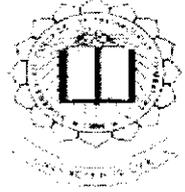


P-323A



**ATTENDANCE AUTOMATION
AND DISCUSSION BOARD USING FINGERPRINT**

PROJECT REPORT

Submitted By

B.MASANAMUTHU

Register No.: 0720300020

*in partial fulfillment for the award of the degree
of*

MASTER OF COMPUTER APPLICATIONS

in

COMPUTER APPLICATIONS

KUMARAGURU COLLEGE OF TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Coimbatore)

MAY 2010

KUMARAGURU COLLEGE OF TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Coimbatore)

COIMBATORE – 641 006.

Department of Computer Applications

PROJECT WORK

MAY 2010

This is to certify that the project entitled
**ATTENDANCE AUTOMATION
AND DISCUSSION BOARD USING FINGERPRINT**

is the bonafide record of project work done by

B.MASANAMUTHU

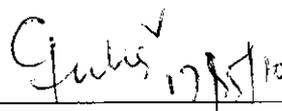
Register No: 0720300020

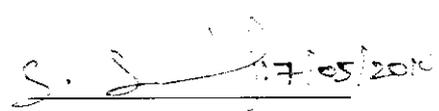
of MCA (Computer Applications) during the year 2009-2010.


Project Guide


Head of the Department

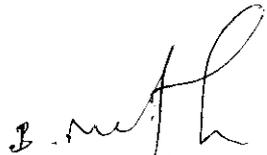
Submitted for the Project Viva-Voce examination held on 17/5/2010


Internal Examiner


External Examiner

DECLARATION

I affirm that the project work titled **ATTENDANCE AUTOMATION AND DISCUSSION BOARD USING FINGERPRINT** being submitted in partial fulfilment for the award of **MASTER OF COMPUTER APPLICATIONS** is the original work carried out by me. It has not formed the part of any other project work submitted for award of any degree or diploma, either in this or any other University.


(Signature of the Candidate)

B.Masanamuthu

0720300020

I certify that the declaration made above by the candidate is true

Signature of the Guide,


7/5/10

Ms. R. VEENA SHREE, Lecturer

May 2, 2010

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Masanamuthu B (Reg. No 0720300020), Final Year, MCA student of Kumaraguru College of Technology has successfully completed his Project on "Attendance Automation and Discussion Board using Fingerprint" in our organization, for the period December 01, 2009 to April 30, 2010. His Performance during this period is good.

For S3 Technologies



Ranjith Santhosh Kumar D.S

Human Resource

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ABSTRACT

Attendance automation and discussion board used to track the employee attendance daily. Minutiae (are major features of a fingerprint, using which comparisons of one print with another can be made) based fingerprint require highly accurate templates for enrollment. As the result, the process cut down administrative time, safeguards from error, and saves a large amount of money that could have been lost due to mishandled time cards and employees punching in for each other. It is a complete and a cost effective solution for Attendance and security. The attendance system can reduce errors in enforcement of company attendance policies. The general discussion can be done between the employees. Employees can post their questions and discussion any one can reply for that question once employee register. Employees can send the private messages between them.

This project is developed in Vb.net and Asp.net as Front-end and Microsoft Sql-Server as Back-end.

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CHAPTER 1

INTRODUCTION

1.1 ORGANIZATION OVERVIEW

S3 provides a full range of business process consulting and information technology solutions to clients worldwide in the property / casualty and health insurance business, and to other industries. We help our clients identify ways to increase the company's growth and control costs through improved business processes and application of information technology.

S3 has dedicated offshore engineering resources to augment our U.S.-based team. Our dedicated Offshore Development Centers (ODCs) are certified for ISO9000 and CMMI Level 3(Capability Maturity Model Integration).

- High quality, fully documented application and system development
- Intellectual property protection
- State of the art software platforms and tools
- Skilled, certified, and experienced professionals
- Proven offshore development process and methodology
- Secure physical and network environments

Our Vision

“Dreaming a vision is possible and realizing it is our goal”.

Our Mission

We have achieved this by creating and perfecting processes that are in par with the global standards and we deliver high quality, high value services, reliable and cost effective IT products to clients around the world.

1.2 PROJECT OVERVIEW

Attendance automation and discussion board used to track the employee attendance daily. Minutiae based fingerprint require highly accurate templates for enrollment. We propose a system in which fingerprint verification is done by using extraction of minutiae technique and the system that automates the whole process of taking attendance, Manually which is a laborious and troublesome work and waste a lot of time, with its managing and maintaining the records for a period of time is also a burdensome task. For this purpose we use fingerprint verification system using extraction of minutiae techniques.

The Fingerprint is the feature pattern of one finger or an impression of friction ridges found on inner surface of finger. Everyone in this world has his own fingerprint with the permanent uniqueness. A fingerprint is made up of ridges and furrows, which shows good similarities like parallelism and average width.

Employees can register their names in the discussion board. Once the employees registered, they can post the messages or questions. Any one can reply for that post. Everyone can view the discussions but only registered members can post or reply questions.

Employees can send the private messages between registered members. Administrator has the full rights to the discussion board. Admin can create new user and admin can disable and enable the users. Employees can change the profile and password.

Finger print enrolment and verification:

Enrolment is the process of capturing a person's fingerprint (using a fingerprint capture device). During the enrolment process project saves a person's fingerprint to a database.

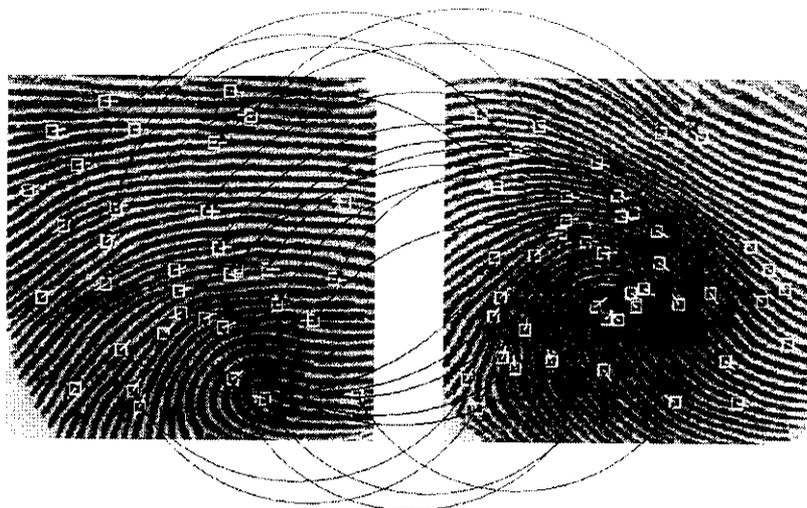
When enrolling features from a finger are extracted and saved as a fingerprint template for a future comparison against other fingerprint templates. The following instructions describe a typical fingerprint enrolment scheme.

