



Empowering Collaboration: Unveiling a State-of-the-Art Corporate Social Responsibility Portal for Sustainable Corporate Citizenship

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ABSTRACT

CSR Portal is one among the biggest platform which will interconnect many corporate companies to share their operations, events, functions and difficulties, etc. By this approach all corporate companies will get interconnected and will share their knowledge about particular business. So, the development of CSR Portal will be more difficult and we need to provide lot of security and safety to overcome the cyber security attacks. Graphical representation of Companies CSR Profile, Innovative Solutions, Validated NGO's, and CSR Projects will be displayed in dashboard screen. In future the same portal can be mounted to the public or private cloud environment to provide global support. For distributed environment we can move this portal to Block Chain Technology in future depending on current requirement.

EXISTING SYSTEM

In existing system, each and every company will have its own portal to track the number of projects and its current status. They won't even worried about the cyber security attacks, because they will stretch more and concentrate on their client projects and work less on their own websites. The data which is rendered in the company project will not be proper or not updated one. In our proposed, the data which is maintained in the web application will be displayed across different companies, so they will be more careful while updating the CSR Portal which instead will store the sensitive information with Advanced Encryption Standard (AES) Encryption.

PROPOSED SYSTEM

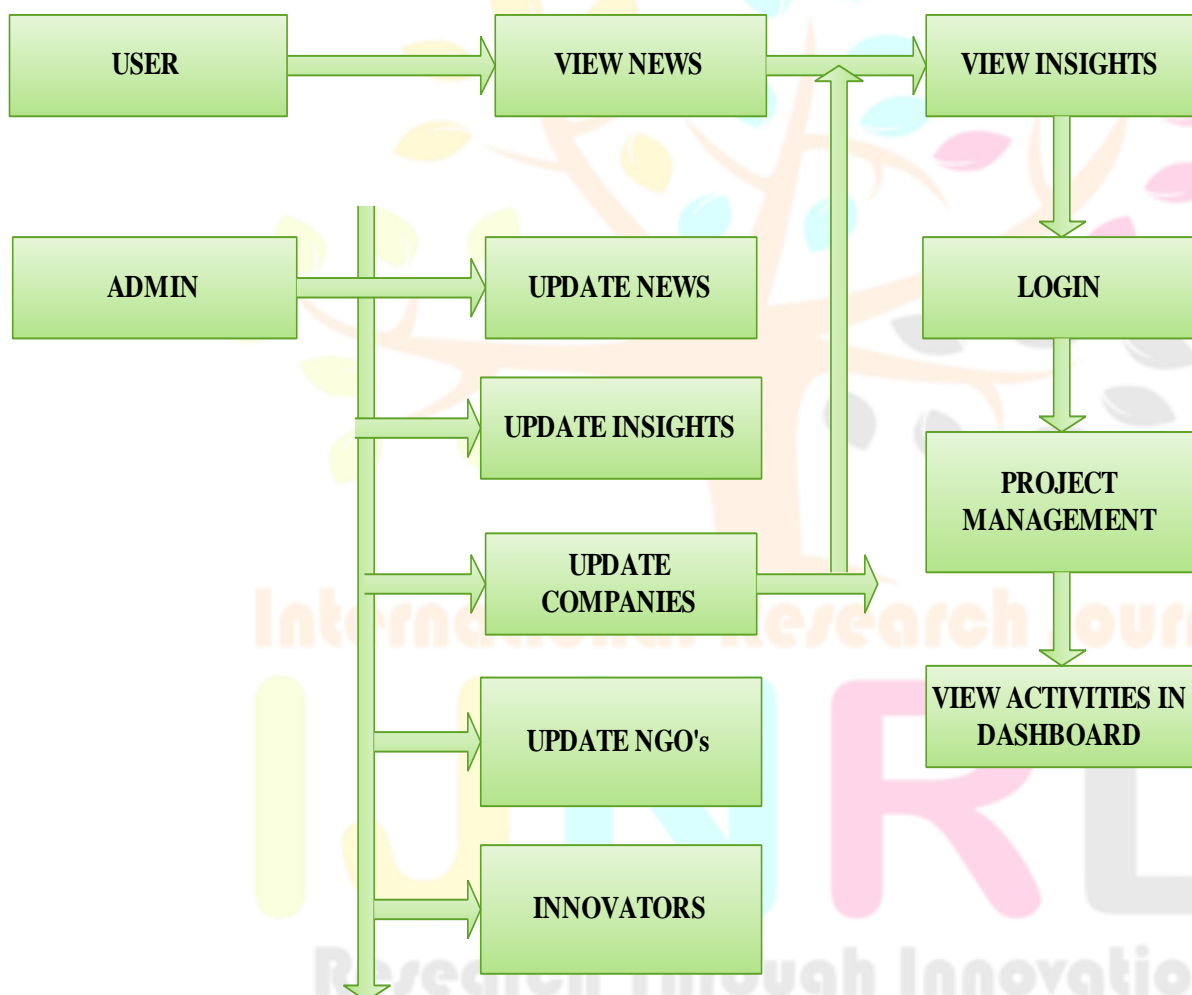
In proposed system, the development of CSR Portal will be more difficult and we need to provide lot of security and safety to overcome the cyber security attacks. Graphical representation of Companies CSR Profile,

