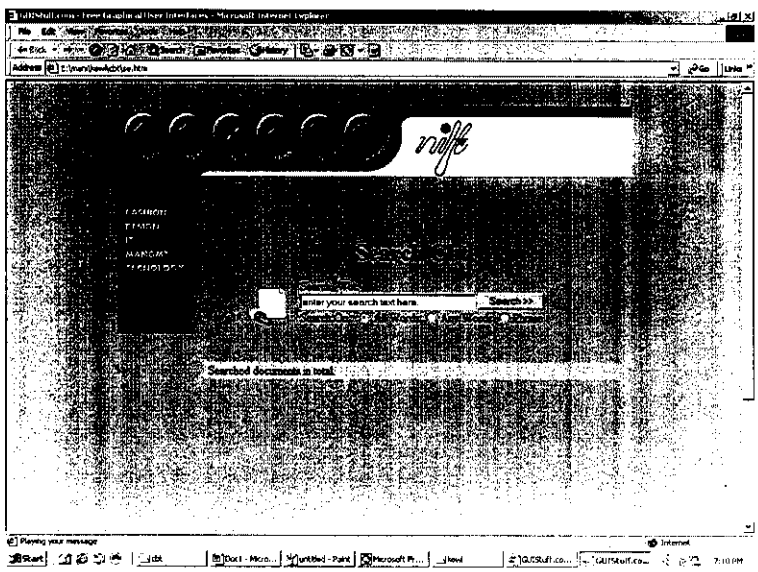
- Cbt Home page.



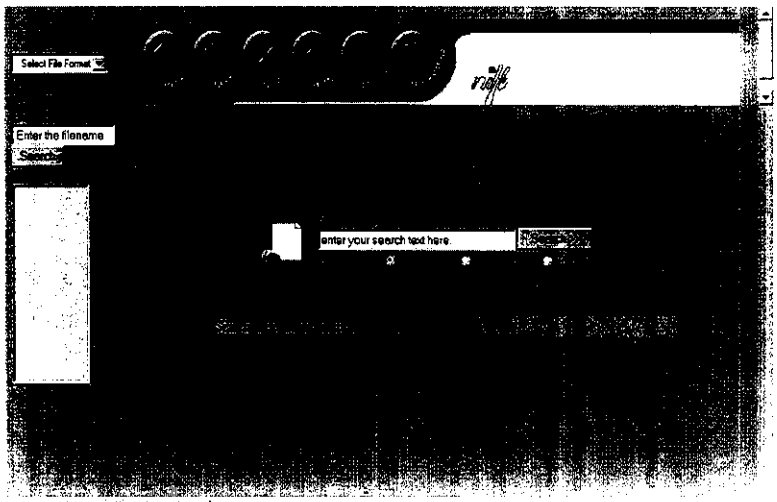
- Tutorial page.



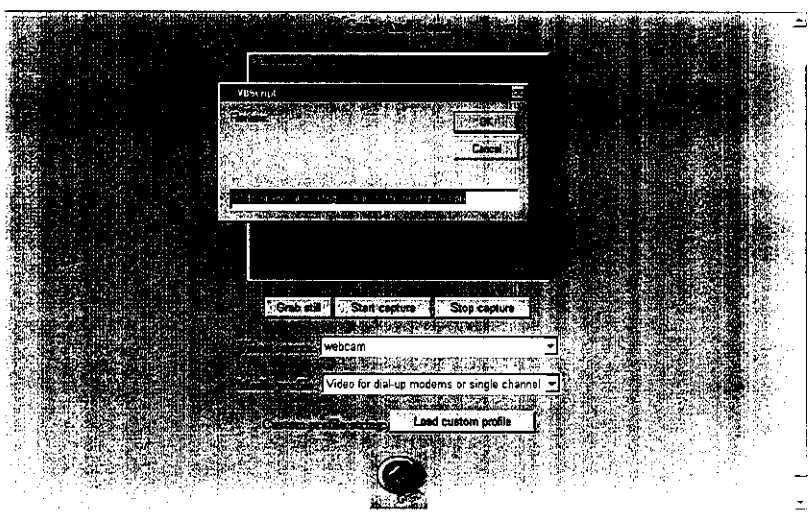
- Cbt Search page.



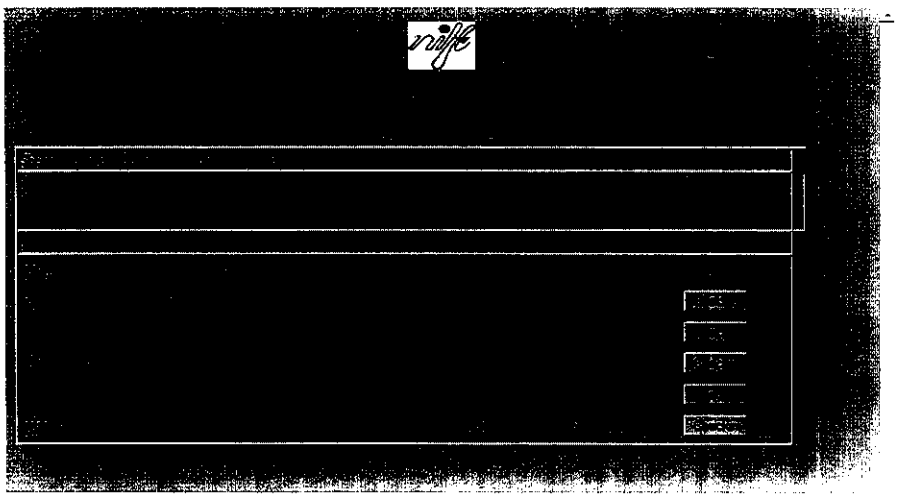
- Digital Libray –Document Gallery



- Digital Libray –Grab/Upload



- Inout board-Home page.



- Inoout board-update information.