- Get a person's identification number.
- Capture a person's fingerprint using a fingerprint scanner.
- Extract a fingerprint features from a fingerprint image.
- Associate a person with his fingerprint.
- Save extracted features (a template) to a database

Verification is the process when a captured fingerprint is compared to an enrolled fingerprint in order to determine whether the two match.

During a verification a scanned fingerprint is compared with the one saved to a database and is decided whether the two match. The following scheme is usually used for fingerprint verification:

- Get a person's identification number.
- Capture a person's fingerprint using a fingerprint scanner.
- Extract a fingerprint features from a fingerprint image for the purpose of verification.
- Get a fingerprint template (the one that was saved to a database earlier) by identification number
- Compare two fingerprints: the one that was scanned with the one that was saved to database (refer fig 1.2.1).
- Perform an action according to the verification result (eg. notify if two fingerprints matches).



(Fig 1.2.1) Fingerprint verification

CHAPTER 2

SYSTEM ANALYSIS

System analysis involves the process of diagnosing, interpreting and helps us to propose a new system. This chapter describes existing and proposed system.

2.1 Existing System

- The employee attendance is maintained by manually with some electronic device (barcode reader).
- One employee card can be swiped by others.
- There is loss to the company.
- There is no discussion between the employees.
- More amount of money is spent by company for making id cards.
- No security. Payroll calculated by manually.

2.2 Proposed System

- The Finger Print based employee attendance system check the finger print of each employee in-time and out-time.
- It is a complete and a cost effective solution for Time & Attendance and security.
- Employees can view their salary report and performance.
- Employees can discuss their topics under forum.
- Employees can send the private messages in discussion forum.

2.3 Module Functionalities

The modules of the projects are

- Department Entry
- Employee Details
- Attendance Recording
- Discussion Board
- Holiday Entry

Department Entry

Administrator can enter the various departments which are required for the company. Based on the department employees can inserted.

Employee Details

Employees' details are entered by administrator. In this employee fingerprint can be enroll. Two fingerprint templates is captured by admin and verify two templates. Check the database and verify with captured template. Save the details.

Attendance Recording

Employees should enter their attendance every day. Employee should enroll their finger before 10 A.M every day morning. If they enroll two times before 10 A.M he/she will be absent in the morning. Similarly in the evening and after noon.

Holiday entry

Administrator can enter the holiday details which are based on company holidays. On holiday date the attendance recording is not visible.

Discussion board

Under this module employees can post their message or doubt. Only registered members can post the messages. Posted messages can be viewed by any one entered in to the site.

Admin only can approve the user. Admin has full rights to disable the users at anytime. Admin can add the users manually.

Private messages can be sent between the users. The users can change their password.

2.4 FEASIBILITY STUDY

The main purpose of feasibility study is to determine the problem is worth solving. Feasibility study is high-level capsule version of the extra system analysis and design process. The success of a system also lies in the amount of feasibility study done on it. There are three main feasibility tests performed. They are

Operational Feasibility

During feasibility analysis, operational feasibility study is necessary as it ensures that the project developed is successfully implemented in the organization. According to software engineering principles, operational feasibility or in other words usability should be high. In this project, a thorough analysis is done and found that the system is operational.

Technical Feasibility

Technical feasibility takes care of the technical issues that are to be tested to see whether the system is feasible. Technical feasibility analysis makes a comparison between the levels of technology available and the technology that is needed for the project. The level of technology is determined by factors such as the software tools available, the machine environment, platform etc since, the resource required for the development of the project is already available, and this project is technically feasible.

Economical Feasibility

This is the most important aspect that has to be critically evaluated. The costs and benefits have to be estimated. Considering the cost factor, the system will be economically feasible.

CHAPTER 3

DEVELOPMENT ENVIRONMENT

This chapter describes the hardware and software requirements of the application.

3.1 HARDWARE REQUIREMENTS

Processor	-	Intel core 2 duo
Hard Disk Capacity	-	80GB
RAM	-	512MB
Speed	-	2.66 GHz
Monitor	-	Samsung
Floppy Disk Drive	-	1.44MB
Finger Hamster	-	Nitgen

3.2 SOFTWARE REQUIREMENTS

When an application project is considered the three basic software requirements are the platform in which the project is developed, the front-end tool that provides the interaction with the user and back-end tool that stores the data.

Operating system	:	Windows XP (SP 2)
Front end	:	ASP.NET, VB.NET
Back end	:	SQL SERVER 2005

3.3 PROGRAMMING ENVIRONMENT

The .NET Framework is a new computing platform that simplifies application development in the highly distributed environment of the Internet.

OBJECTIVES OF .NET FRAMEWORK:

- To provide a consistent object-oriented programming environment whether object codes is stored and executed locally on Internet-distributed, or executed remotely.
- To provide a code-execution environment to minimizes software deployment and guarantees safe execution of code.
- Eliminates the performance problems.
- There are different types of application, such as Windows-based applications and Web-based applications. To make communication on distributed environment to ensure that code be accessed by the .NET Framework can integrate with any other code.

ASP.NET

ASP.Net is part of the whole, NET framework, built on top of the Common Language Runtime (also known as the CLR) - a rich and flexible architecture, designed not just to cater for the needs of developers today, but to allow for the long future we have ahead of us. What you might not realize is that, unlike previous updates of ASP, ASP.Net is very much more than just an upgrade of existing technology – it is the gateway to a whole new era of web development.