Innovative Solutions, Validated NGO's, and CSR Projects will be displayed in dashboard screen. In order to safeguard the private/sensitive details of our application, we are using cryptographic technique. The CSR Portal which instead will store the sensitive information with Advanced Encryption Standard (AES) Encryption. In future the same portal can be mounted to the public or private cloud environment to provide global support. For distributed environment we can move this portal to Block Chain Technology in future depending on current requirement.

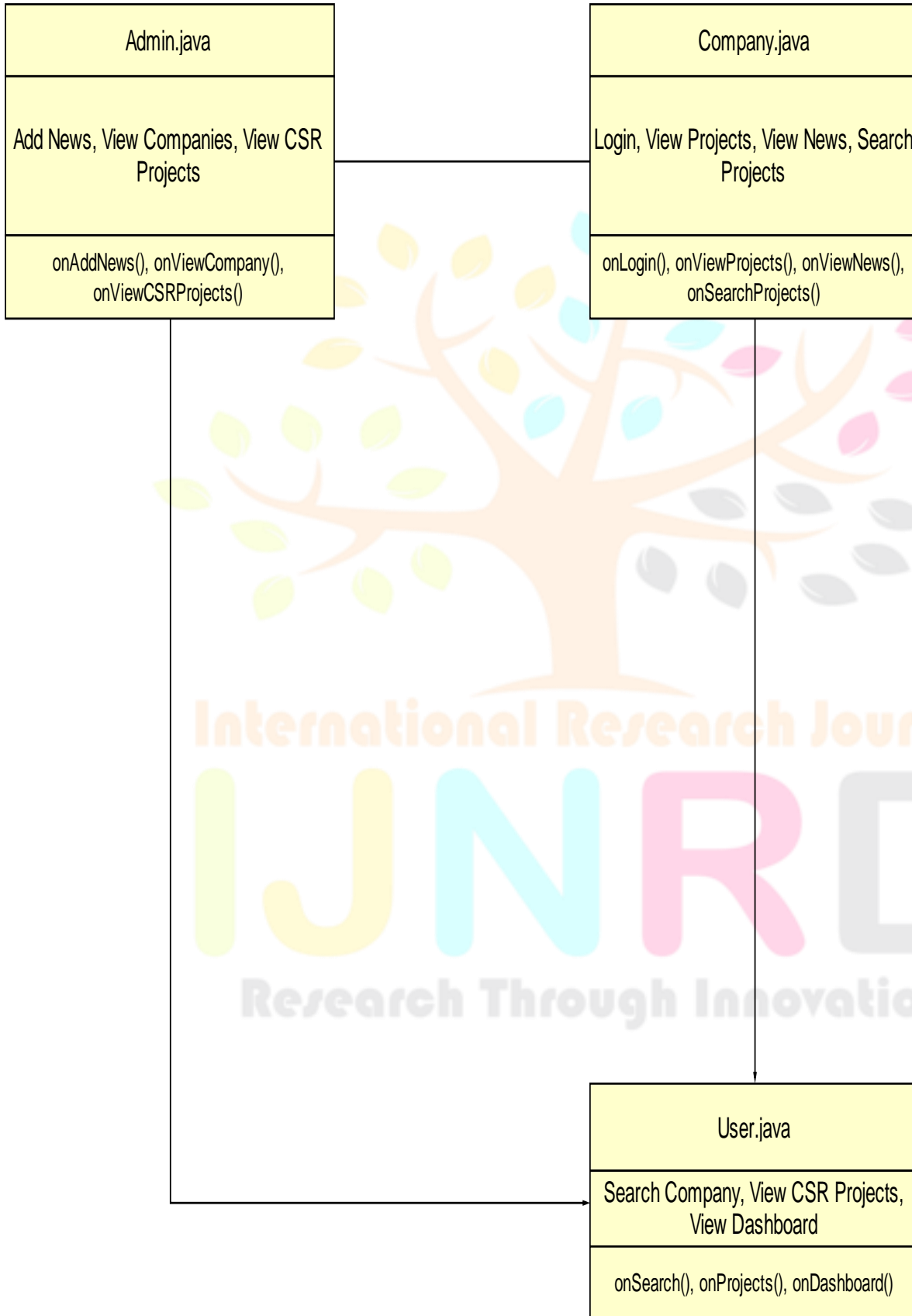
ALGORITHM

- ❖ Advanced Standard Encryption (AES)

