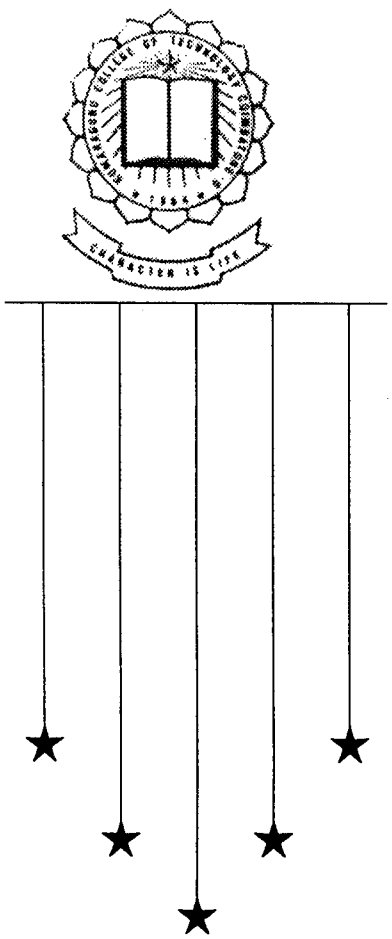
Web Site Accounting System



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PROJECT REPORT

SUBMITTED BY

S.Jai Ganesh (0037Q0033)

GUIDED BY

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Lecturer.

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF
MASTER OF SCIENCE IN
APPLIED SCIENCE-COMPUTER TECHNOLOGY
OF THE BHARATHIAR UNIVERSITY, COIMBATORE

2001-2002

Department of Computer Science and Engineering

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Department of Computer Science Engineering

Certificate

This to certify that the project report entitled

Web Site Accounting System

Has been submitted by

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In partial fulfillment of the requirements for the Award of degree of Master Of Science Applied Sciences (Computer Technology) of the Bharathiar University, Coimbatore-46 during the year 2001-2002.

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S. Jai Ganesh 25/4/02
(Head Of Department)

Certified that the candidate was examined by us in the project viva-voce examination held on & the University Register number is. 0037Q0033

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CERTIFICATE

This is to certify that the Project work entitled **Web Site Accounting System** was carried out by **Mr. Jai Ganesh S (Reg No: 0037Q0033)** from Kumaraguru College of Technology, Bharathiar University, Coimbatore, at **National Informatics Centre**, Department of InformationTechnology,Tamil Nadu State Unit, Chennai, in partial fulfillment of the requirements of the Degree of Master of Science in Applied Science & Computer Technology, during December 2001 – April 2002.

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DECLARATION

I hereby declare that this project entitled

WEB SITE ACCOUNTING SYSTEM

submitted in partial fulfillment of the requirement for the award of the degree of M.Sc (Applied Science – Computer Technology) is the report of the original work done by me during the period of study (2001-2002) in

KUMARAGURU COLLEGE OF TECHNOLOGY

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Acknowledgement

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I am extremely thankful to my Class Advisor **Mr. R. Dinesh, M.S.** Senior Lecturer and the Project co-ordinator **Mr. K.Sivan Arul Selvan, M.Sc., M.C.A.**, Lecturer for their kind support, encouragement and valuable suggestions for completing the project.

Last but not least I extend my heartfelt thanks to all the faculty, friends and well wishers who helped me in completing this project work.

dedicated to my parents

who sacrificed their

today for my

better tommorow

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Abstract

1. ABSTRACT

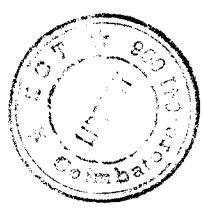
The main **objective** of this project entitled "**Web Site Accounting System**" is to maintain accounting details for various customers regarding the usage of Web Services provided through a Web Site.

With rapid increase of Internet and WWW media for e-commerce and other Web services, it is required by the service providers to maintain Accounting System for billing purpose of their customers distributed all over the world. Web services can range from Website hosting, Directory enquiry services, search the databases, secure e-mail accounts, file downloading etc., In order to do billing for this service usage, a Log file is required to be maintained on the Web Server.

This project consists of **two main modules**,

- In the **Client-side Module,** the customer can use the browser to subscribe for various Web services offered, by filling the prescribed Proforma. This module includes functions such as Online Subscription, Renewal of Subscription, Searching the database for information and Downloading files etc.,

- **The Server-side Administration Tool** includes activities like Log file maintenance, Website usage, Website billing and User authentication.



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Introduction

2.1 ORGANIZATION PROFILE

Introduction

National Informatics Center (NIC) is a premier information technology organization India, which is committed to providing state-of-the-art, solutions for the IT needs of the Government of India at all levels. NIC carries the distinction of being the largest IT Organization in the country and has set up a satellite based nationwide computer communication network, called NICNET, with over 1400 nodes connecting the National Capital, the State Capitals and the District Headquarters to one another. The IT services of NIC range from Consultancy, Software Design & Development, Office Automation and Networking Services to Training, Video Conferencing, CAD, EDI, Multimedia and Internet Services including Web Site Development and Hosting. NIC has a nationwide presence, with its offices spread all across the country, from Leh to Andaman & Microbar Islands.

Organization:

The organizational set up of NIC encompasses its Headquarters at New Delhi, **State Units** in all the 29 State capitals and 6 Union Territory Headquarters and District centers in more than 540 Districts of India. The Organization employs a large pool of efficient technical manpower. At the **NIC Headquarters**, a large number of Application divisions exist which provide total Informatics support to the Ministries and Departments of the Central Government. NIC computer cells are located in almost all the Ministry Bhawan of the Central Government and Apex Offices including the Prime Ministers office, the Rashtrapati Bhawan and the Parliament House. Apart form this, NIC has various Resource Divisions at the Headquarters, which specialize into different areas of IT and facilitate the Application Divisions as well as other centers in providing state-of-the-art services to the Govt. At the state level, NIC state centers provide informatics support to their respective state Government and at the District level lie the NIC District Informatics Offices which strive hard to provide effective informatics support to the

development, revenue and judiciary administration of the district. In order to promote Information technology in the country, focusing on INTERNET Technology based Value-added services in the area of Industry, Business and Commerce, NIC has also established 22 National Information Technology Promotional Units (NITPUs) at major industrial/ Commercial cities viz. – Ahmedabad, Bangalore, Bhopal, Bhubaneshwar, Calcutta, Chandigarh. Chennai, Guwahati, Hyderabad, Jaipur, Kanpur, kochi, Lucknow, Ludhiana, Mumbai, Nagpur, Panipat, Patna, Pune, Simal, Tripur and Vishakapatnam. These centers provide Video Conferencing facilities, EDI services and other INTERNET Technology based Services over NICNET.

Services:

- The range of service provided by these units include
- Internet connectivity
- E-mail
- Remote Database Access
- Web authoring and Hosting
- Video Conferencing
- EDI

The spectrum of services provided by NIC encompasses various dimensions of the Information Technology Arena and can be broadly listed as under:

- Consultancy
- Software Design & Development
- Networking
- Internet & WWW Services
- Video Conferencing
- Computer Aided Design (CAD)
- Multimedia
- Geographical Information System (GIS)
- Electronic Commerce
- Office Automation Training

2.2 WEB SITE ACCOUNTING SYSTEM

MODULAR DESCRIPTION

Introduction

The functionality of each module is necessary to understand the project completely. This chapter gives the overall functionality of each module. It also describes the relation between each module. The Web Site Accounting System is divided into following sub modules.

New Registration

Online Subscription

In this, the customer can use Internet Browser to subscribe for various Web services offered by filling the prescribed Proforma. After receiving the payment, either through cash/cheque he will be intimated his account password through e-mail. The user can then check his email account to find the password and he/she can login with that password.

User Authentication

User Login Name and Password

Each user is given a login id and a password. With the user id and the password, he/she can enter into the site to use any resources and Web services. If the login id and the password are valid then the user is allowed to go to the homepage.

Creating Session

For each correct login, a session is created. This session contains the objects like username, password and the rights given to a logged user. For each access of information provided in this site, the username is verified with the username in the session created for the logged user. For each and every user with the help of the session we can obtain the login and logout times. With the details obtained from the session, we can maintain the Log file.

Web Services

As soon as the user logs in the user can make use of many Web services .Web services can range from Web site hosting, Directory enquiry services, search the databases, secure e-mail account, file downloads and etc.,

Log File Maintenance

Here, a log file record is created for each logged in User. This Log file is referred in future to generate reports for the users. The log file contains various information such as the date on which the user accessed, login time, logout time, number of hours he has accessed the site, IP address of the clients (users) machine etc., These details are added into the log file by means of maintaining a session for each user.

Reports

This Reports module is a Management Information System for Web Site Accounting System. This module generates reports for customer's usage of an account similar to the telephone bill. The reports are Daily, Weekly and Monthly reports. Either the reports can be downloaded to the client's machine or it can be sent as an attachment to the clients Email account. The report contains information about total access time of a Website, login time, logout time, IP-address of the client machine and the Web services used by the client.

System Specification

3. SYSTEM SPECIFICATION

3.1 SYSTEM CONFIGURATION

Hardware Configuration

Server

Processor	Pentium III
RAM Size	256 MB
Hard Disk Capacity	20 GB
Clock Speed	850 MHz

Software Used

Technology	Java & Java Servlets
Back End	MS- Access
Operating System	Windows NT
Scripting Languages	HTML, JavaScript
Browser	Internet Explorer/Netscape Navigator
Web Server	Apache Tomcat Server 4.0/IIS, Servletrunner

3.2 About the Software

JAVA SERVLET TECHNOLOGY

JAVA SERVLETS

Java Servlets provides web developers with a simple, consistent mechanism for extending the functionality of a web server and for accessing existing business systems. A servlet can almost be thought of as an applet that runs on the server side without a face. Java servlets have made many web applications possible.

Servlets are the Java platform technology of choice for extending and enhancing web servers. Servlets provide a component-based, platform-independent method for building web-based applications, without the performance limitations of CGI programs.

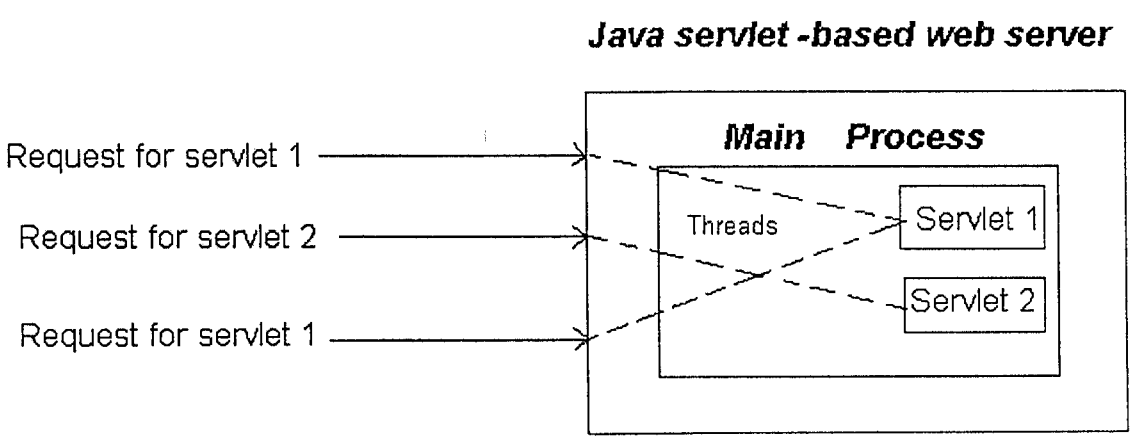
A servlet is similar to a proprietary server extension, except that it runs inside a **Java Virtual Machine** (JVM) on the server, so it is safe and portable. Servlet can be defined as a mini server side program, similar to an applet. Servlets are loaded and executed by a web server in the same way as applets.

Today, servlets are a popular choice for building interactive web applications. Third-party servlet containers are available for Apache Web Server, iPlanet Web Server, Microsoft IIS, and others. Servlet containers can also be integrated with web-enabled application servers, such as BEA WebLogic Application Server, IBM WebSphere, iPlanet Application Server, and others.

A servlet accesses requests from the client, performs some task, and returns results. The following are the basic steps of using servlets.

- The Client makes a request
- The web server forwards the request to the servlet after receiving it from the client.
- Some kind of process is done by the servlet after receiving the Http request.
- A response is returned back to the web server from the servlet.
- The web server will forward the response to the client

Unlike CGI and Fast CGI, which use multiple processes to handle separate programs and/or separate request, separate threads with in the web server process handle all servlets. This means that servlets are also efficient and scalable. Because servlets run within the web server, they can interact very closely with the server to do things that are not possible with CGI scripts.



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The Power Of Servlets

So far, it has been portrayed servlets as an alternative to other dynamic web content technologies, but it hasn't really explained why should we use them. What makes servlets a viable choice for web development? We believe that servlets offer a number of advantages they are,

Portability

Because servlets are written in Java and conform to a well defined and widely accepted API, they are highly portable across operating systems and across server implementations. A servlet developed on a Windows NT machine running the Java Web Server can be later deployed effortlessly on a high-end Unix server running Apache. With servlets, we can truly "write once, serve everywhere."

Efficiency and Endurance

Servlets, in general, are naturally enduring objects. Because a servlet stays in the server's memory as single object instance, it automatically maintains its state and can hold on to external resources, such as database connections, that may otherwise take several seconds to establish.

Safety

Servlets support safe programming practices on a number of levels. Because they are written in Java, servlets inherit the strong type safety of the Java language. In addition, the Servlet API is implemented to be type-safe Servlets can handle errors safely, due to Java's exception-handling mechanism. If a servlet divides by zero or performs some other illegal operation, it throws an exception that can be safely caught and handled by the server, which can politely log the error and apologize to the user.

Elegance

The elegance of servlet code is striking. Servlet code is clean, object oriented, modular, and amazingly simple. One reason for this simplicity is the Servlet API itself, which includes methods and classes to handle many of the routine chores of servlet development. Even advanced operations, like cookie handling and session tracking, are abstracted into convenient classes.

Integration

Servlets are tightly integrated with the server. This integration allows a servlet to cooperate with the server in ways that a CGI program cannot. For example, a servlet can use the server to translate file paths, perform logging, check authorization, perform MIME type mapping, and, in some cases, even add users to the server's user database. Server-specific extensions can do much of this, but the process is usually much more complex and error-prone.

The Servlet API

This is the one of the API provided by Sun Corporation, for developing Java Servlets. The package name is JSDK (Java Servlet Development Kit). It is available in 2.0,2.1,2,2 versions. This package is used to develop HTTP servlets, or any kind of servlets, for that matter. Servlets use classes and interfaces from two packages

- Javax.servlet
- Javax.servlet.http.

Javax.servlet package contains classes to support generic, protocol-independent servlets. The classes in the javax.servlet.http package to add HTTP specific functionality extend these classes. The top-level package name is javax instead of familiar java, to indicate that the Servlet API is a standard extension.

Every servlet must implement the javax.servlet.Servlet interface. Most servlets implement it by extending one of the two special classes: javax.servlet.GenericServlet or javax.servlet.http.HttpServlet. A protocol-independent servlet should subclass Generic Servlet, while an HTTP servlet should subclass HttpServlet, which itself is a subclass of Generic-Servlet with added HTTP-specific functionality.

Unlike a regular Java program, and just like an applet, a servlet does not have a **main ()** method. Instead, the server in the process of handling requests invokes certain methods of a servlet. Each time the server dispatches a request to a servlet, it invokes the servlet's **service( )** method.