ASP.Net is a feature at the following web server releases

- Microsoft IIS 5.0 on WINDOWS 2000 Server
- Microsoft IIS 5.1 on WINDOWS XP

ASP.Net has been designed to try and maintain syntax and run-time compatibility with existing ASP pages wherever possible. The motivation behind this is to allow existing ASP Pages to be initially migrated ASP.Net by simply renaming the file to have an extension of .aspx.

Benefits of ASP.Net

The .NET Framework includes a new data access technology named ADO.Net, an evolutionary improvement to ADO. Though the new data access technology is evolutionary, the classes that make up ADO.Net bear little resemblance to the ADO objects with which you might be familiar. Some fairly significant changes must be made to existing ADO applications to convert them to ADO.Net. The changes don't have to be made immediately to existing ADO applications to run under ASP.Net, however.

ADO will function under ASP.Net. However, the work necessary to convert ADO applications to ADO.Net is worthwhile. For disconnected applications, ADO.NET should offer performance advantages over ADO disconnected record sets. ADO requires that transmitting and receiving components be COM objects. ADO.Net transmits data in a standard XML-format file so that COM marshaling or data type conversions are not required.

Structured Query Language (SQL)

To work with data in a database, you must use a set of commands and statements (language) defined by the DBMS software. There are several different languages that can be used with relational databases; the most common is SQL. Standards for SQL have been defined by both the American National Standards Institute (ANSI) and the International Standards Organization (ISO). Most modern DBMS products support the Entry Level of SQL-92, the latest SQL standard (published in 1992).

4. SYSTEM DESIGN

System design is the most creative and challenging phase in the life cycle of system development. The requirements of the proposed are detailed by use of use cases and data flow diagrams.

4.1 DATA FLOW DIAGRAM

Data flow diagrams are commonly used during problem analysis and design. A DFD shows the flow of data through a system. It views the system as a function that transforms the input into desired outputs. A DFD aims to capture the transformation that takes place within a system into output data so that eventually the output data is produced.

The agent that performs the transformation of data from one state to another is called a process (Bubble). The processes are shown by named circles and dataflow are represented by named arrows. A square defines a source or destination of system data. An open rectangle is a data source.

The dataflow diagram can be used as a tool for business planning and strategic planning. It is known as 'bubble chart' or 'data flow graphs' or 'program graph'. The components of the dataflow diagram are the process, the flow, the store and the terminator.

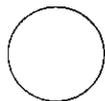
The representation of the four components of dataflow diagram is:



- The terminator of the dataflow diagram.



- The tables that are used in the system.



- The process that are used in the system.

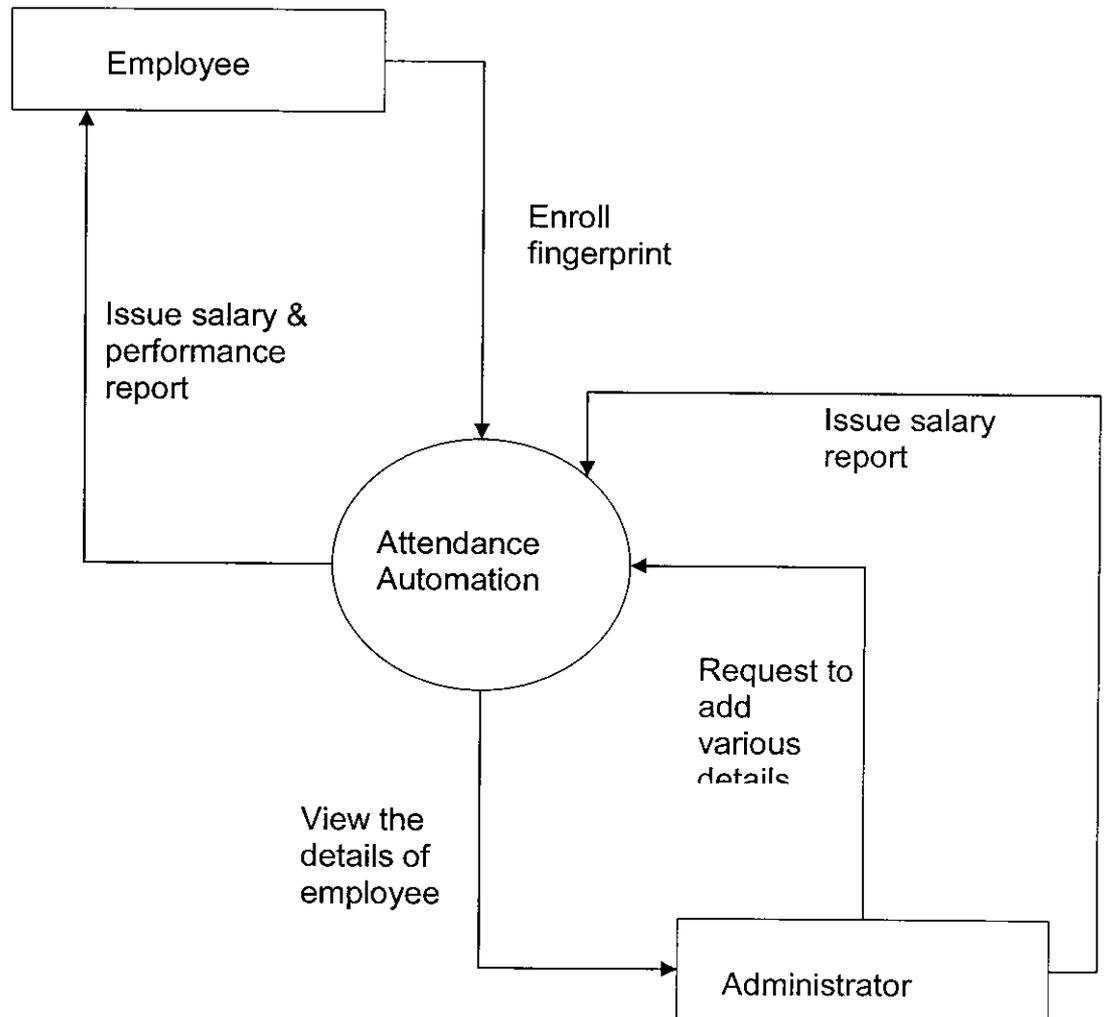


- The flow of data in the system.