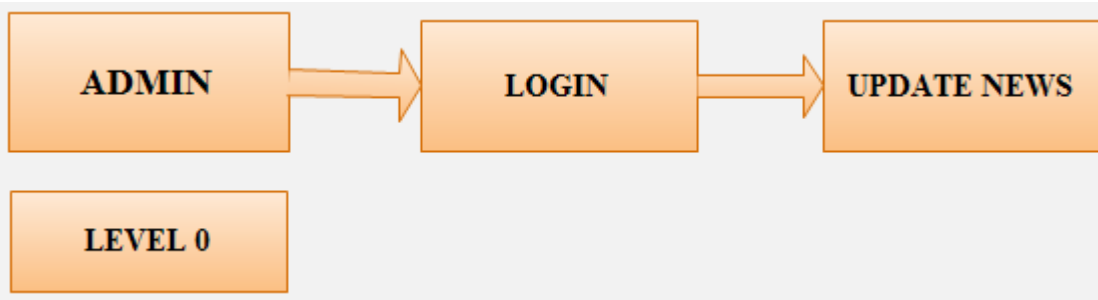
SYSTEM ARCHITECTURE

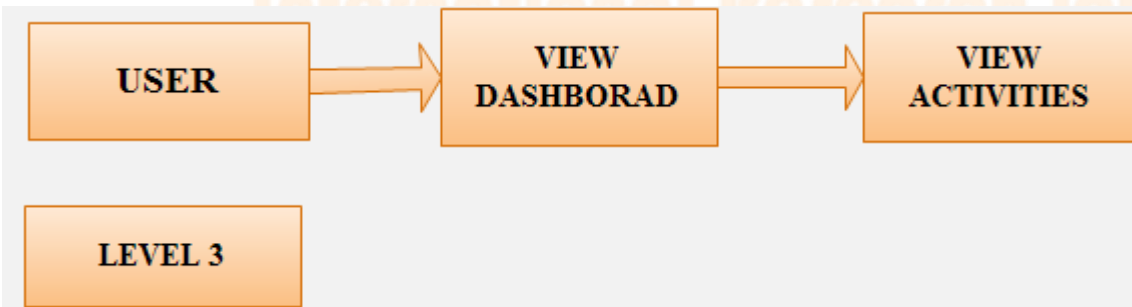
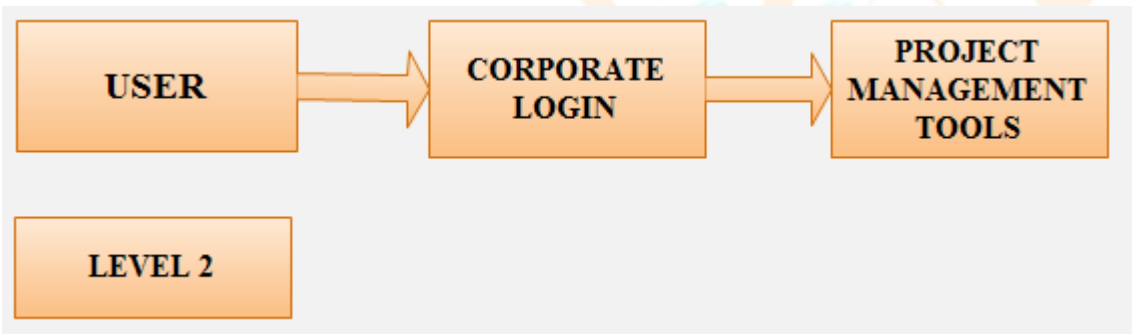
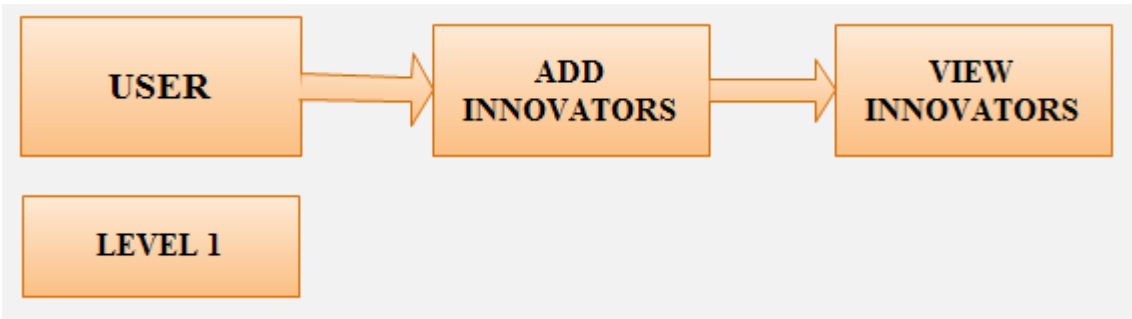