A generic servlet should override its service ( ) method to handle requests as appropriate for the servlet. The service ( ) method accepts two parameters: a **request object** and a **response object**. The request object tells that servlet about the request, while the response object is used to return a response.

Servlet Supporting Web Server

- Sun's Java Web Server ("Jeeves")
- Microsoft's Internet Information Server
- Apache Web Server
- JSDK (ServletRunner & Start Server)
- iPlanet Web Server
- BEA WebLogic Application Server

SERVLETRUNNER

Once you have written your servlet, you can run it in many web servers, or in the **servletrunner**. Where ever you decide to run your servlet, there are certain pieces of data that you might want or need to specify. When you are using servletrunner you do this with properties.

Using Servlet Runner

The `servletrunner` is a small utility, intended for testing. It is multithreaded, so it can run more than one servlet. It can be used, therefore, to run multiple servlets simultaneously, or to test one servlet that calls other servlets in order to satisfy client requests. Unlike some web servers, it does not automatically reload servlets when they are updated. Because it is small, however, there is very little overhead associated with stopping and restarting it in order to use a new version of a servlet.

The `servletrunner` is in the `<JDK>/bin` directory. Invoking it with the -help flag shows a usage message without running it:

```
% ./bin/servletrunner -help
Usage: servletrunner [options]

Options:
  -p port          the port number to listen on
  -b backlog       the listen backlog
  -m max           maximum number of connection handlers
  -t timeout       connection timeout in milliseconds
  -d dir           servlet directory
  -r root          document root directory
  -s filename      servlet property file name
  -v verbose       output
%
```

In order to see the default values of these options, you can call `servletrunner` with the -v switch. This will, however, start the servlet runner. Just stop it after you have obtained the information, if you are not ready to run it yet, or want it to run with something other than the default values.

```
% ./bin/servletrunner -v
Server settings:
  port = 8080
  backlog = 50
  max handlers = 100
  timeout = 5000
  servlet dir = .
  document dir = .
  servlet propfile = .:servlet.properties
```

Once the servletrunner is executing, you run servlets by calling them directly in your browser, or as the forms example shows, by using a form that calls a servlet to process its data. The URL for a servlet has the following general form:

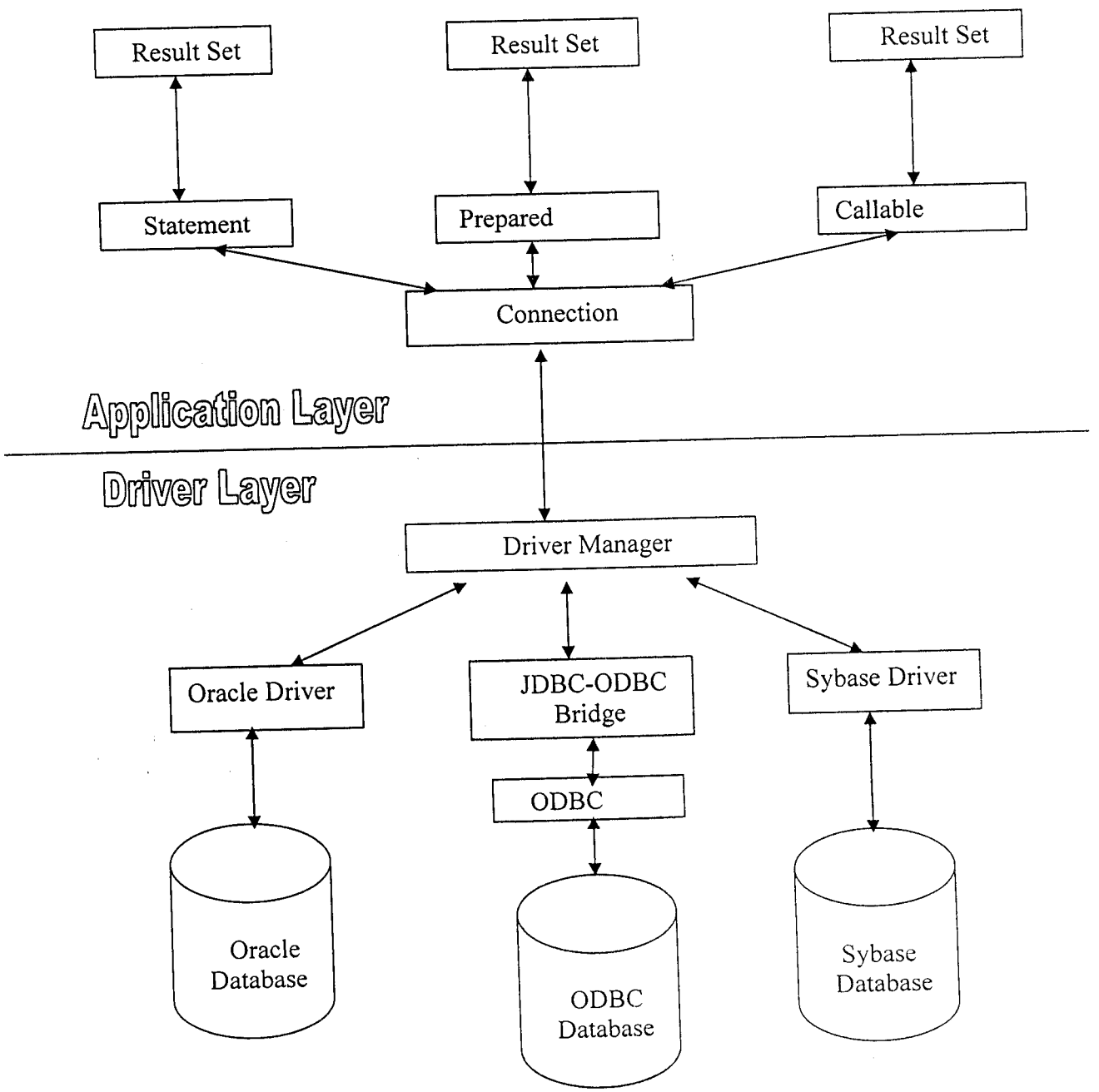
`http://machine-name:port/servlet/servlet-name`

where *servlet-name* corresponds to the name you have given your servlet. For example, to run the Phone Servlet, which has the property `servlet.phone.code=PhoneServlet`, you would use the following URL. (It assumes that servlet runner is running on your machine, `localhost`, at port 8080, and that the phone servlet is located in the servlet directory provided to `servletrunner` at startup:

`http://localhost:8080/servlet/phone`

JDBC (Java Data Base Connectivity)

JDBC is a SQL-level API – one that allows you to execute SQL Statements and retrieve the results, if any. This API is a set of interfaces and classes designed to perform actions against any database.



JDBC Drivers

The JDBC API, found in the java.sql package, contains only a few concrete classes. Much of the API is distributed as database-neutral interface classes that specify behavior without providing any implementation. Third-party vendors provide the actual implementations.

An individual database system is accessed via a specific JDBC driver that implements the java.sql.Driver interface. Drivers exists for nearly all-popular RDBMS systems, though few are available for free are available free. Sun bundles a free JDBC-ODBC bridge driver with the JDK to allow access to standard ODBC data sources, such as a Microsoft Access database. However, Sun advises against using the bridge driver for anything other that development and very limited deployment. Servlet developers in particular should heed this warning because any problem in the JDBC-ODBC bridge driver's native code section can crash the entire server, not just your servlets.

JDBC drivers are available for most database platforms, form a number of vendors and in number of different flavors. There are four driver categories:

Type 1 JDBC-ODBC Bridge Driver

Type 1 driver use a bridge technology to connect a Java client to an ODBC database service. Sun's JDBC-ODBC bridge is the most common type 1 driver. These drivers are implemented using native code.

Type 2 Native-API Partly-Java Drivers

Type 2 drivers wrap a thin layer of Java around database-specific native code libraries. For Oracle databases, the native code libraries might be based on the OCI (oracle Call Interface) libraries, which were originally designed for C/C++ programmers. Because Type 2 drivers are implemented using native code, in some cases they have better performance that their all-Java counter parts. They add an element of risk, however, because a defect in driver's native code section can crash the entire server.

Type 3 Net-Protocol All-Java Driver

Type 3 drivers communicate via a generic network protocol to a piece of custom middleware. The middleware component might use any type of driver to provide the actual database access. Web Login's Tengah product line as an example. These drivers are all Java, which makes them useful for applet deployment and safe for servlet deployment.

Type 4 Native-Protocol All-Java Driver

Type 4 drivers are the most direct of the lot. Written entirely in Java, Type 4 drivers understand database-specific networking protocols and can access the database directly without any additional software.

A list of currently available JDBC drivers can be found at http://java.sun.com/products/jdbc/jdbc.drivers.html.

About Java Script:

Java Script is an Interpreted language, rather than a compiled language. The java script code runs inside a web page loaded into a browser. All we need to create is a text editor like windows notepad, and a web browser such as Netscape Navigator or Internet Explorer, with which we can view our pages. These browsers come equipped with Java Script interpreters. Basically the job of a web browser is to hold lots of web pages on its hard drive. Then when a browser usually on a different computer requests a web page that is contained on that web server, the web server load it from its own hard drive and then passes the page back to the requesting computer via a special communication protocol called "Hyper Text Transfer Protocol(HTTP)". The computer running the web browser that makes the request is known as the Client and the computer satisfying the clients request is called the Server.

The main reason for using java script in this project is its wide spread use and availability. Java script is very versatile and not just limited to use within a web browser.

ADVANTAGES OF JAVA SCRIPT

Java script is having more advantage over competing script languages like VB Script, this includes..

1. Capable of Running in any Browser

The Java Script is capable of running in any browser like Netscape Navigator, Internet Explorer and others, but the other scripting language VB Script can be run only on Internet Explorer and Perl .

2. Managing Administration Tasks

Java Script is used to automate computer administration tasks. It can also be used for Interacting with the users and getting information form them and validating their actions.

About MS-Access:

Access is used as the back end. It allows creation of tables and queries in an easier way and it does not place much constraint before the user. Conversion of existing ODBC databases is also a good advantage of using Access. Forms can also be prepared in Access and when converted into MDE files gives us a read only design of code and forms.

Access provides extensive new features to easily use the Internet and develop a World Wide Web (WWW) application. We need a web browser, such as Microsoft Internet Explorer, and a modem, Intranet Connection, or other network connection to access the Internet and take advantage of these features.

Access provides complete documentation for the tables created and also provides the option of viewing the relationships used in creating tables. Foreign Key can be created using the relationship window.

Access also comes with Wizards under all its options i.e., under Tables, Queries, Forms, Reports etc., All these Wizards help the user to work in an flexible and interactive environment.

We can use Access to create a World Wide Web Application. For example, we can create a corporate home page, an online magazine or newsletter, a registration system for a trade show, or online product catalog. To create this web application, we output objects to HTML format or use the Publish to the Web Wizard.

We can export reports to static HTML format and you can export datasheets and forms to static and dynamic HTML format. Access creates one web page for each report page, datasheet, and form you export. Exporting objects to HTML format is useful for creating a simple web application, verifying the format and appearance of an object's output, or adding files to existing web applications.

System Study

4. SYSTEM STUDY

4.1 Introduction

A Complete understanding of the system is essential to the success of the software development effort. No matter how well designed or coded, a poorly analyzed and specified program will disappoint the user. The system study is a process of discovery, refinement, modeling and specification. The software scope, initially established by the system engineer and redefined during software project planning, is refined in detail. Models of required data, information and control flow, and operational behavior are created, analyzed and allocated to various software elements.

This enables the system engineer to specify software function and performance, indicate software's interface with other system elements, and establish constraints, which the software must meet.

4.2 Need For The System

NIC (National Informatics Centre) is the authorized software developer for all the government projects of Tamil Nadu State. NIC offers state-of-art software solutions and value added Information services to its clients, which includes various Web Services.

In order to administer this, Web Site Accounting System will maintain a log file about the customers and will generate reports and bills for any particular client depending upon the time they have accessed the Internet. This is the primary need for the Web Site Accounting System.

4.3 PROPOSED SYSTEM

Information Service Provider allows value added services through a Web based media. Therefore, it is necessary for the web site administrator of the Information Service Provider to maintain details about visitors of the web site for billing purposes. The web administration can range from maintaining the details about the subscribers, traffic analysis and monitoring the system continuously. With the rapid increase in usage of Internet media for various information retrieval like e-commerce, e-governance it is necessary to have an accounting system.

The proposed system consists of the following,

New Registration

Here the new user can subscribe online for various Services provided by the Information Service Provider by filling the prescribed Proforma.

Intimation of Password through Email

Once the user subscribes for the registration, the proposed system will generate a random password and will send it to the users email account. The user then needs to check the email account to get the password.

User Authentication

Each user is given a user name and a password for the access of the Web services. At the time of login the username and password will be checked and only the valid users can access the Web services

Web Services

As soon as the user logs in, the user can make use of many web services. Web services can range from web site hosting, Directory enquiry services, search the databases, secure e-mail account, file downloads, etc., Sample Web services that has to be done in this system are Agents Information System for small savings and searching the World Wide Web for a particular keyword.

Reports

This Reports module is a Management Information System for Web Services Accounting System. This module generates reports for the usage of NIC account for the customers similar to the telephone bill. The reports to be generated are Daily, Weekly and Monthly Reports.

Security

Since this system is an Internet based model, we need to provide high security for this system, because it may be possible for the non-authenticated users to access the services. This can be handled by creating a session for each user and by the way of keeping track of them. This session will act as a security manager for this site.

The **advantages** of the proposed system are

- Easy maintenance of billing information.
- Highly dependable.
- Added advantage of security.
- Easy exchange of reports to users through Email.

System Design

5. SYSTEM DESIGN

Once the requirements are frozen in the analysis phase, the requirement specifications are carried over to the Design Phase. Design phase involves in deciding how to implement the requirements. System design is an iterative process through which requirements are translated in to a "blueprint" for constructing the software. Initially, the design is represented in higher levels of abstraction.

5.1 Table Design

The strength of a system always depends on how the tables are designed. To design efficient and more flexible tables, all tables should be normalized properly. Normalization is the process, which reduces the Data Redundancy, Data integrity and ultimately provides with a more efficient and flexible structure. Table design for the Web Services Accounting System is shown below:

Table Name: Login_Table
Description : Stores the Login Name and Password for the End user.
Primary Key : login_Name

Field Name	Type	Size	Description
login_Name	Text	50	A unique name that is given to a user.
password	Text	10	Randomly generated keyword that is given to a user

Table Name : Registration_table

Description : Stores the new user details.

Primary Key : login_Name

Field Name	Type	Size	Description
login_Name	Text	50	A unique name that is given to a new user
email	Text	50	Email address of the new user
First_name	Text	25	First name of the new user
Middle_name	Text	25	Middle name of the new user
Last_name	Text	25	Last name of the user
Gender	Text	10	Gender of the new user
address	Text	50	Address of the new user
city	Text	25	City where the user residing in
residing_in	Text	25	Country residing in

Table Name : Logfile_table

Description : Stores the details about the logged in users.

Primary Key : Login_Name

Field Name	Type	Size	Description
login_name	Text	50	Login name of the logged user
date_accessed	Date/Time		Date at which the user had logged in.
start_time	Date/Time		Login time of the user
End_time	Date/Time		Logout time of the user
usage	Text	50	Number of hours the user had used
Usage_sec	Number	Long int	Total number of milliseconds the had used
req_url	Text	50	Requested URL by the user
Ip_add	Text	50	IP address of the user's machine

Table Name : agent_table

Description : Stores the details about the small savings agents.