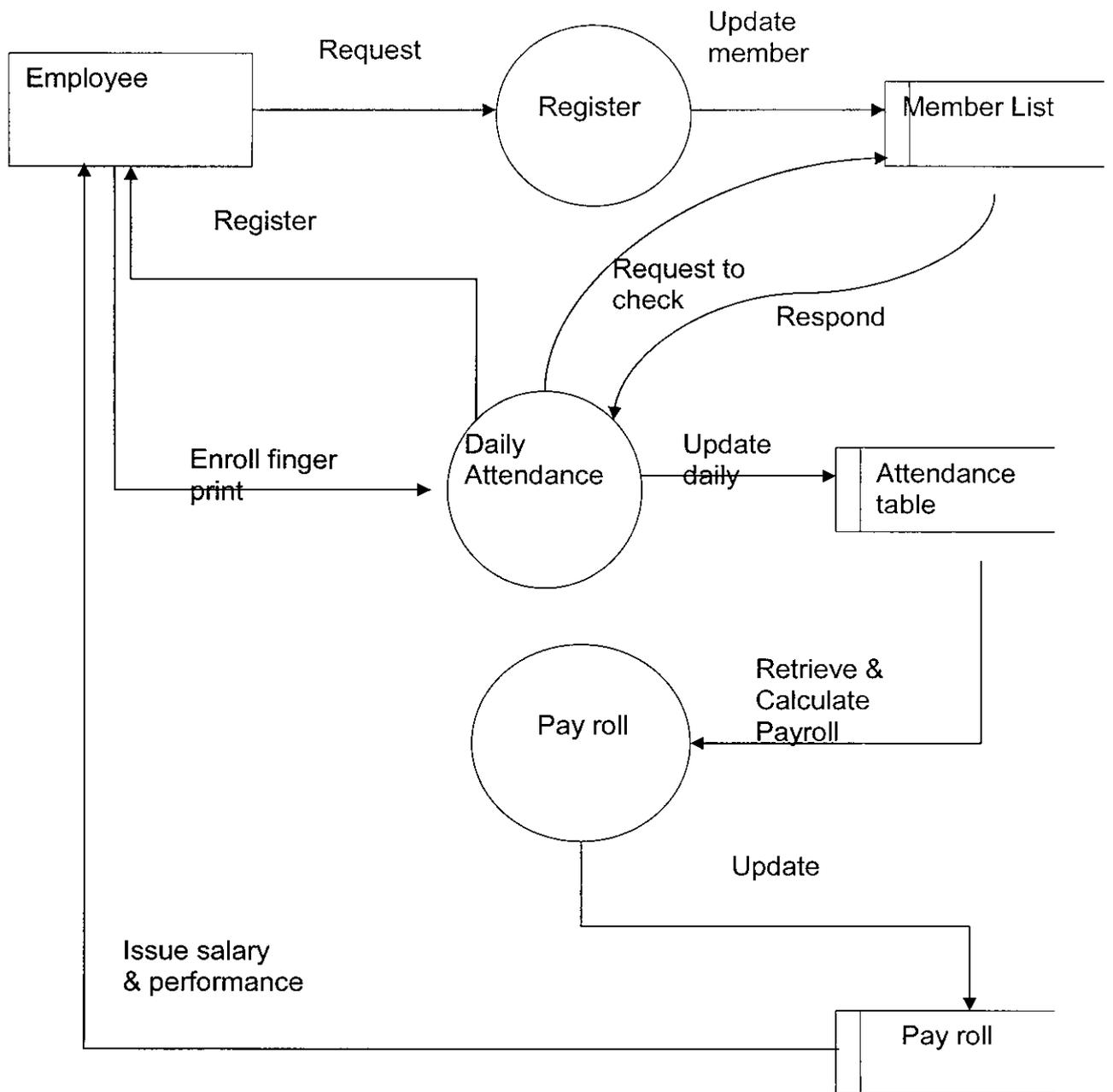


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4.1.1 Level -0



4.1.2 Level -1



4.2 Input Design and Output Design

Input design is a process of converting the user-originated inputs into the computer-based format. The goal of designing input data is to make the automation as easy and free from errors as possible. The requirements of input design such as user friendliness, consistent format and interactive dialogues for giving the right message and help for the user at right time are also considered for the development of the project.

The inputs form used in this system are:

a. Department Entry Form

It allows admin to enter the various departments.

b. Employee Details Form

It allows admin to enter the employee details and enroll their fingerprint.

c. Holiday Entry Form

Admin can enter the holiday details based on company holiday.

d. Attendance Recording Form

Employees can enroll their fingerprint for their attendance process. Every one should have to enroll otherwise he/she will be absent on that day.

e. Discussion Forum

Employees can post their messages or question and reply to that concern posts. Private messages can be send between employees.

4.2.1 Output Design:

The Output is mainly used to communicate with the employees, processing the input data given by the user. It is documented in each stage of the project to ensure error free output. The output screens are designed in a very simple and easy to understand format. All user options are presented in well-formatted forms. The user friendliness of the output screen makes it very easy to use. The quality refers to the way by which the output is presented to the user.

4.3 Database Design

A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. During database design analyst studies the data to determine which data will require store on external storage device. Here, the analyst is responsible for designing a control system to prevent tampering with the data stored by the computer.

The details about the relevant data for the system are first identified. According to their relationship, tables are designed through following method.

- The data type for each data item is decided.
- The tables are then normalized.