CLASS DIAGRAM



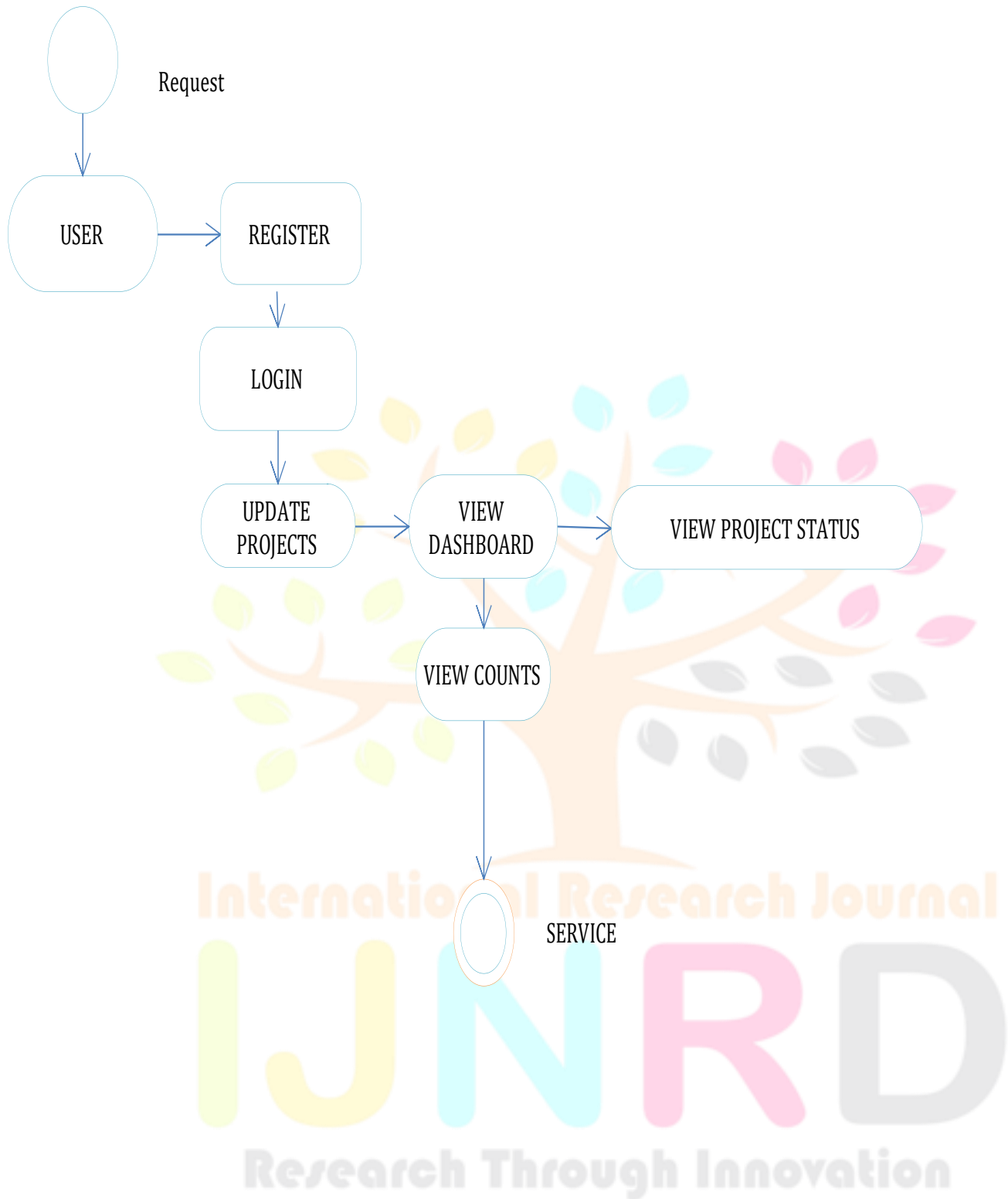
DFD DIAGRAM



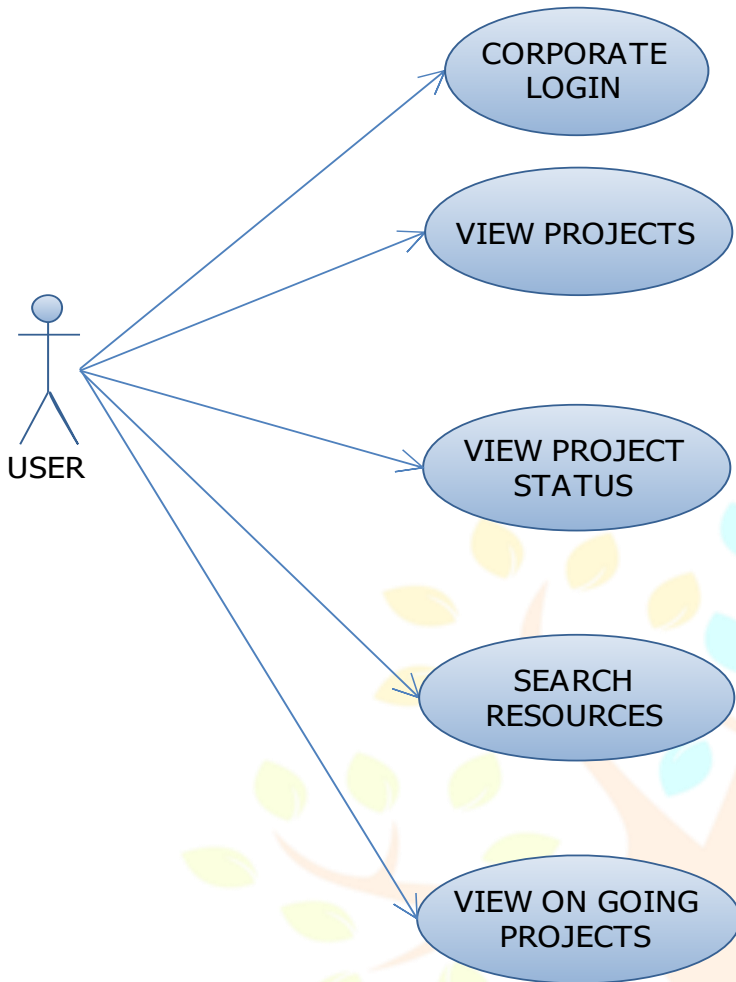


Research Through Innovation

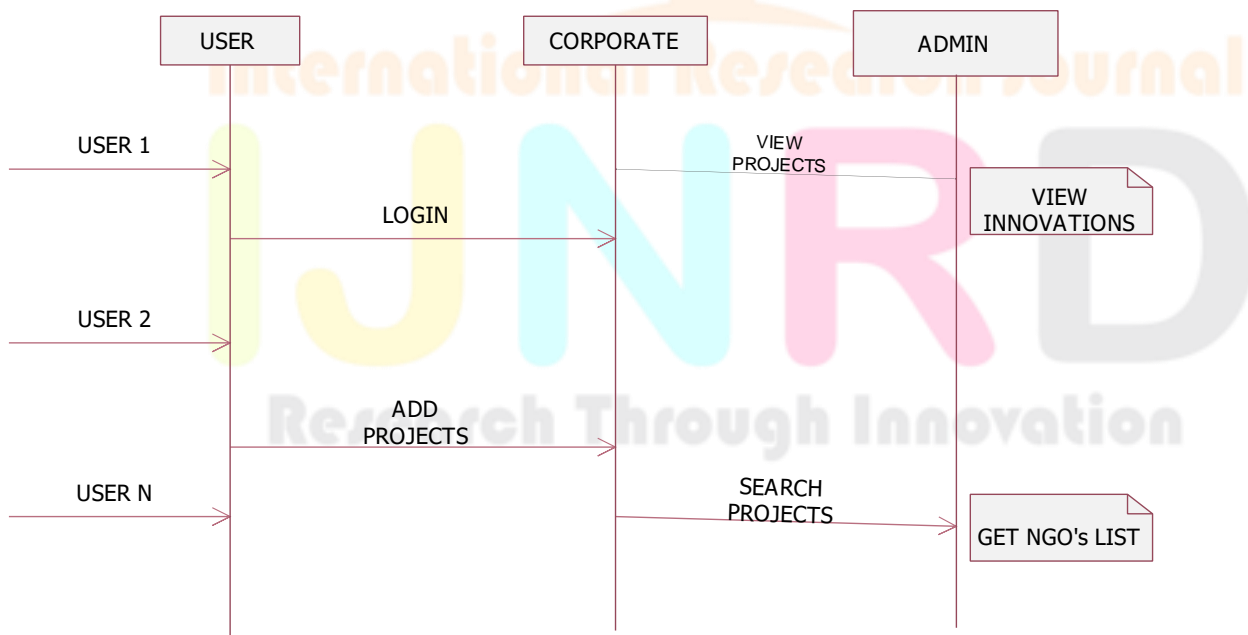
ACTIVITY DIAGRAM



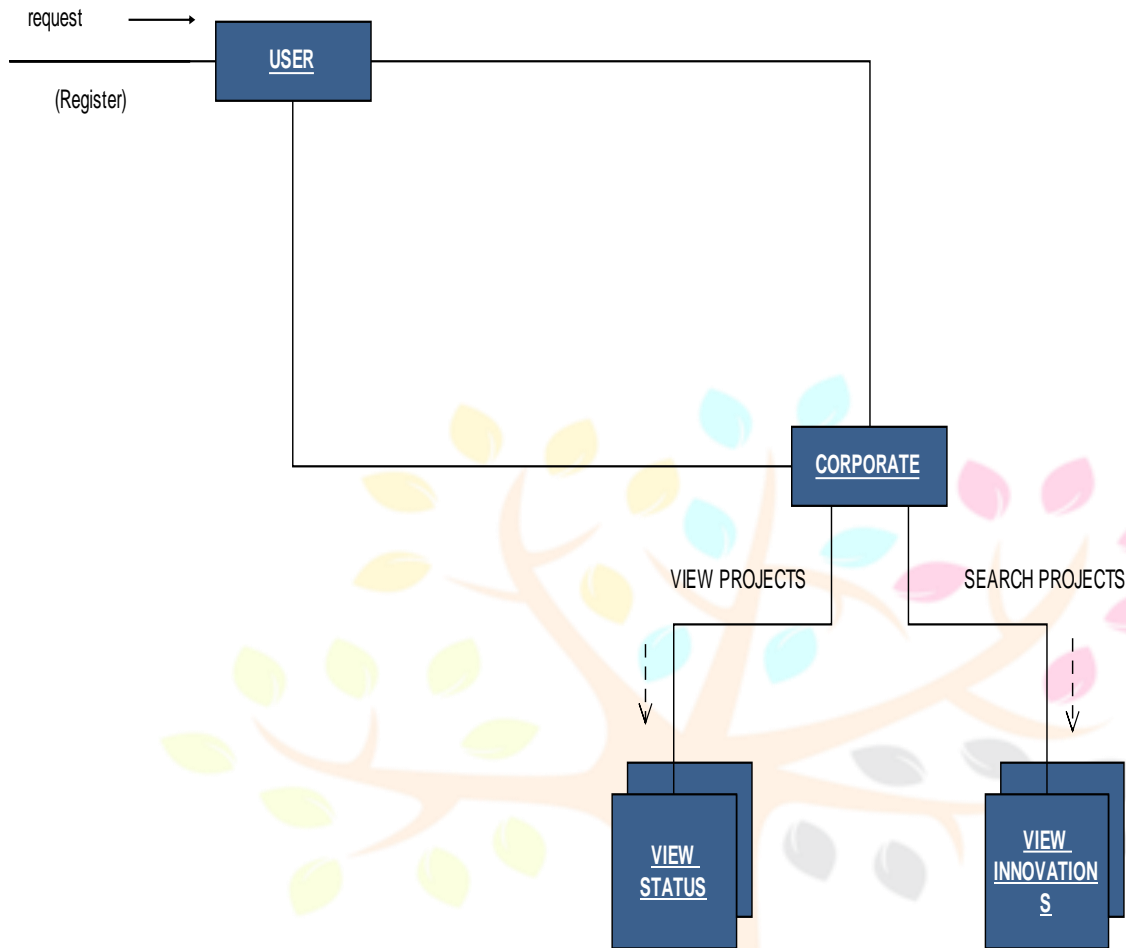
USECASE DIAGRAM



SEQUENCE DIAGRAM



COLLABORATION DIAGRAM



LITERATURE REVIEW

1) Feature Extraction based Online Job Portal

Job search portals and proper portal log-ins are the main goals of this research project. Placements are becoming increasingly important, and many people's lives are dependent on them. Both job seekers and recruiters can use a job portal to find the ideal company for their needs. In the event of activity seekers, their educational qualifications and their preferences are taken into consideration. For those looking for work, activity portals display a list of companies, while for recruiters, a database of thousands of potential employees provides the ideal applicants. When it comes to recruiting human resources, the utilisation of an electronic platform for job postings and attracting qualified applications has evolved throughout time.