Primary Key : regno

Field Name	Type	Size	Description
agname	Text	50	Agent name
regno	Text	50	Agent Register number
agcode	Text	3	Agent code number
dob	Text	50	Agent's date of birth
sex	Text	50	Agent's sex
quali	Text	50	Agent's Qualification
fname	Text	50	Agent's First name
add1	Text	50	Agent Address
add2	Text	50	Agent Address
add3	Text	50	Agent Address
pincode	Number	6	Pincode Number of Agent
phone	Number	15	Phone Number of Agent
stcode	Text	3	State Code
dtcode	Text	2	District Code

Table Name: Guideline_Table

Description : Stores the details of Guidelines.

Field Name	Type	Size	Description
zonecode	Number	Long Int	Zone code
srocode	Number	Integer	Sro code
villagecode	Number	Integer	Village code
streetcode	Number	Integer	Street code
streeteng	Text	250	Street name in English
streetname	Text	250	Street name
value	Number	Integer	Guideline value

Table Name : Zone Table

Description : Stores the details of Zone.

Field Name	Type	Size	Description
zonecode	Number	Integer	Zone code
zonename	Text	50	Zone name
pwdavailable	Text	1	Pwd value available
gldavailable	Text	1	Guideline value available

Table Name: Srolist Table

Description : Stores the details of Sro.

Field Name	Type	Size	Description
zonecode	Number	Integer	Zone code
srocode	Number	Long Int	Sro code
zone name	Text	50	Zone name
districtcode	Number	Integer	District code
districtname	Text	50	District name
sroname	Text	100	Sro name
gldavailable	Text	50	Guideline value available

Table Name: Village Table

Description : Stores the details about villages.

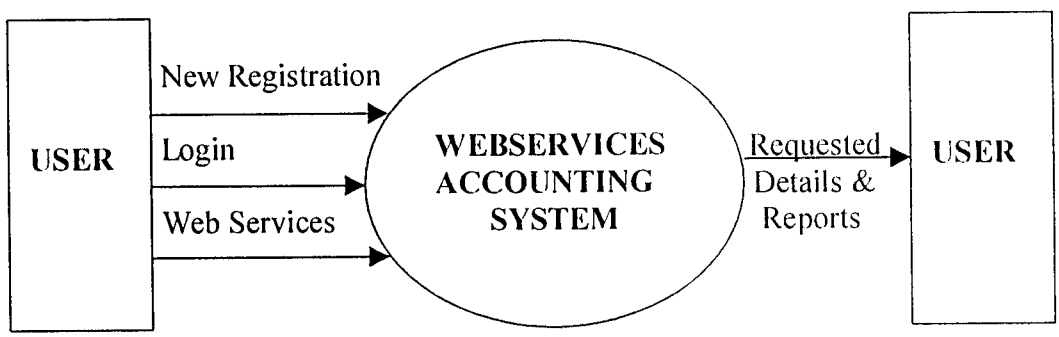
Field Name	Type	Size	Description
srocode	Number	Double	Sro code
villagecode	Number	Double	Village code
villagename	Text	50	Village name
gldavailable	Text	50	Guideline value available

Table Name : Pwdrates Table

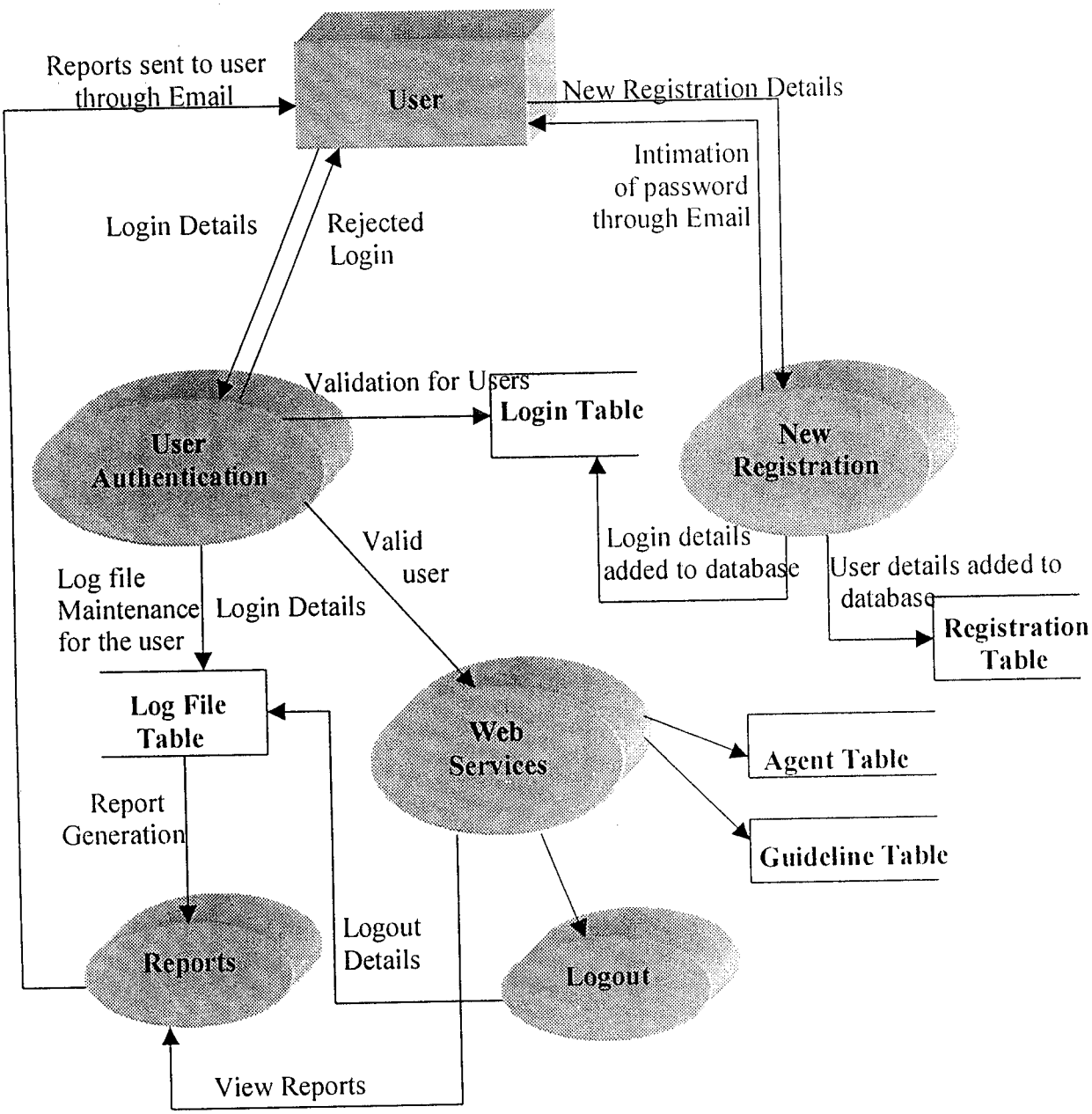
Description : Stores the details about pwdrates.

Field Name	Type	Size	Description
pwdid	Number	Long Int	Pwd id
classcode	Text	2	Class code
roof code	Number	Integer	Roof code
floorno	Number	Integer	Floor number
floorvalue	Number	Integer	Floor value
depreciation	Number	Single	Depreciation

5.2 CONTEXT ANALYSIS DIAGRAM

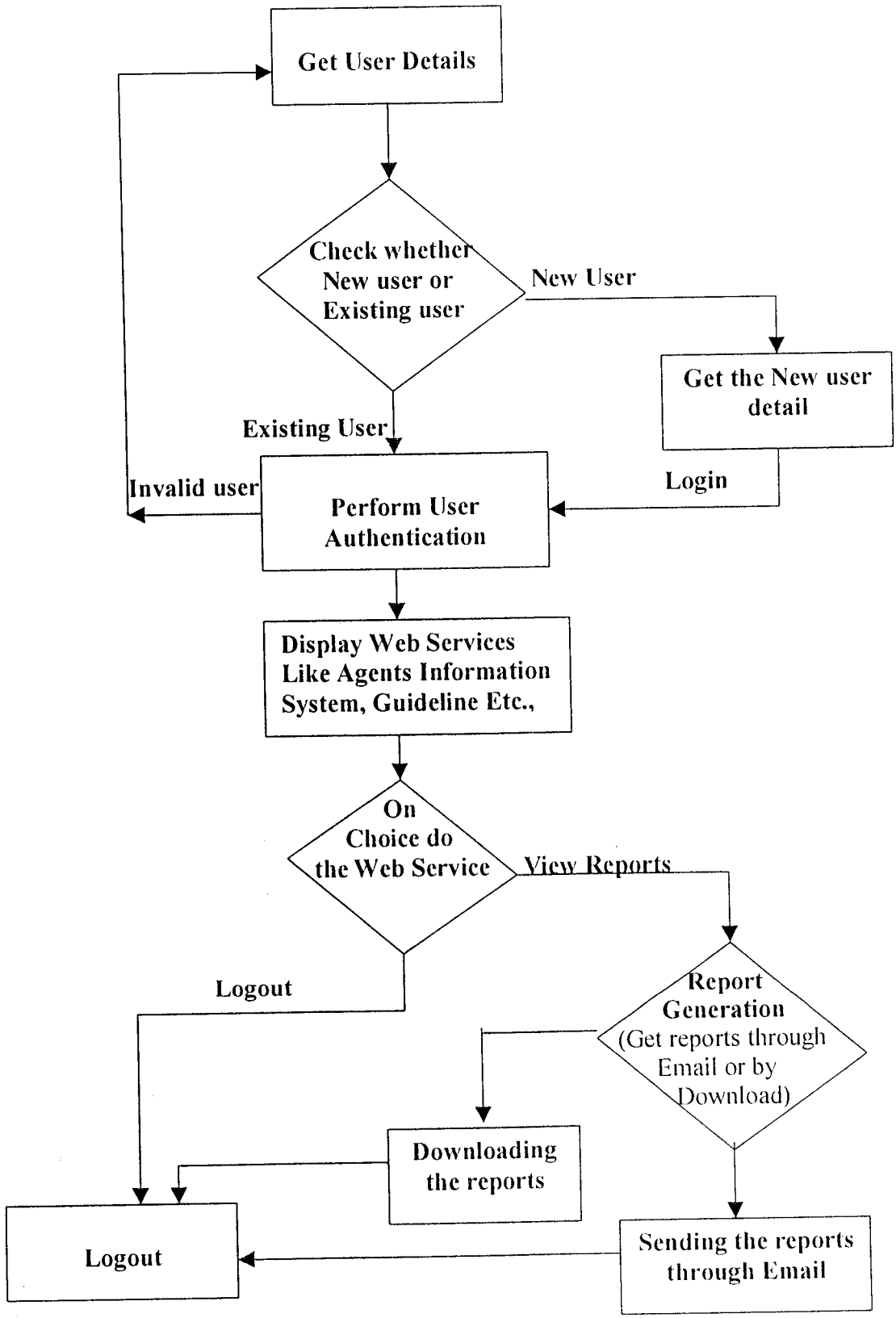


5.3 Data Flow Diagram



DFD – For the entire system

5.4 WORK FLOW DIAGRAM



Testing & Implementation

6. SYSTEM TESTING & IMPLEMENTATION

Testing is conducted for the following purposes.

- Number of input parameters equal to the number of
- arguments
- Parameter and argument attributes match.
- Global variable definitions consistent across the modules.
- Parameter and arguments units match
- I/O errors handled.
- Format specification matches I/O statement.
- Any textual errors in the output information.
- Inconsistent data types.
- Incorrect variable names.
- Erroneous initialization or default values.

Testing is vital to the success of the system. System testing makes a logical assumption that if all the parts of the system are correct, the goals will be successfully achieved. System testing begins by testing program modules separately followed by testing "bundled modules" as a unit. A program module may function perfectly in isolation but tend to fail when interfaced with other modules. The approach is to test each entity successfully up to the system test level.

A program represents the logical elements of a system. For a program to run satisfactorily, it must be compiled and tested with the correct data to check that it ties properly with other programs. Achieving an error free program is the responsibility of the programmer. Program testing checks for the syntax and logical errors. When a program is tested, the actual output is compared with the expected output.

Programs are invariably related to one another and interact with total system. Each portion of the system is tested against the entire module with data before the entire system is ready to be implemented.

IMPLEMENTATION

Introduction

Implementation is the stage where the theoretical design is implemented.

This stage consists of:

- Making necessary changes to the system as desired by the user.
- Testing the developed programs with the sample data.
- Detection and correction of the errors.

Future Enhancements

7. FUTURE ENHANCEMENTS

The **Web Site Accounting System** has been developed to overcome all the difficulties that were faced by the system administrator to keep track of customers, for their billing purposes. The whole system is automated which reduces the workload and eliminates the error that creep into the system by providing proper validation techniques.

Scope for Future Enhancements

This system can be **enhanced** by incorporating the following features,

- Instead of getting the money by means of cash through bank, it can be enhanced with Credit Card system, wherein if the user enters the credit card number this system would connect to that bank server by Remote Method Invocation and do appropriate Credit Card Validations.

- The next enhancement would be to do the billing by means of the amount of data transferred from the server to the client instead of accounting, by means of the time the user has accessed.

References

8. REFERENCES

Books

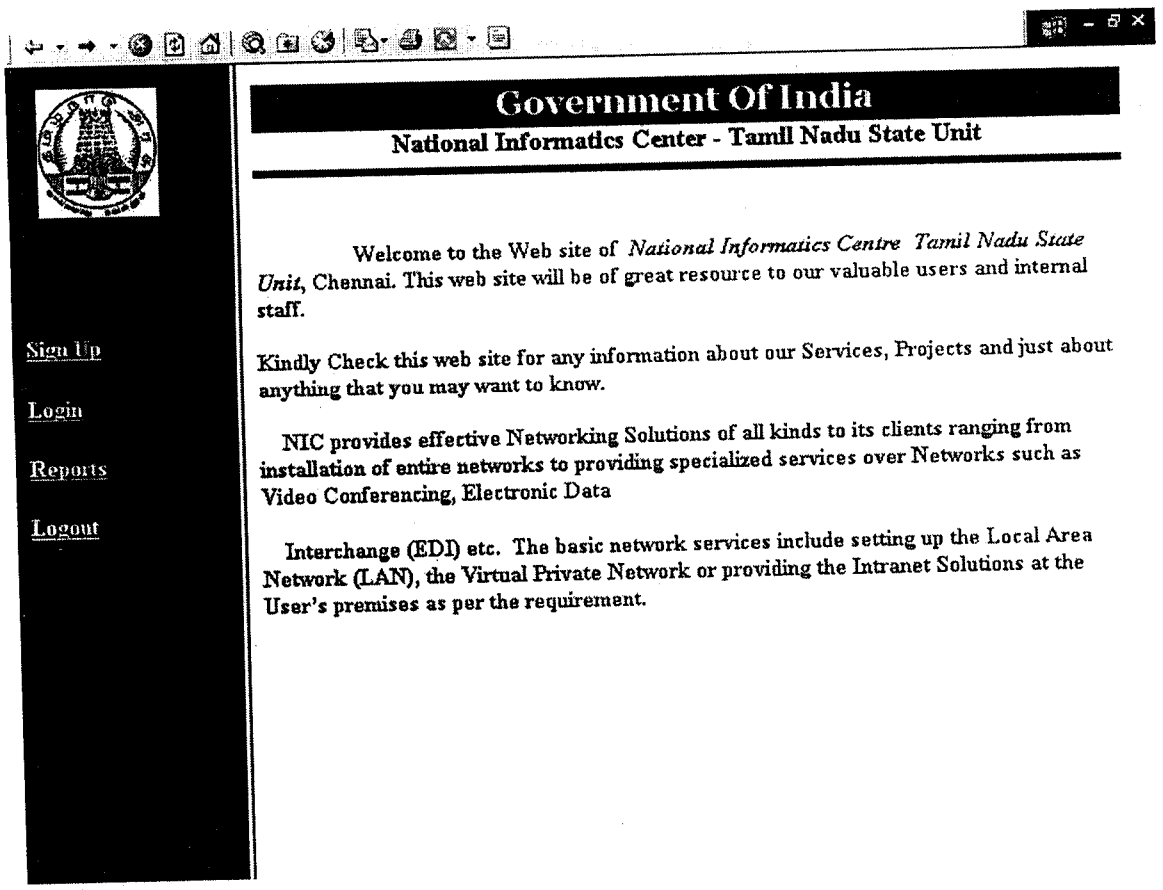
1. Java Servlets - Jason Hunter
2. Inside Servlets - Dustin R. Callway
3. The Java Complete Reference - Patrick Naughton and Herbert Schildt
4. Programming Internet Email - David Wood
5. Software Engineering - Roger S. Pressman