4.3.1. Table Name Department details

Primary key: Depid

Field name	Data type	Description
Depid	Numeric(18)	Department id
Depname	Varchar2(25)	Department name
Block	Varchar2(2)	Block name

4.3.2. Table Name: Employee details

Primary key: Empid

Field name	Data type	Description
Empid	Numeric(18)	Employee id
Name	Varchar2(25)	Employee name
Dob	Date	Date of birth
Gender	Varchar2(2)	Gender
Address	Varchar2(25)	Address
Phone	Numeric	Phone number
Mail-id	Varchar2(30)	Email id
Finger	Image	Employee Finger print
Picture	Image	Employee picture

4.3.3. Table Name: Attendance Recording

Primary Key: Attenid

Foreign Key: Empid

Field name	Data type	Description
Attenid	Numeric(18)	Attendance id
Login	Datetime	Login time
Logout	Datetime	Logout time
Empid	Numeric(18)	Employee id
picture	image	Employee picture

4.3.4. Table Name: Holiday Details

Primary Key: HolidayId

Field name	Data type	Description
HolidayId	Numeric(18)	Holiday Id
Name	Varchar2(25)	Holiday Name
Date	Date time	Holiday Date

4.3.5. Table Name: User account

Primary key: user id

Field name	Data type	Description
User id	Integer(18)	User Identification
User name	Varchar(20)	User name
Email	Varchar(20)	Email id
Password	Varchar(10)	Password
Interest	Varchar(25)	Interest on topic

4.3.6. Table Name: Topics

Primary key: topic id

Foreign Key: user id

Field name	Data type	Description
Topic id	Integer(18)	Topic identification
Forum id	Integer(18)	Forum id
User id	Integer(18)	User identification
Subject	Varchar2(20)	Forum subject
Last message id	Integer(18)	Message identification
View count	Integer(18)	No.of counts
Reply count	Integer(18)	No.of reply counts

4.3.7. Table Name: Forum table

Primary key: forum id

Field name	Data type	Description
Forum id	Integer(18)	Forum identification
Title	Varchar2(20)	Title
Description	Varchar2(25)	Description

4.3.8. Table Name: Messages table

Primary key: message id

Foreign Key: topic id, user id

Field name	Data type	Description
Message id	Integer(18)	Message id
Topic id	Integer(18)	Topic identification
User id	Integer(18)	User identification
Body	Varchar2(MAX)	Message content
Creation date	Datetime	Message create date

4.3.9. Table Name: Personal message table

Primary key: message id

Field name	Data type	Description
Message id	Integer(18)	Message id
From user id	Integer(18)	Source user id
To user id	Integer(18)	Destination user id
Body	Varchar2(MAX)	Message content
Creation date	Date time	Message create date

CHAPTER 5

TESTING

Testing is executing a program to test the logical changes needed in it and with intention of finding errors. Tests are conducted to find discrepancies between the new system and its original objective, current specifications and documents

5.1 Unit testing

In unit testing, we have to test the program making up the system. Unit testing focuses first on the modules independently of one another, to locate errors. This enables within that module alone.

In this project, each page was tested separately as a unit. The flow of control and data through that page was tested. Each page is tested with the previously prepared test cases to find cases to find errors in the page. After rectifying the errors, once again it was tested to ensure whether there was no error.

5.2 Integration Testing

Data can be lost across any interfaces. Once module can have an adverse effect on another, sub functions when combined, may not produce the desired major functions. Integrations testing for conducting tests to uncover errors associated within the interface. The objective is to take unit-tested module and build a program structure. The entire module are combined and tested as whole.

In this project, top down integration testing was followed. For example, first the user should give the name of valid username. If the user name is not valid this will show the message as “This username not available”. This process is continued from the page level to module level and finally the whole system is tested

5.3 System Testing

System testing is actually a serious of different tests, whose primary purpose is to fully exercise the computer-based system. This helps in verifying that all the system elements have been properly integrated and perform the allocated functions. It verifies the entire product after having integrated all software and hardware components, and validates it according to the original project requirement.

5.3.1 Security Testing

Security testing is important in system testing. Testing is done to ensure that a user with respective rights can only view the various forms and reports presented by Attendance Automation & discussion board. Only the admin can enter into the admin option pages. If employees or others try to perform something beyond his assigned rights corresponding messages should be displayed. Then the system displays in such cases displays an error message.

Another security issues involves the sensitive data in the system. The system is highly secure with authentication fixed at various levels of the hierarchy.

5.3.2 Stress Testing

Stress Testing executes a system in a manner that demands resources in abnormal quantity, frequency or volume. Attendance automation and discussion board was stress tested by all internal users of authorized service vendors in the project and accessing simultaneously to various modules in the system. All the reports and the screens are tested for their validity and values in the database tables are checked for their correctness and consistency. After successful testing of the system, it was ready for implementation.

5.4 Maintenance

The process of making changes and modifications to the system after it has been delivered implemented and is in use called software maintenance.

Corrective Maintenance

It is concerned with fixing reported errors in software. They are coding errors and design errors.

Adaptive Maintenance

It is concerned with changing the software to source and to adapt to the new and changing environment.

Defective Maintenance

It involves implementing new functional or non-functional system requirements to ensure more effective execution of the system.

Perceptive Maintenance

It mainly deals with accommodating new or changed users requirements. It also includes activities to increase the system performance or to enhance its user interface. The objective of perceptive maintenance should be to prevent failures and optimize the software.

Preventive Maintenance

It concerns activities aimed at increasing the system's maintainability such as updating documentation adding comments, improving modular structure of the system.

CHAPTER 6

SYSTEM IMPLEMENTATION

6.1 Implementation Process

System Implementation is the part of the software engineering life cycle, where, the design artifacts are converted to a working application. Coding is done in this stage using an framework and programming language, which would solve the specific problem the best way. Once the design is coded into a working application, it has to be verified, validated and tested in detail. The tested product if successful is deployed in the user environment.

6.2 System Verification

Verification testing checks whether the product development is moving towards the actual product needed by the customer requirements and specification verification is done in a step by step process.

In this System, verification was done during the development itself. Each database bindings are verified after binding to test whether the control is bound to the right data field.

6.3 System Validation

Validation testing is done to ensure whether the work steps and deliverables during the project are acceptable. It verifies whether right data is being accessed and performs the functions properly.

In the Attendance Automation, for example it verifies whether the employee's finger print template is available in existing database and checks the two templates enrolled by employee. It determines the correctness of the final software product by a development project with respect to the user needs requirements.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

7.1 Conclusion

The project titled “ATTENDANCE AUTOMATION AND DISCUSSION BOARD” was designed to efficiently evaluate the employee attendance thoroughly through a fully automated system. The system was tested with different employee fingerprints and the performance of the system was found to be efficient. All efforts have been made to understand the system wholly and understand all the details. Much of the process is automated and hence the chance of human errors is limited.

The successful completion of the system results in:

- The quality of the attendance system has been improved.
- Salary calculation has been automated.
- Security is high with help of biometrics.