Web Sites

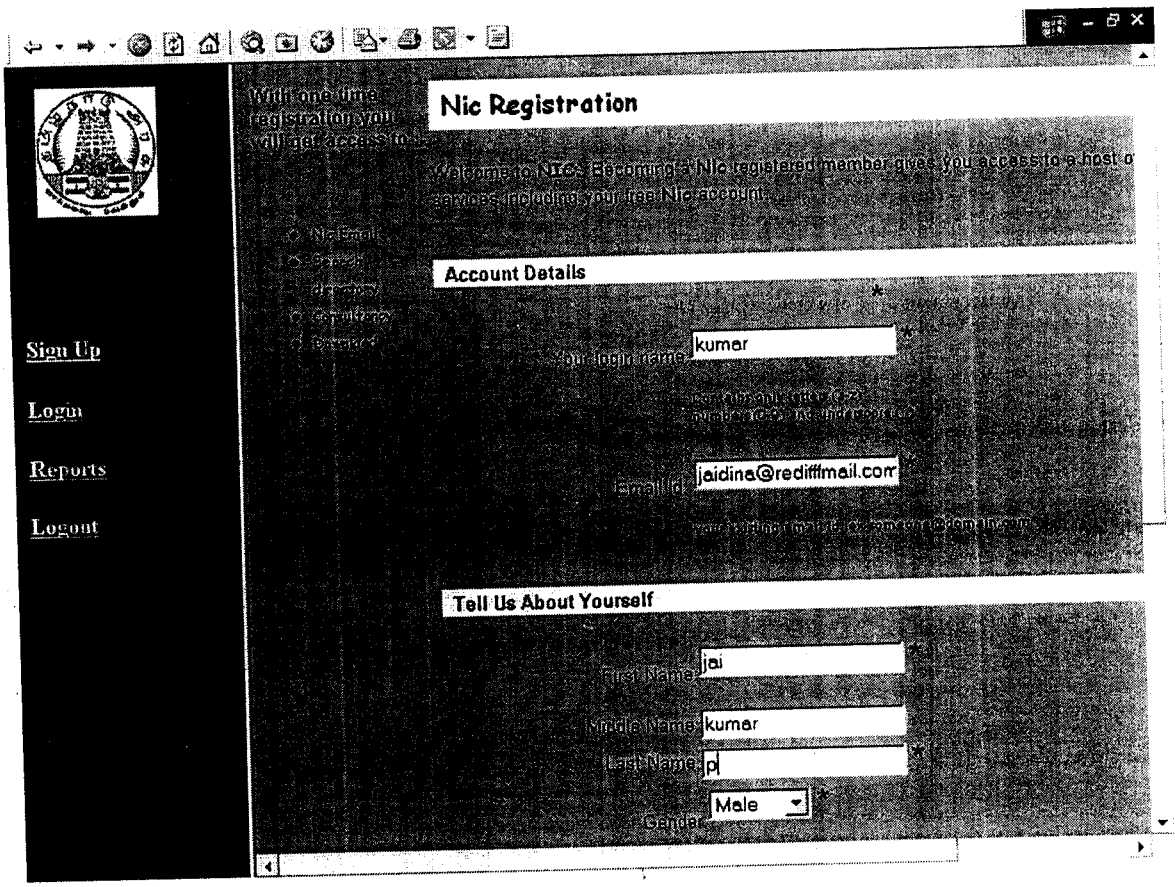
1. www.java.sun.com/products/servlets
2. www.javacommerce.com
3. www.servletforum.com
4. www.oreilly.com/catalog/jservlet2
5. www.java.sun.com/products/javamail

Appendices

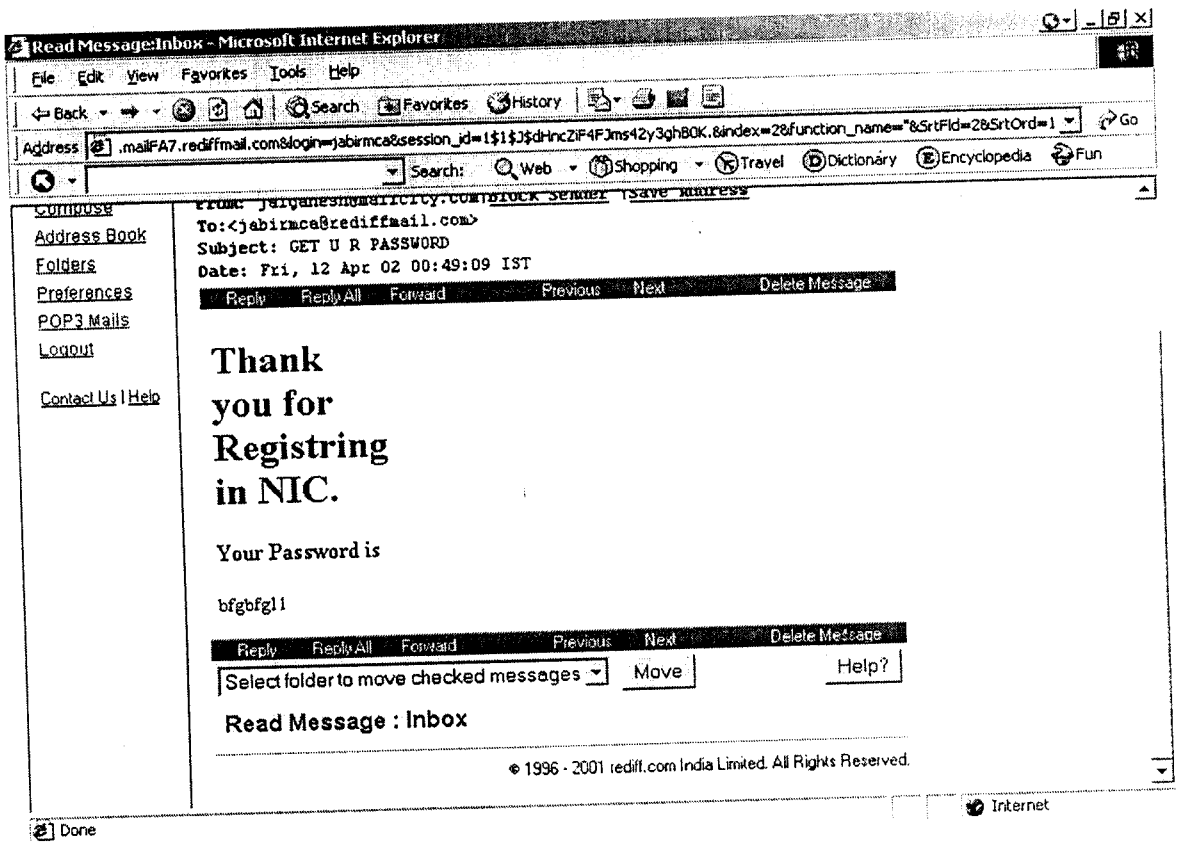
SAMPLE SCREENS



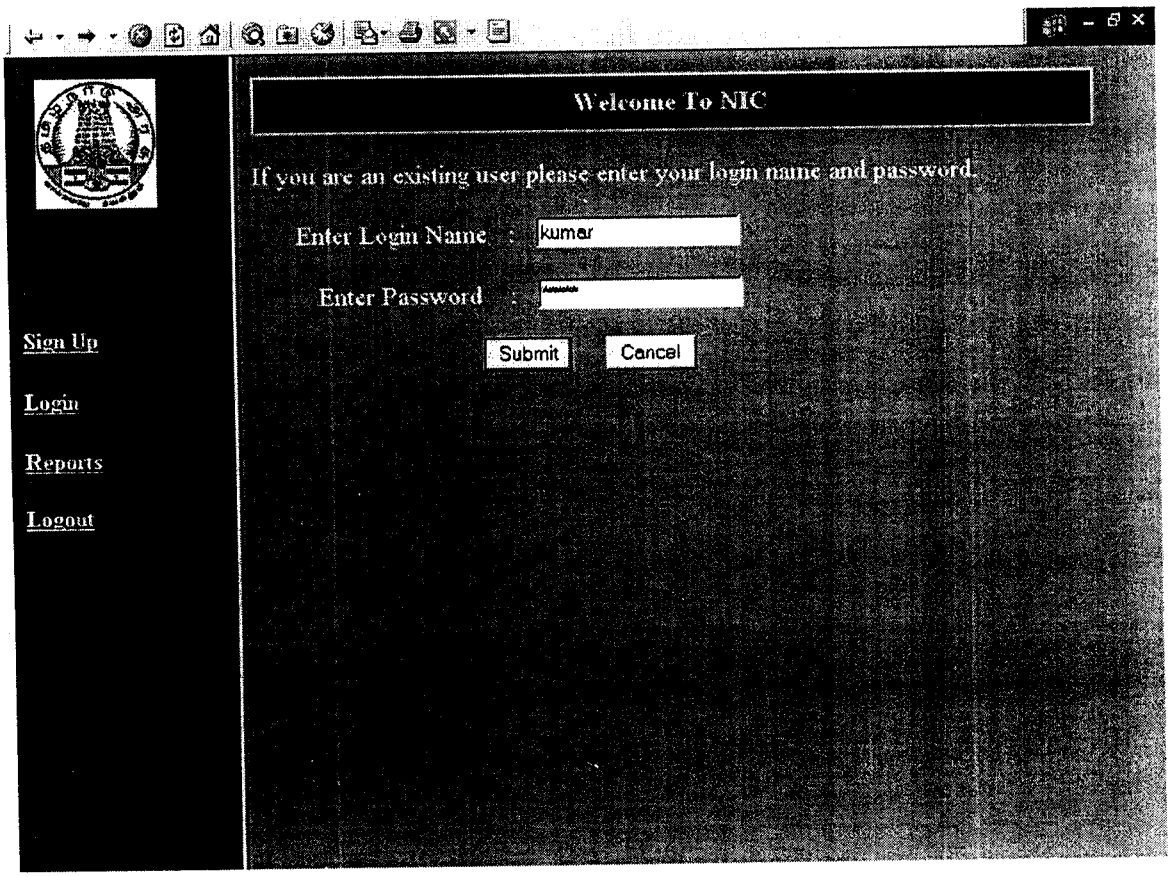
New Registration



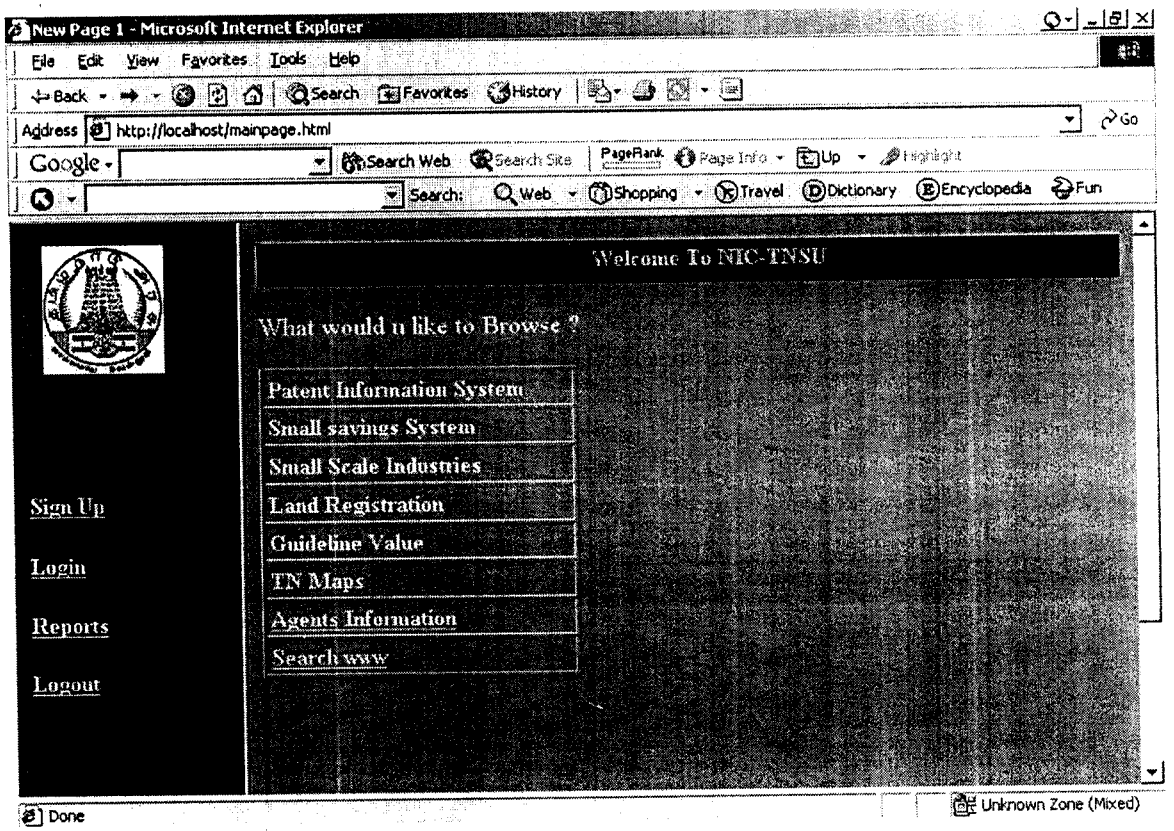
INTIMATION OF PASSWORD



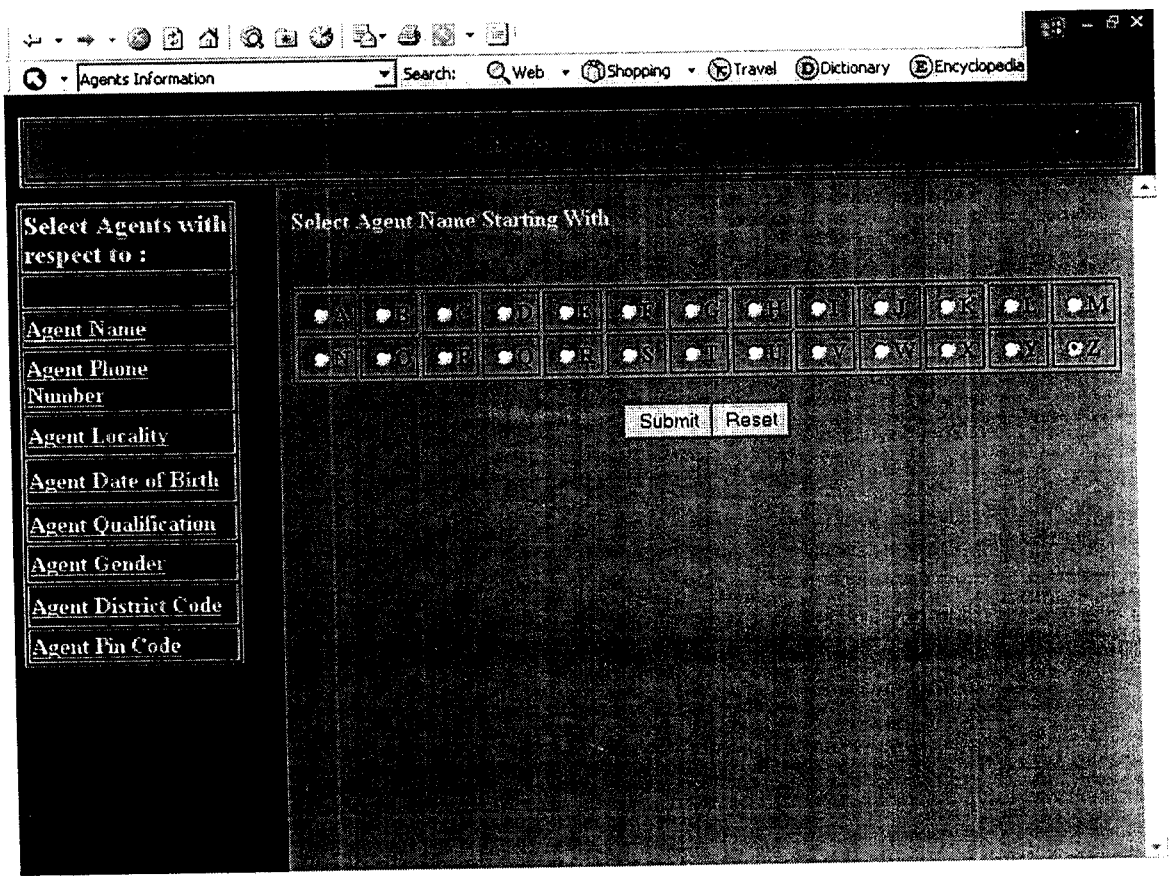
LOGIN PAGE


Welcome To NIC
If you are an existing user please enter your login name and password.
Enter Login Name :
kumar
Enter Password :
Submit
Cancel
Sign Up
Login
Reports
Logout

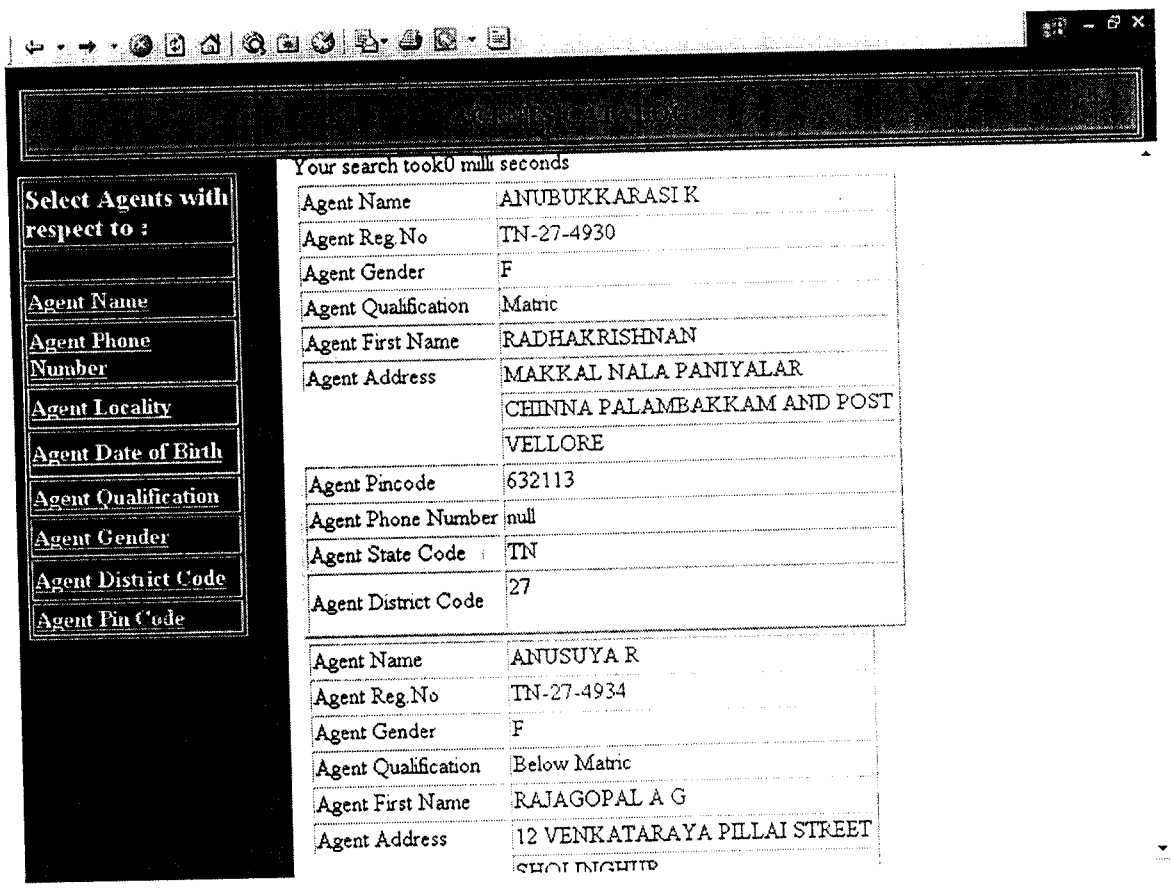
Home Page


New Page 1 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://localhost/mainpage.html
Go
Google
Search Web
Search Site
PageRank
Page Info
Up
Highlight
Search:
Web
Shopping
Travel
Dictionary
Encyclopedia
Fun
Welcome To NIC-TNSU
What would u like to Browse ?
Patent Information System
Small savings System
Small Scale Industries
Land Registration
Guideline Value
TN Maps
Agents Information
Search www
Sign Up
Login
Reports
Logout
Done
Unknown Zone (Mixed)

AGENTS INFORMATION PAGE



RESULTS OF AGENTS WHOSE NAME STARTING WITH 'A'



Select Agents with respect to :

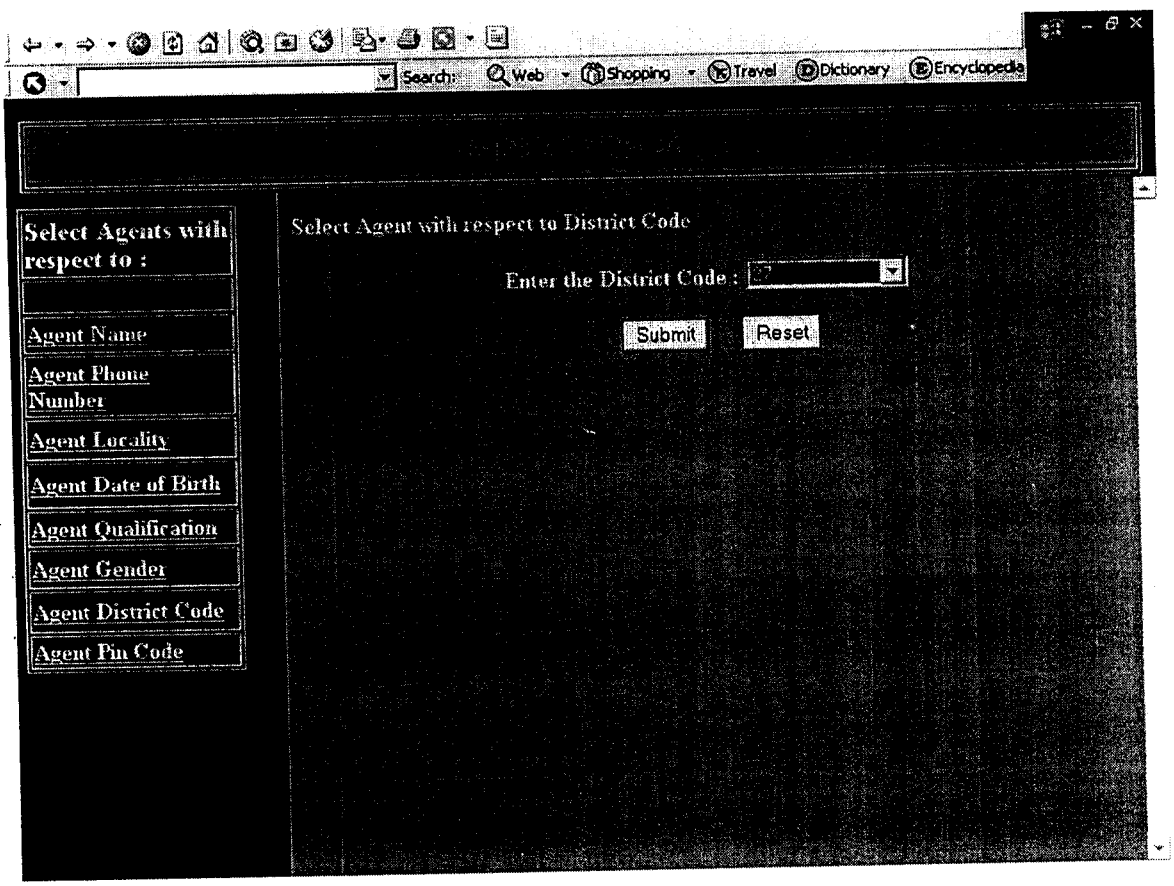
- Agent Name
- Agent Phone Number
- Agent Locality
- Agent Date of Birth
- Agent Qualification
- Agent Gender
- Agent District Code
- Agent Pin Code

Your search took0 milli seconds

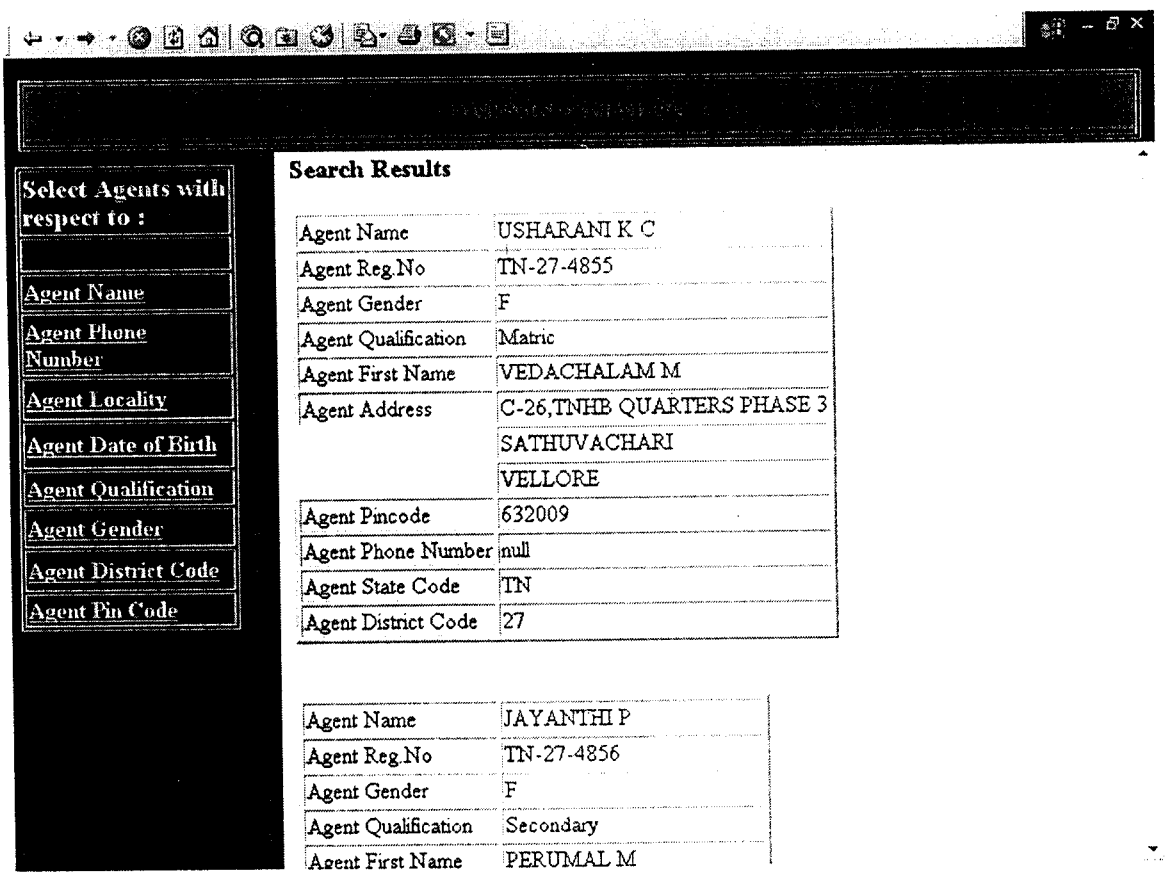
Agent Name	ANUBUKKARASI K
Agent Reg No	TN-27-4930
Agent Gender	F
Agent Qualification	Matric
Agent First Name	RADHAKRISHNAN
Agent Address	MAKKAL NALA PANIYALAR CHINNA PALAMBAKKAM AND POST VELLORE
Agent Pincode	632113
Agent Phone Number	null
Agent State Code	TN
Agent District Code	27

Agent Name	ANUSUYA R
Agent Reg.No	TN-27-4934
Agent Gender	F
Agent Qualification	Below Matric
Agent First Name	RAJAGOPAL A G
Agent Address	12 VENKATARAYA PILLAI STREET

SELECTING AGENTS BASED UPON DISTRICT CODE



RESULTS OF AGENTS WHOSE DISTRICT CODE IS 27



Select Agents with respect to :

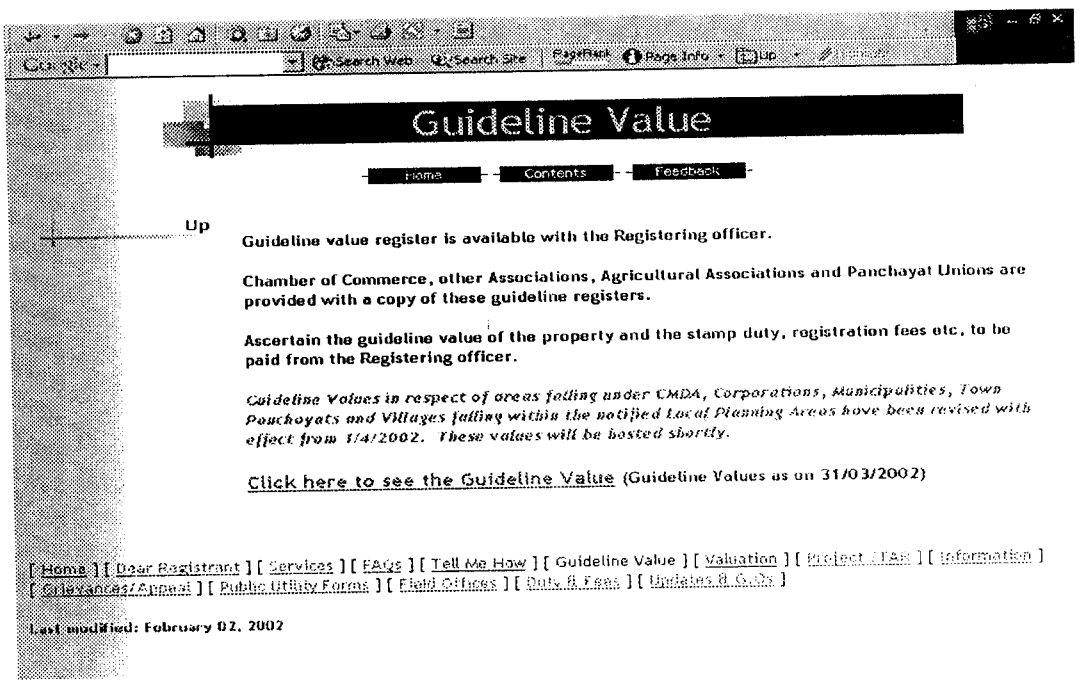
- Agent Name
- Agent Phone Number
- Agent Locality
- Agent Date of Birth
- Agent Qualification
- Agent Gender
- Agent District Code
- Agent Pin Code

Search Results

Agent Name	USHARANI K C
Agent Reg.No	TN-27-4855
Agent Gender	F
Agent Qualification	Matric
Agent First Name	VEDACHALAM M
Agent Address	C-26,TNHB QUARTERS PHASE 3
	SATHUVACHARI
	VELLORE
Agent Pincode	632009
Agent Phone Number	null
Agent State Code	TN
Agent District Code	27

Agent Name	JAYANTHI P
Agent Reg.No	TN-27-4856
Agent Gender	F
Agent Qualification	Secondary
Agent First Name	PERUMAL M

GUIDELINE VALUE CATALOG



Guideline Value

Home | Contents | Feedback

Up

Guideline value register is available with the Registering officer.