7.2 Future Enhancement

“Attendance Automation and Discussion Board” will be enhanced future with following features:

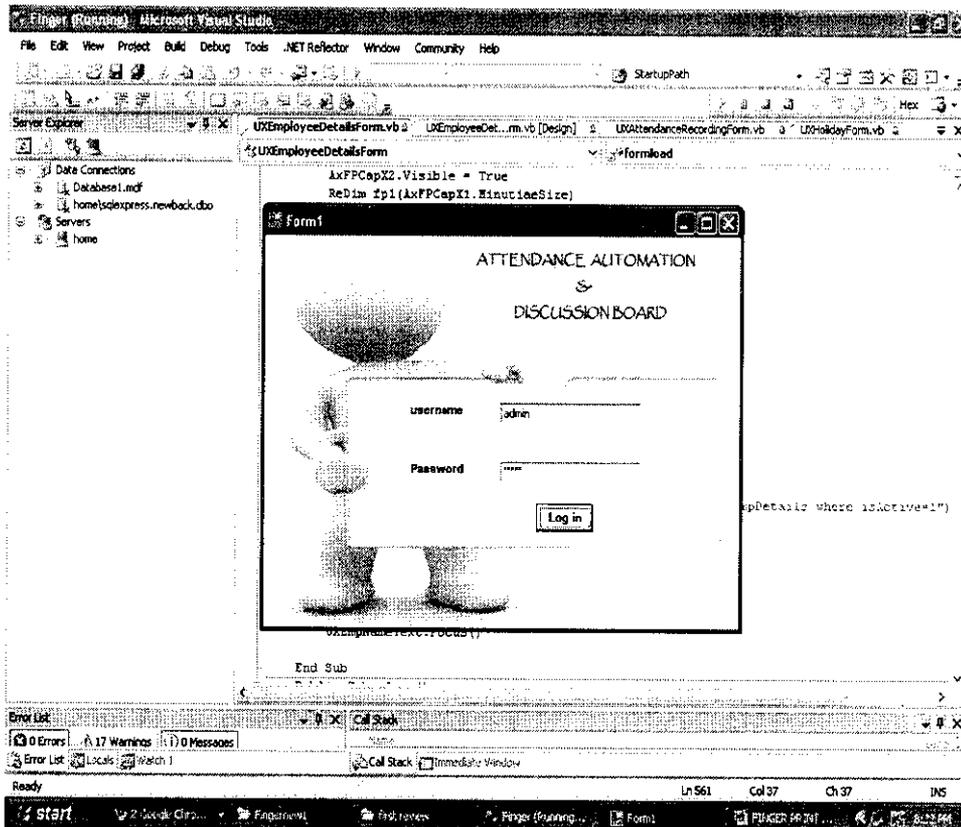
- The system can be enhanced with face recognition technology instead of finger print for better security.