Chamber of Commerce, other Associations, Agricultural Associations and Panchayat Unions are provided with a copy of these guideline registers.

Ascertain the guideline value of the property and the stamp duty, registration fees etc, to be paid from the Registering officer.

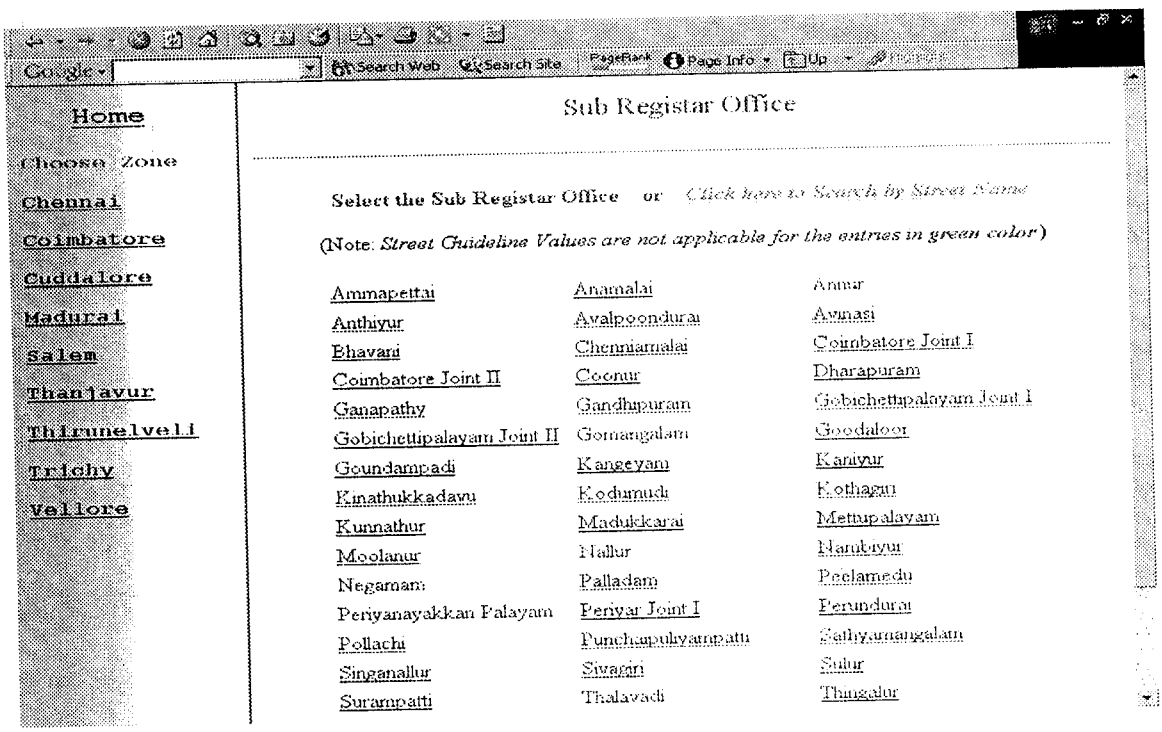
Guideline Values in respect of areas falling under CMDA, Corporations, Municipalities, Town Panchayats and Villages falling within the notified Local Planning Areas have been revised with effect from 1/4/2002. These values will be hosted shortly.

Click here to see the Guideline Value (Guideline Values as on 31/03/2002)

[Home] [Dear Registrant] [Services] [FAQs] [Tell Me How] [Guideline Value] [Valuation] [Project - I&A] [Information]
[Grievances/Appeal] [Public Utility Forms] [Field Offices] [Duty & Fees] [Updates & Quiz]

Last modified: February 02, 2002

SRO's UNDER COIMBATORE



Home

Choose Zone

Chennai

Coimbatore

Cuddalore

Madurai

Salem

Thanjavur

Thirunelveli

Trichy

Vellore

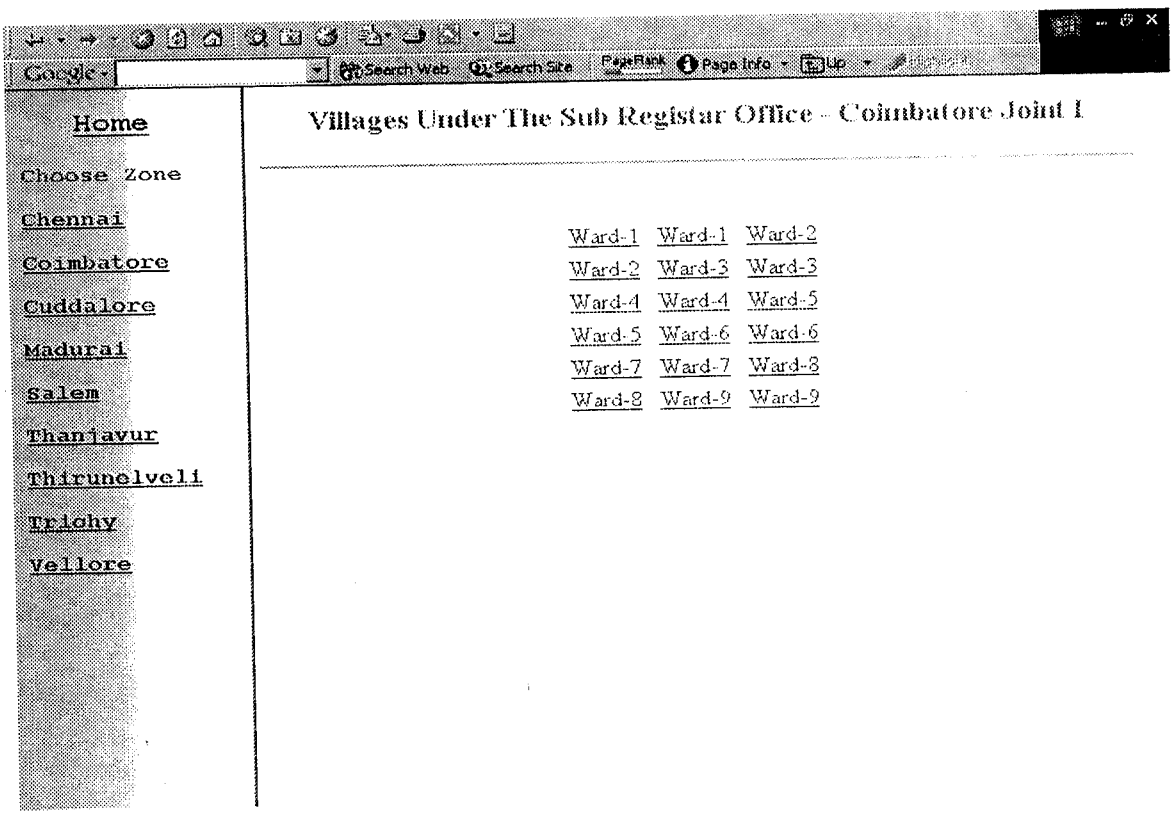
Sub Registar Office

Select the Sub Registar Office or *Click here to Search by Street Name*

(Note: *Street Guideline Values are not applicable for the entries in green color*)

Ammapettai	Anamalai	Annur
Anthiyur	Avalpoondurai	Avinasi
Bhavani	Chenniamalai	Coimbatore Joint I
Coimbatore Joint II	Coonur	Dharapuram
Ganapathy	Gandhipuram	Gobichettipalayam Joint I
Gobichettipalayam Joint II	Gomangalam	Goodaloor
Goundampadi	Kangeyam	Kaniyur
Kinathukkadavu	Kodumudi	Kothagiri
Kunnathur	Madukkarai	Mettupalayam
Moolanur	Nallur	Narukiyur
Negamam	Palladam	Peelamedu
Periyanayakkan Palayam	Periyar Joint I	Perundurai
Pollachi	Punchapuliyampatti	Sathyamangalam
Singanallur	Siwagiri	Sulur
Surampatti	Thalavadi	Thingalur

VILLAGES UNDER THE SRO - COIMBATORE JOINT I



Home

Choose Zone

Chennai

Coimbatore

Cuddalore

Madurai

Salem

Thanjavur

Thirunelveli

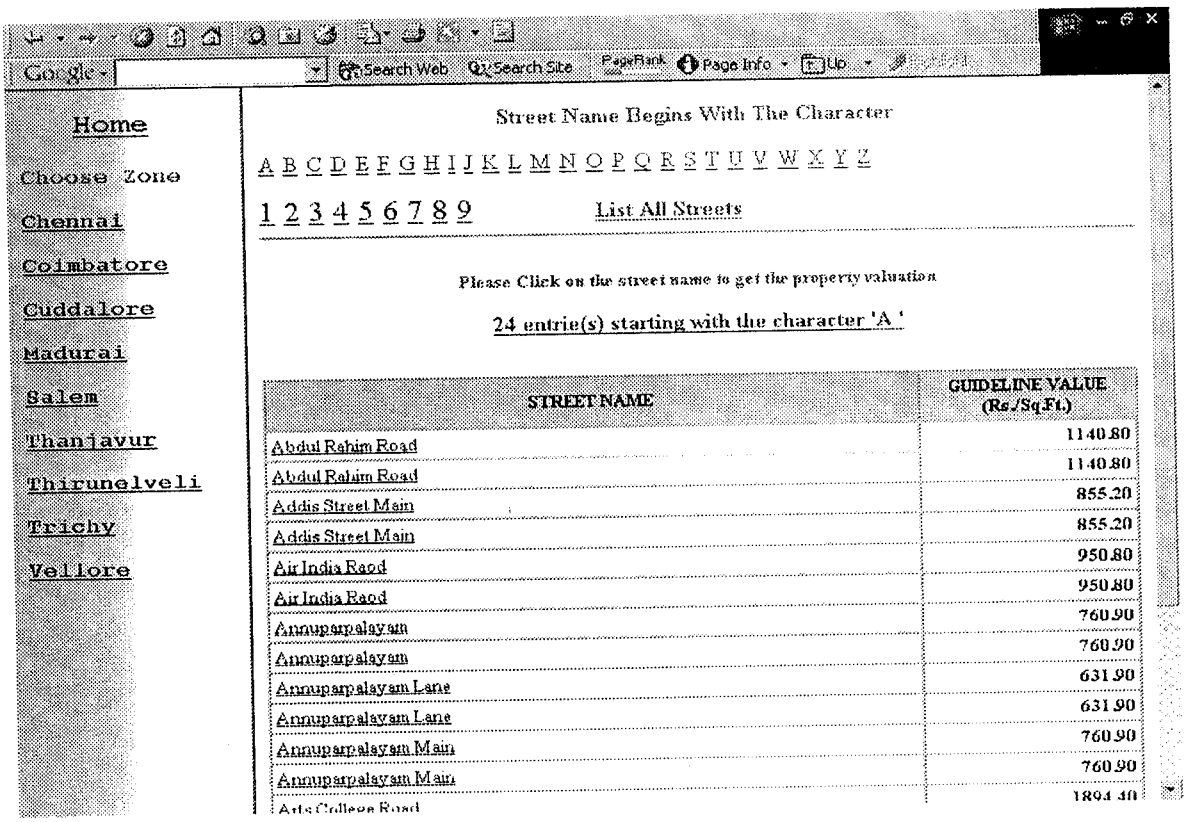
Trichy

Vellore

Villages Under The Sub Registar Office - Coimbatore Joint I

Ward-1	Ward-1	Ward-2
Ward-2	Ward-3	Ward-3
Ward-4	Ward-4	Ward-5
Ward-5	Ward-6	Ward-6
Ward-7	Ward-7	Ward-8
Ward-8	Ward-9	Ward-9

STREET's UNDER THE WARD - I



Home

Choose Zone

Chennai

Coimbatore

Cuddalore

Madurai

Salem

Thanjavur

Thirunelveli

Trichy

Vellore

Street Name Begins With The Character

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

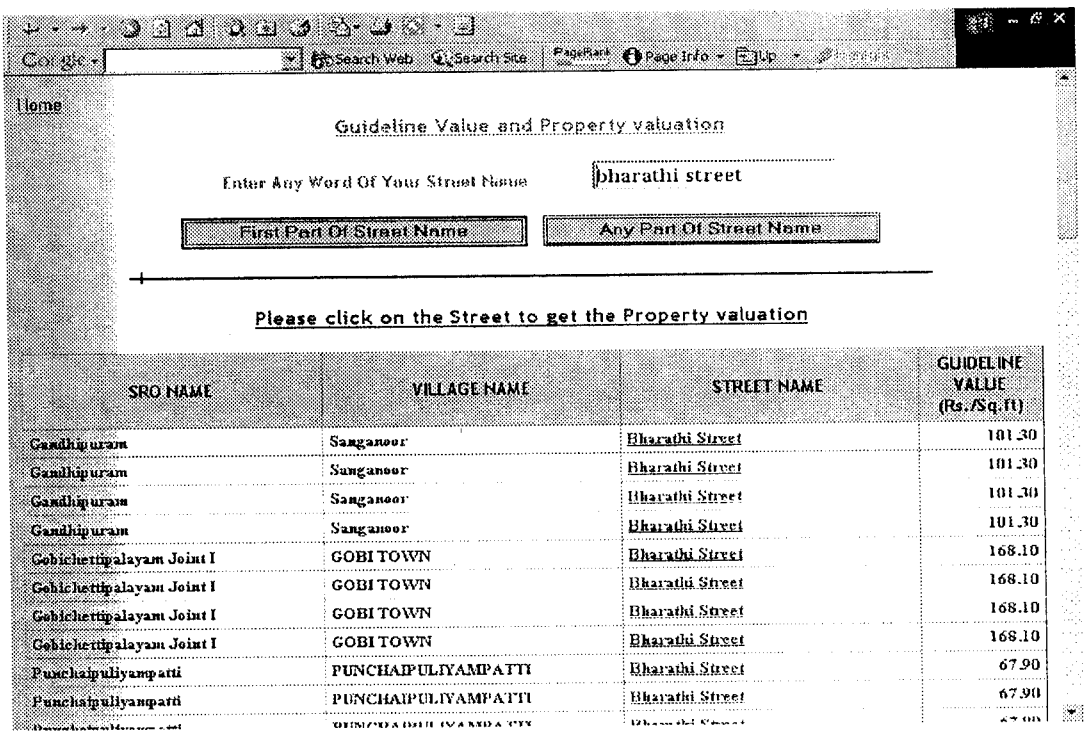
1 2 3 4 5 6 7 8 9 List All Streets

Please Click on the street name to get the property valuation

24 entrie(s) starting with the character 'A '