CHAPTER 8

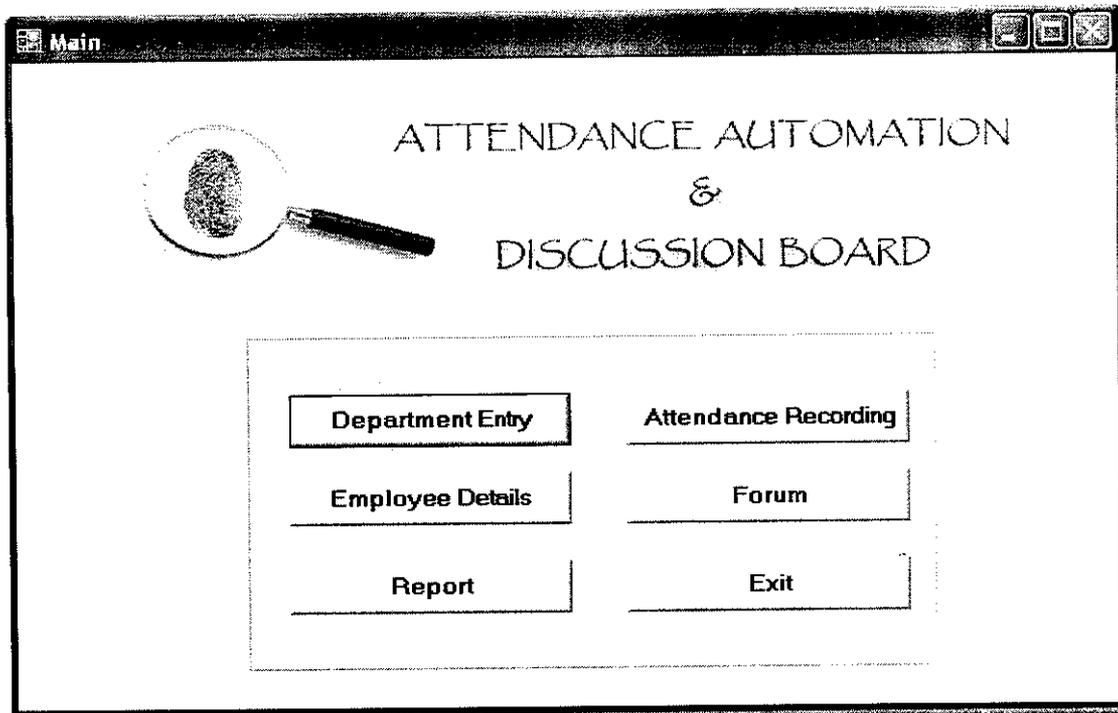
APPENDICES

8.1 Sample Screens

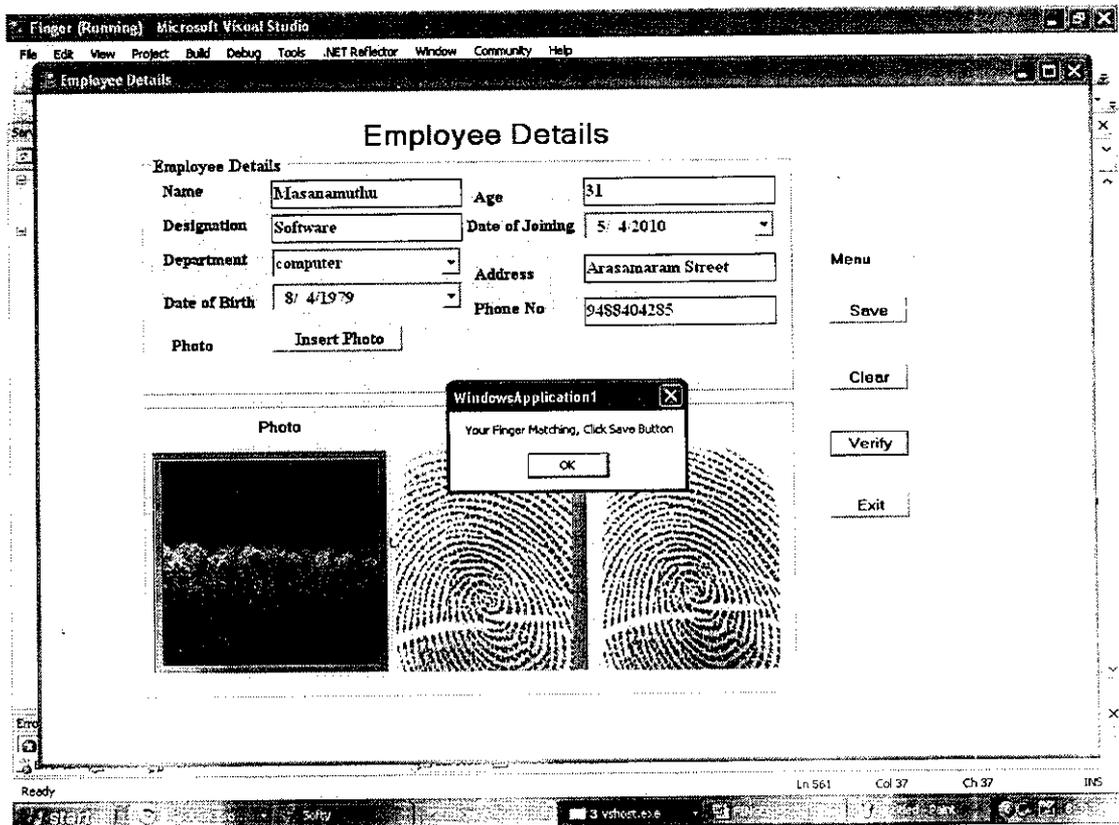
Login Form



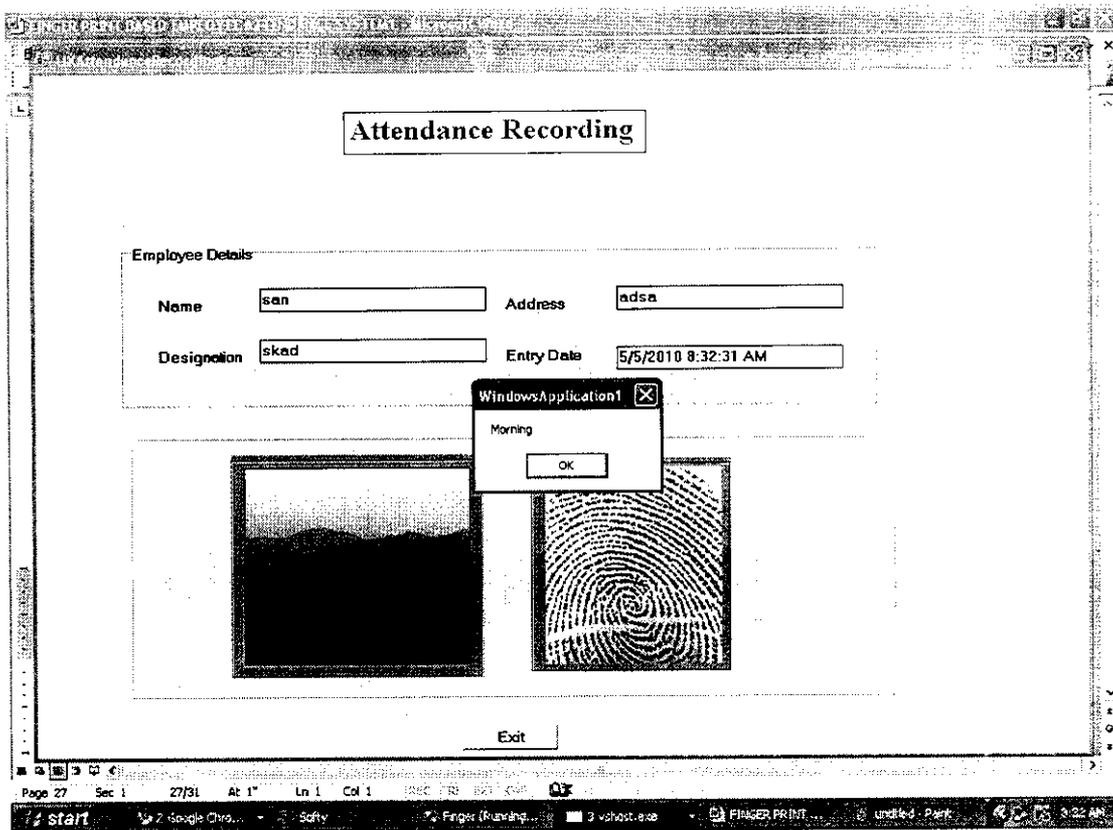
Selection form



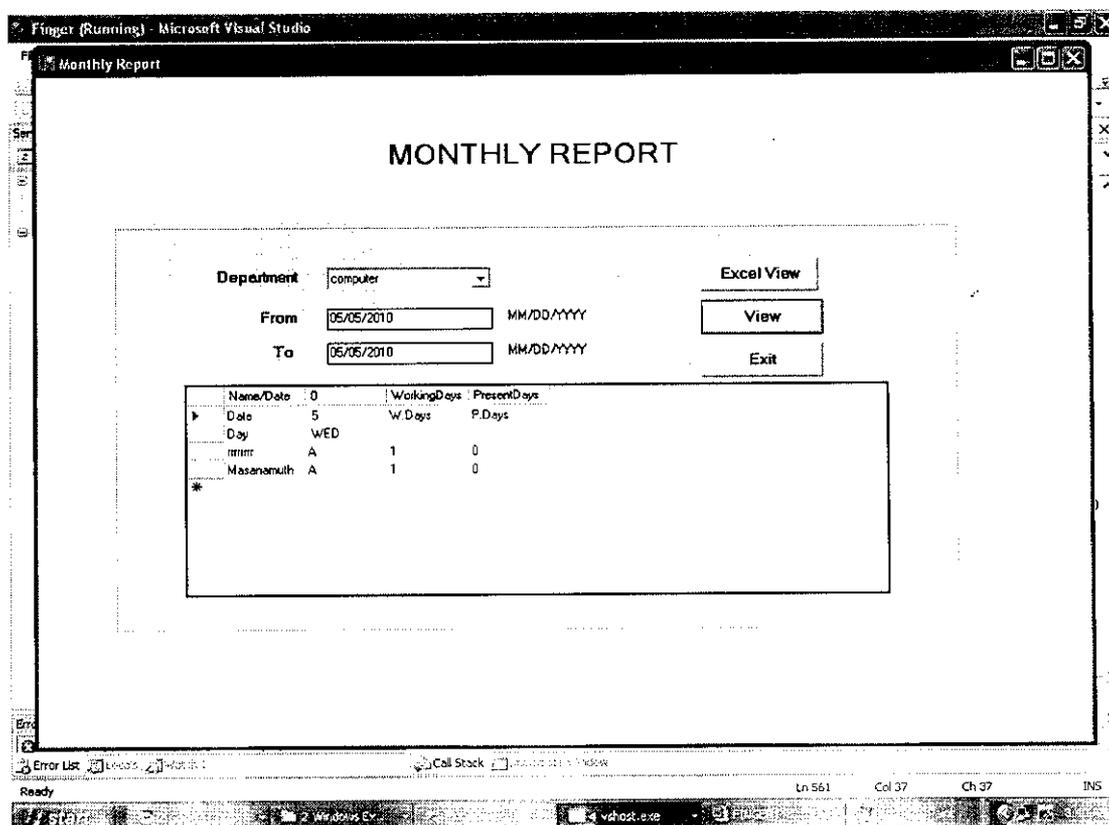
Employee Fingerprint Matching



Employee attendance recording



Attendance monthly report



Employee report

	name	designation	dateof birth
san	skad	4/24/1	
mask	aaa	4/25/2	
massmuthu	abc	4/26/1	
wenan	sjhjds	4/29/2	

Attendance report in excel view

		Attendance Report																			
		From : 01-04-2010							To : 05-05-2010												
Date		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Day		MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
san		A	A	A	A	A	A		A	A	A	A	H	A		A	A	A	A	A	A
mask		A	A	A	A	A	A		A	A	A	A	H	A		A	A	A	A	A	A
massmuthu		A	A	A	A	A	A		A	A	A	A	H	A		A	A	A	A	A	A
wenan		A	A	A	A	A	A		A	A	A	A	H	A		A	A	A	A	A	A

Discussion Home page

net - Forums - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites

Address http://localhost:1467/Dashboard/forum1-net.aspx

home recent topics recent posts

DISCUSSION BOARD

user: _____
psw: _____
 remember me | [lost password](#) | [register](#)

Home » net

Visual C# <small>from mass</small>	<small>Created on</small> Thu, 4 Mar, 10, 10:35 PM - mass 4 1
Datastructures <small>from mass</small>	<small>Created on</small> Mon, 22 Feb, 10, 8:42 AM - mass 7 1

Home » net

Local intranet

start Taskbar Enrollment is the pr... Dashboard (Runnin... net - Forums - Ma... Microsoft PowerPol... 7:51 AM

Add new post page

http://localhost:1467/Dashboard/addpost.aspx?ForumID=1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address http://localhost:1467/Dashboard/addpost.aspx?ForumID=1 Go

DISCUSSION BOARD

mass | my profile | sign out

#1

Add new post

Subject: IIS server

B I U

What is the use of IIS Server?.....

add message

attach files

create a poll

Done Local intranet

start first review Enrollment in the pr... Dashboard (Paw... http://localhost:146... Microsoft PowerPoi...

Create poll page