STREET NAME	GUIDELINE VALUE (Rs./Sq.Ft.)
Abdul Rahim Road	1140.80
Abdul Rahim Road	1140.80
Addis Street Main	855.20
Addis Street Main	855.20
Air India Raod	950.80
Air India Raod	950.80
Annuparpalayam	760.90
Annuparpalayam	760.90
Annuparpalayam Lane	631.90
Annuparpalayam Lane	631.90
Annuparpalayam Main	760.90
Annuparpalayam Main	760.90
Arts College Road	1894.40

SEARCHING THE STREET VALUE BY NAME



Home

Guideline Value and Property valuation

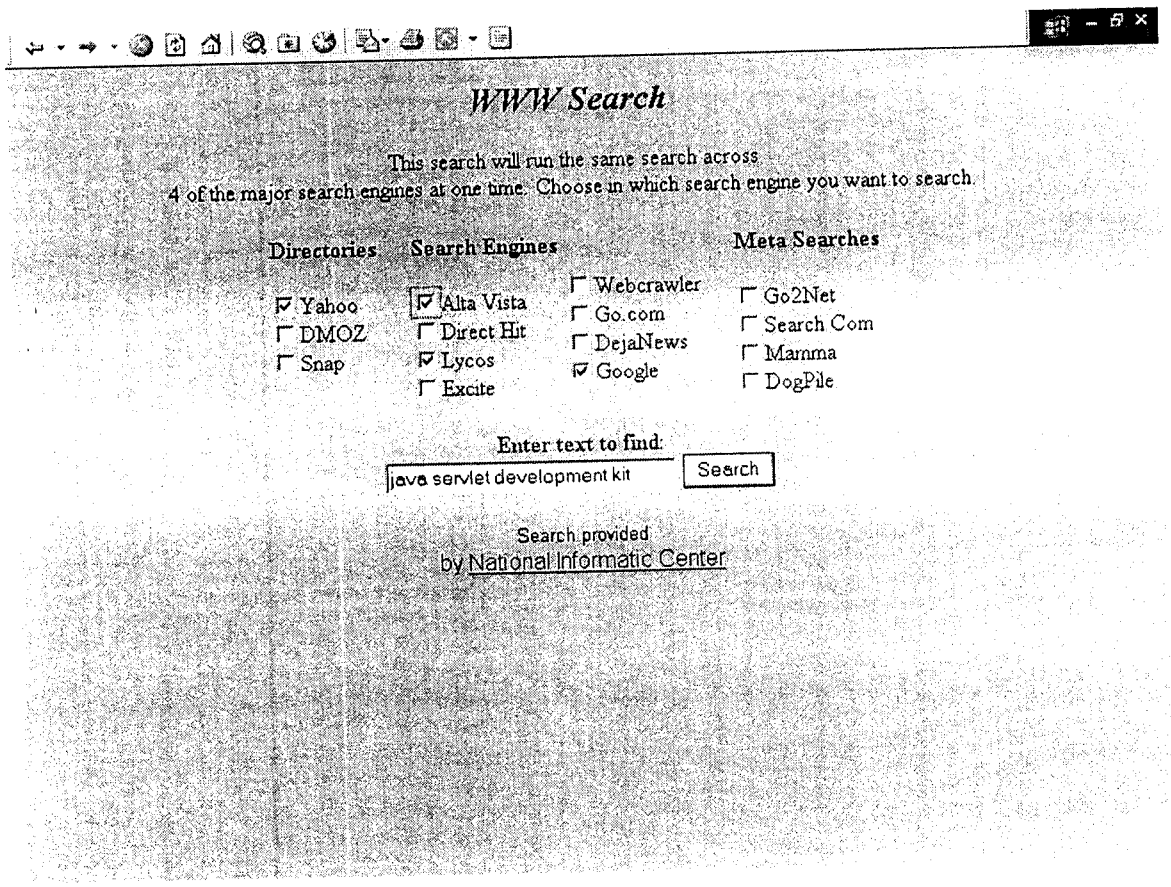
Enter Any Word Of Your Street Name: bharathi street

First Part Of Street Name | Any Part Of Street Name

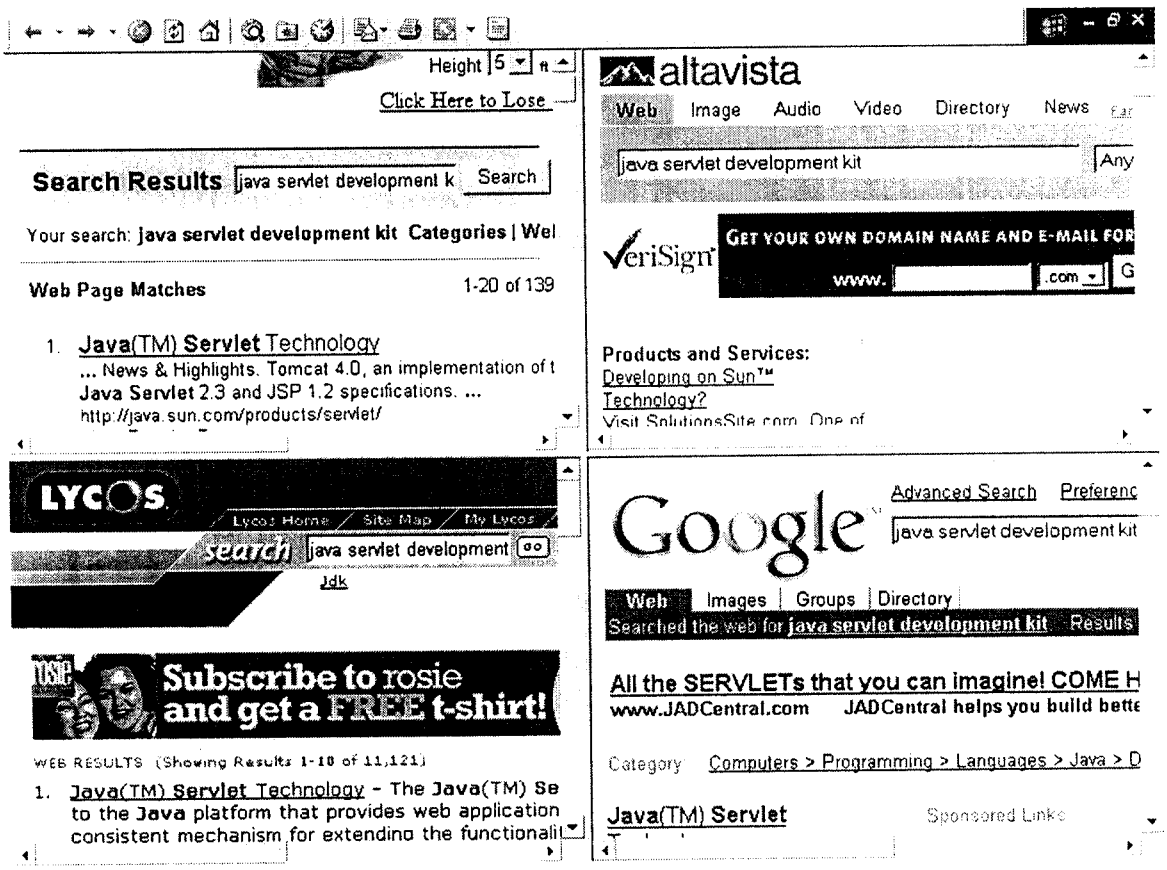
Please click on the Street to get the Property valuation

SRO NAME	VILLAGE NAME	STREET NAME	GUIDELINE VALUE (Rs./Sq.ft)
Gandhipuram	Sanganoor	Bharathi Street	101.30
Gandhipuram	Sanganoor	Bharathi Street	101.30
Gandhipuram	Sanganoor	Bharathi Street	101.30
Gandhipuram	Sanganoor	Bharathi Street	101.30
Gobichettipalayam Joint I	GOBI TOWN	Bharathi Street	168.10
Gobichettipalayam Joint I	GOBI TOWN	Bharathi Street	168.10
Gobichettipalayam Joint I	GOBI TOWN	Bharathi Street	168.10
Gobichettipalayam Joint I	GOBI TOWN	Bharathi Street	168.10
Punchaipuliyampatti	PUNCHAIPULIYAMPATTI	Bharathi Street	67.90
Punchaipuliyampatti	PUNCHAIPULIYAMPATTI	Bharathi Street	67.90

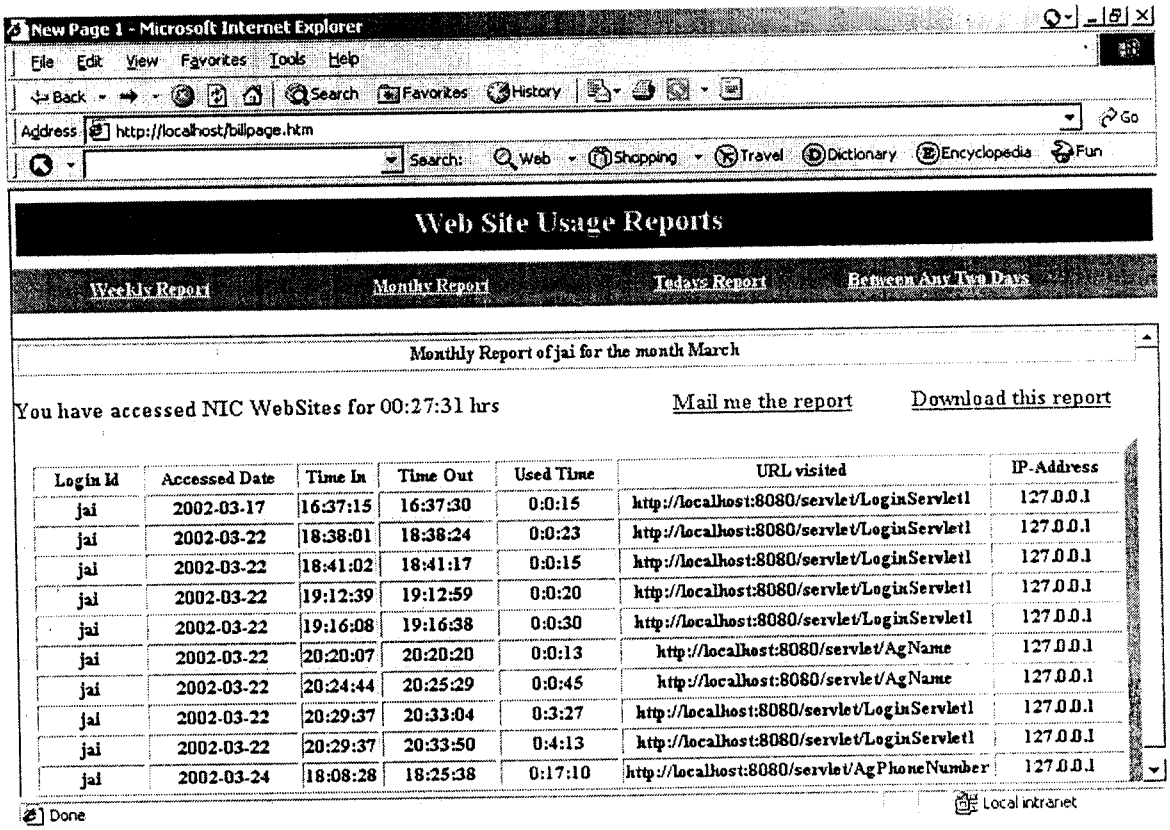
SEARCH ACROSS 4 OF THE SEARCH ENGINES SIMULTANESLY



RESULTS OF THE SEARCH

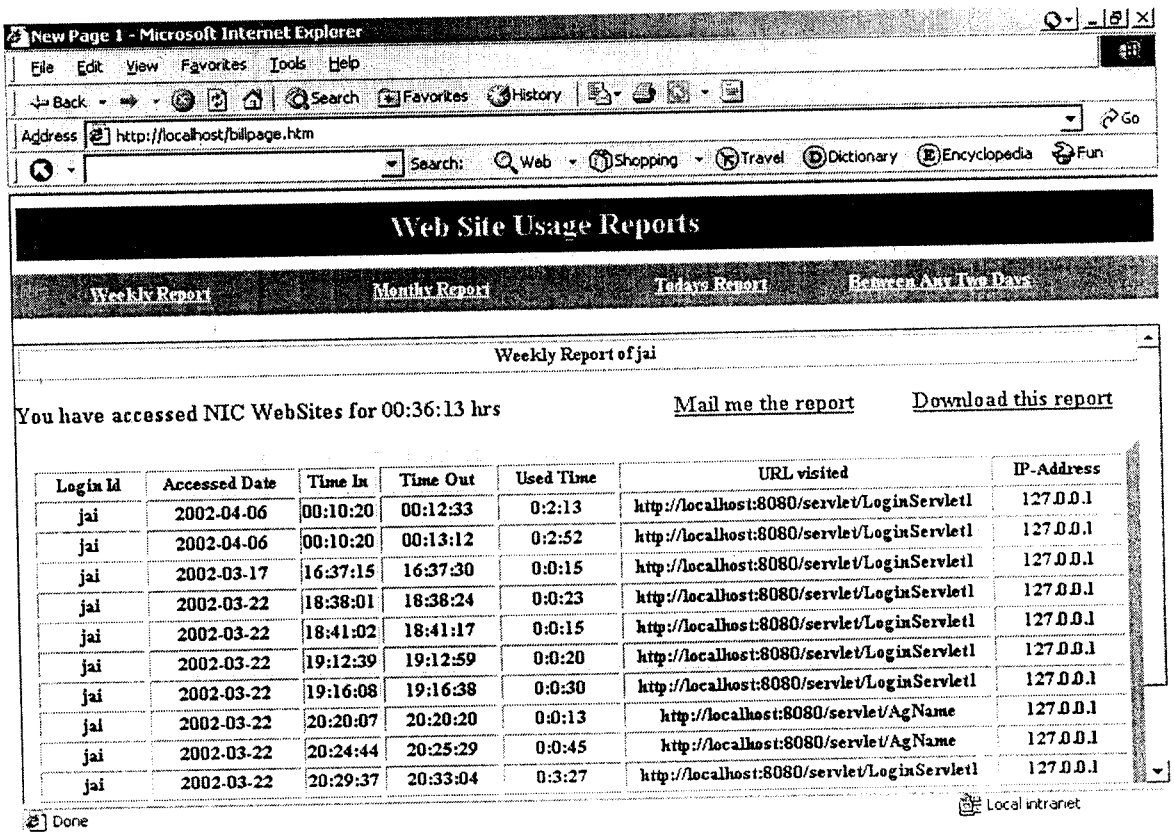


MONTHLY REPORT



Login Id	Accessed Date	Time In	Time Out	Used Time	URL visited	IP-Address
jai	2002-03-17	16:37:15	16:37:30	0:0:15	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	18:38:01	18:38:24	0:0:23	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	18:41:02	18:41:17	0:0:15	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	19:12:39	19:12:59	0:0:20	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	19:16:08	19:16:38	0:0:30	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	20:20:07	20:20:20	0:0:13	http://localhost:8080/servlet/AgName	127.0.0.1
jai	2002-03-22	20:24:44	20:25:29	0:0:45	http://localhost:8080/servlet/AgName	127.0.0.1
jai	2002-03-22	20:29:37	20:33:04	0:3:27	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	20:29:37	20:33:50	0:4:13	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-24	18:08:28	18:25:38	0:17:10	http://localhost:8080/servlet/AgPhoneNumber	127.0.0.1