http://localhost:1467/Dashboard/addpost.aspx?ForumID=1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address http://localhost:1467/Dashboard/addpost.aspx?ForumID=1 Go

DISCUSSION BOARD

mass | my profile | sign out

#1

Add new post

Subject: java

B I U

java can run in different platforms...

add message

attach files

create a poll

Poll Question: Web designing

Poll option: net

Poll option: java

Poll option: HTML

Poll option: CSS

Done Local intranet

start first review Enrollment in the pr... Dashboard (Paw... http://localhost:146... Microsoft PowerPoi...

Poll view page

java - net - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address http://localhost:1467/Dashboard/messages.aspx?TopicID=6&MessageID=6

DISCUSSION BOARD

Home » net » Java

Web designing

.Net: 0
Java: 1
HTML: 0
C#: 0

add reply

java can run in different platforms...

#1

mass

add reply

Home » net » Java

start

Send private message page

http://localhost:1286/AspNetForum_Trial/privateinbox.aspx - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address http://localhost:1286/AspNetForum_Trial/privateinbox.aspx

home recent topics recent posts users

DISCUSSION BOARD

mass | my profile | sign out

#1

Home » Profile » Personal messages - Inbox

mutlu

pages: 1

Done

start

CHAPTER 9

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BOOKS:

1. Alistair McMonnies, “**Object-oriented programming in Visual Basic.NET**”, Pearson Education, and ISBN: 81-297-0649-0, First Indian Reprint 2004.
2. Jittery R.Shapiro, “**The Complete Reference Visual Basic .NET**” Edition 2002, Tata McGraw-Hill, Publishing Company Limited, New Delhi.
3. Robert D.Schneider, Jetty R.Garbus, “**Optimizing SQL Server**”, Second Edition, Pearson Education Asia, ISBN: 981-4035-20-3

WEBSITES:

- [http://www.microsoft.com/dotnet/visual basic](http://www.microsoft.com/dotnet/visual%20basic)
- <http://www.dotnetheaven.com>
- <http://www.w3schools.com>
- <http://www.oreillynet.com/cs/catalog/view/au/327?x-t=book.view>