WEEKLY REPORT



Login Id	Accessed Date	Time In	Time Out	Used Time	URL visited	IP-Address
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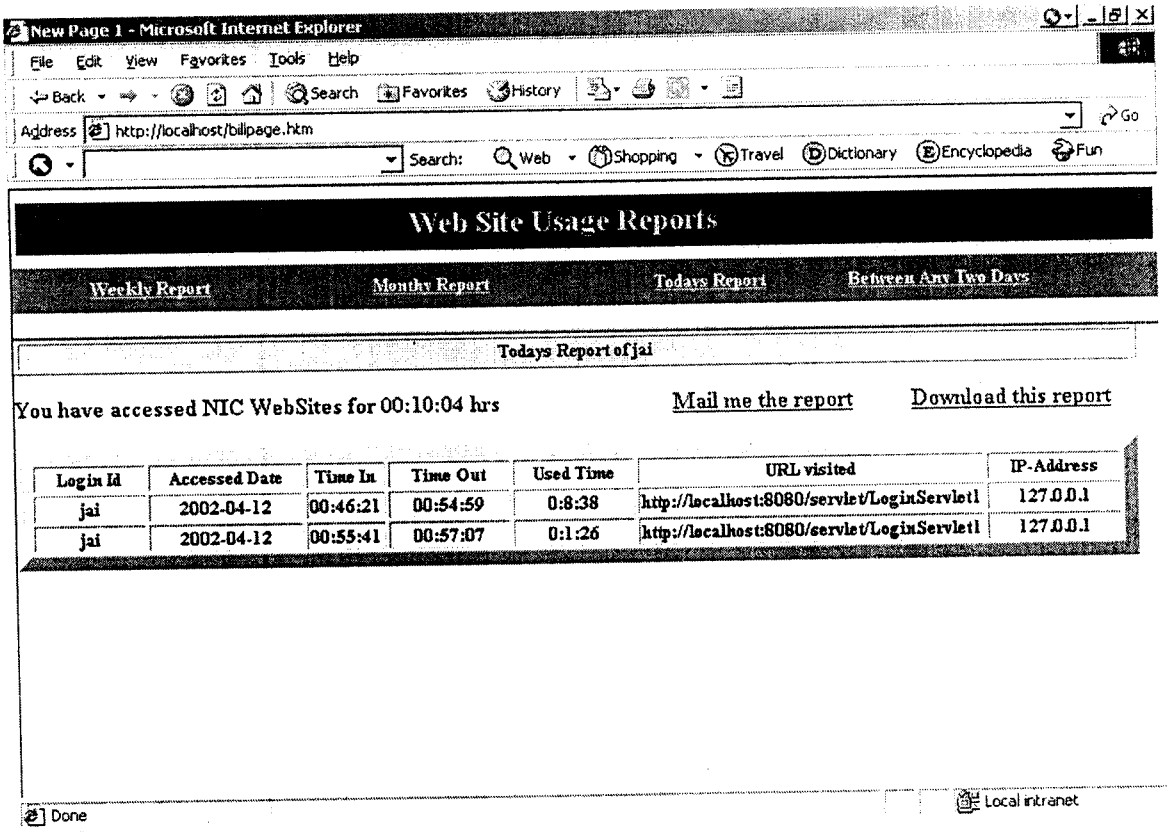
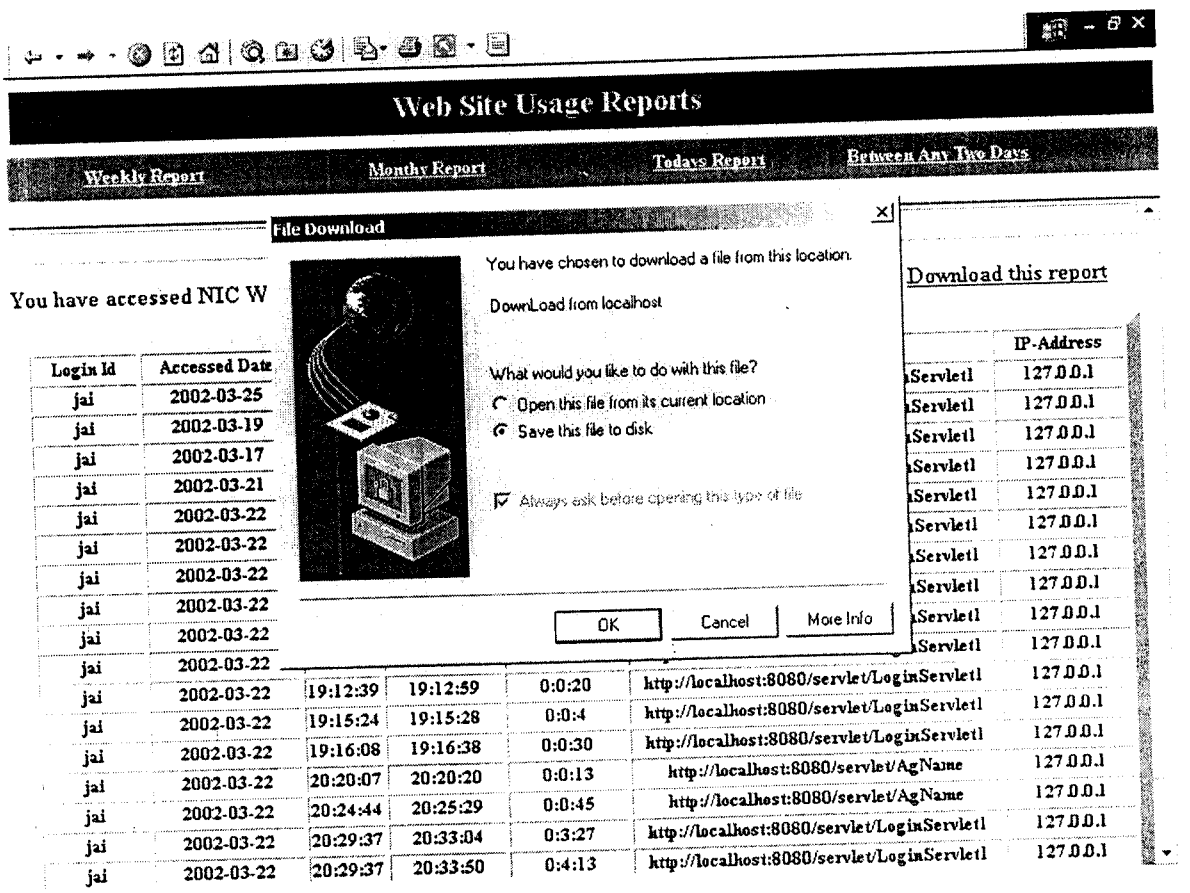
jai	2002-04-06	00:10:20	00:13:12	0:2:52	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-17	16:37:15	16:37:30	0:0:15	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	18:38:01	18:38:24	0:0:23	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	18:41:02	18:41:17	0:0:15	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	19:12:39	19:12:59	0:0:20	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	19:16:08	19:16:38	0:0:30	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	20:20:07	20:20:20	0:0:13	http://localhost:8080/servlet/AgName	127.0.0.1
jai	2002-03-22	20:24:44	20:25:29	0:0:45	http://localhost:8080/servlet/AgName	127.0.0.1
jai	2002-03-22	20:29:37	20:33:04	0:3:27	http://localhost:8080/servlet/LoginServlet1	127.0.0.1

DAILY REPORT

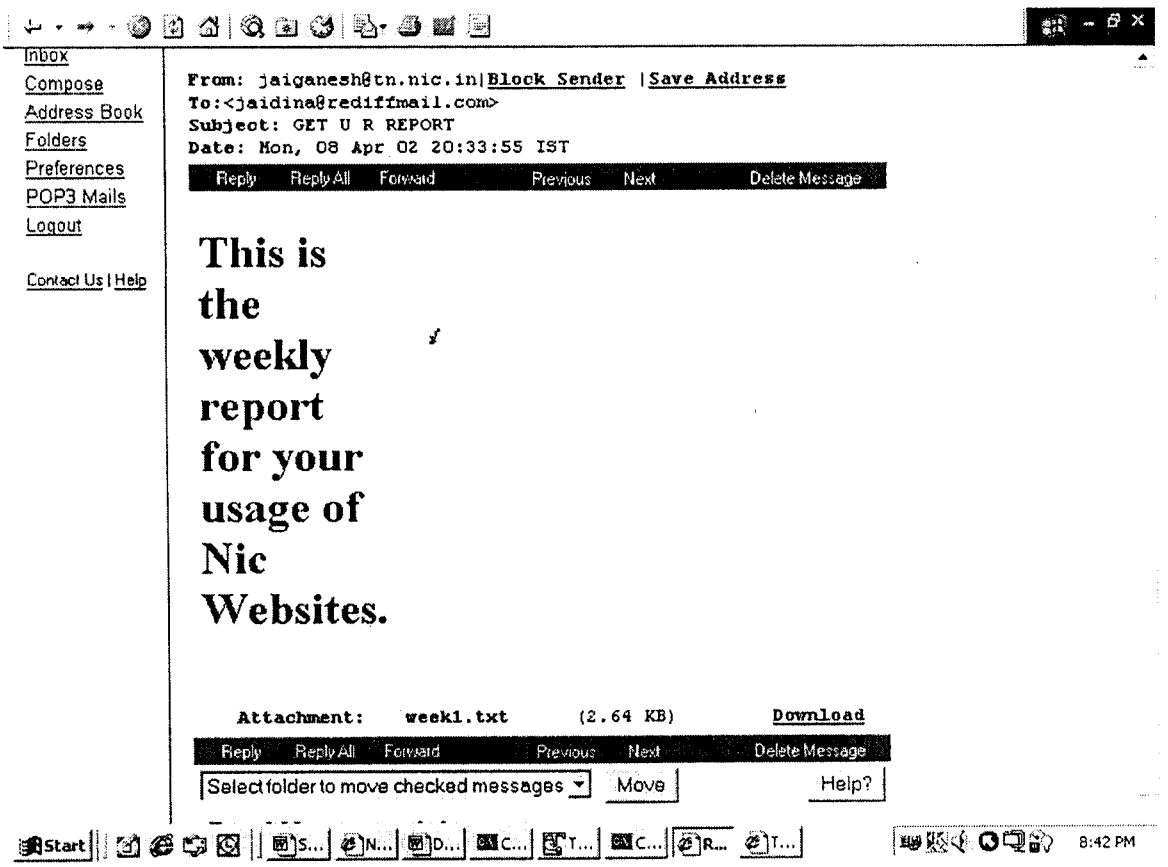


DOWNLOADING THE REPORT

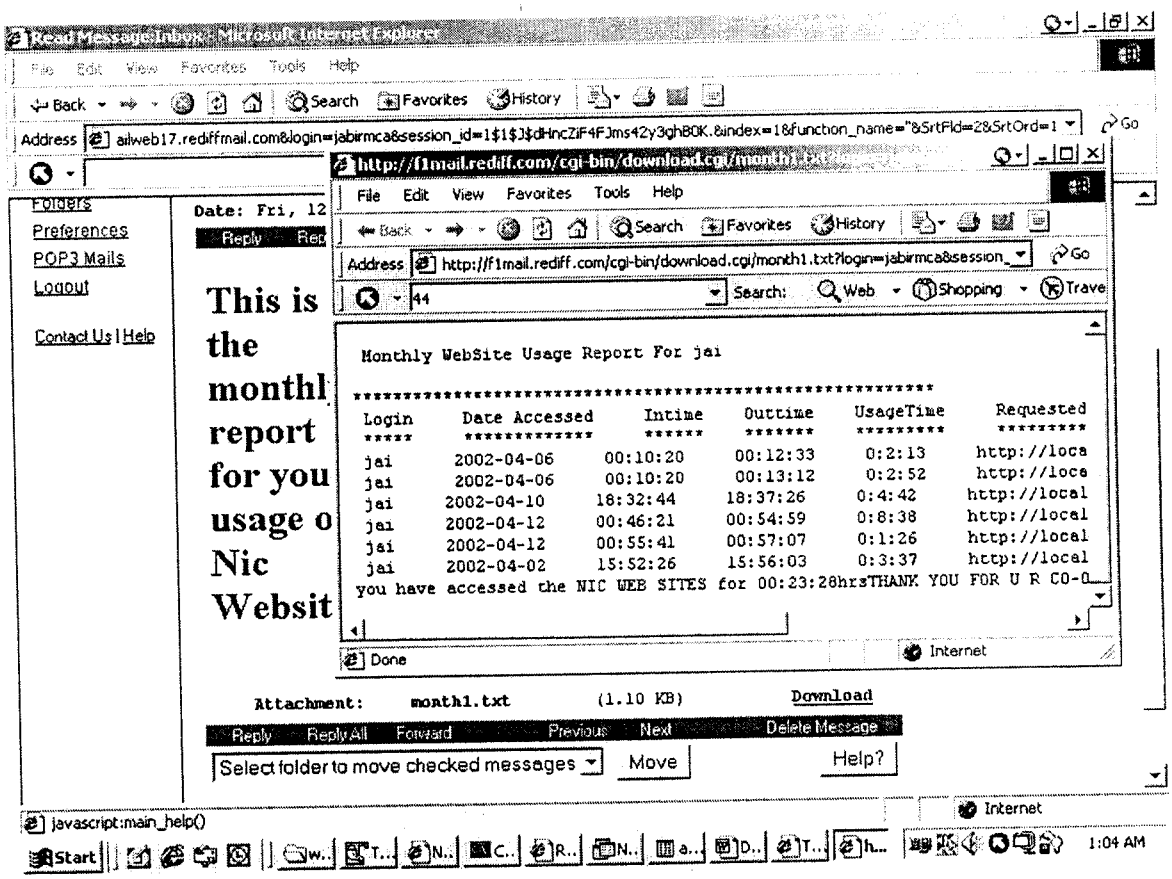


Login Id	Accessed Date					IP-Address
jai	2002-03-25				Servlet1	127.0.0.1
jai	2002-03-19				Servlet1	127.0.0.1
jai	2002-03-17				Servlet1	127.0.0.1
jai	2002-03-21				Servlet1	127.0.0.1
jai	2002-03-22				Servlet1	127.0.0.1
jai	2002-03-22				Servlet1	127.0.0.1
jai	2002-03-22				Servlet1	127.0.0.1
jai	2002-03-22				Servlet1	127.0.0.1
jai	2002-03-22				Servlet1	127.0.0.1
jai	2002-03-22				Servlet1	127.0.0.1
jai	2002-03-22	19:12:39	19:12:59	0:0:20	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	19:15:24	19:15:28	0:0:4	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	19:16:08	19:16:38	0:0:30	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	20:20:07	20:20:20	0:0:13	http://localhost:8080/servlet/AgName	127.0.0.1
jai	2002-03-22	20:24:44	20:25:29	0:0:45	http://localhost:8080/servlet/AgName	127.0.0.1
jai	2002-03-22	20:29:37	20:33:04	0:3:27	http://localhost:8080/servlet/LoginServlet1	127.0.0.1
jai	2002-03-22	20:29:37	20:33:50	0:4:13	http://localhost:8080/servlet/LoginServlet1	127.0.0.1

REPORT IN HIS EMAIL ACCOUNT



REPORT SENT TO USER THROUGH EMAIL



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