Paper Link: <https://ieeexplore.ieee.org/document/9752295>

2) Mining Transportation Issues from Patient Portal Messages

Some patients experience difficulties in accessing healthcare because they were not able to find reliable transportation. For this project, we collected every patient portal message sent by patients in 2019 and selected every message with words related to transportation. We ended up with 177,658 words out of the original 59

million words and we plan to implement sentence embedding and clustering, followed by t-SNE dimensionality reduction.

Paper Link: <https://ieeexplore.ieee.org/document/9874638>

3) Jakarta Government Official Portal Acceptance Based On Technology Acceptance Model

The continuity of the quality of the official portal of DKI Jakarta province in terms of information, relevance and population must be maintained, evaluated and can be developed so that the public can get significant benefits. The purpose of this study was to determine the level of public acceptance of the portal site using the Technology Acceptance Model (TAM) approach. The methodology of this research is to make a survey of the public as users of the portal site, with the objectives based on perceived ease of use, perceived usefulness, behavioral intention to use, attitude toward using technology and actual system use of the portal site. This research is a quantitative research based on data through a questionnaire with a likert scale conducted for users of the Jakarta portal. This study uses a Structural Equation Modeling (SEM) analysis method based on the Partial Least Square (PLS) variant. There are 6 hypotheses proposed in this study, from the test results found 4 acceptable hypotheses. The hypothesis shows that the actual system usage factor is influenced by the Behavioral Intention to use factor of 48.9%. While the Behavioral Intention to use factor is influenced by the Perceived Usefulness factor of 43.9%.

Paper Link: <https://ieeexplore.ieee.org/document/9264916>

4) Electronic Portal of Non-Profit Organizations as an Element of the Communication Strategy of Non-Profit Organizations with Target Groups

The article presents the results of a study of specially created non-state electronic resources (Portals of non-profit organizations) in 18 territorial entities of the Central Federal district of Russia. The author explains the position that the portal can be an element of the communication strategy of the non-profit sector with authorities and citizens within the non-profit organizations sector. The article provides a comparative analysis of content, objects of directed communication, involvement of the non-profit sector of the region in the content of the portal, etc. Suggestions for the formation of an optimal model of a non-governmental Portal of non-profit organizations as a means of strategic communication are made.

Paper Link: <https://ieeexplore.ieee.org/document/9101334>

5) Development of Knowledge Games in an Interactive Educational Portal

The development of knowledge games today is a bit of a forgotten area. By playing such games, the player increases his knowledge or verifies it. Therefore, it is advantageous to incorporate this type of game into an interactive educational portal. The primary mission of the interactive educational portal with the support of

games is to provide new educational opportunities for students of mostly lower grades in primary schools. The basic idea is also to offer a new approach to education. Games are popular now, and through them, it is possible to streamline the educational process. Kids can play and learn at the same time. Such an approach can minimize students' stress while stimulating them to achieve better results. The second aspect is the possibility of cooperation between several students, which can help to create different types of collaboration between pupils.

Paper Link: <https://ieeexplore.ieee.org/document/9497585>

6) Web Accessibility of e-Government Portals and Ministry Websites of the Cyprus Island

The accessibility of a website means everyone including people with disabilities can perceive, understand and interact with the that website. In this study, accessibility of the e-government portals and ministry websites of the North and South Cyprus has been evaluated. The accessibility assessment was carried out to verify compliance with the Web Content Accessibility Guidelines 2.1 (WCAG 2.1) published by the World Wide Web Consortium (W3C) of these websites. The main goal of this study is to determine whether people with disabilities can access and use government websites of the Cyprus Island and to raise awareness about web accessibility. It can be conclude that none of the evaluated websites are error free and only 15.71% overall pages tested achieve an acceptable web accessibility level of compliance.

Paper Link: <https://ieeexplore.ieee.org/document/9254996>

7) Development of a Bahraini open data web portal for investment industry

Bahrain encourages investment in several economic sectors. But, when seeking investment opportunities, investors, particularly, foreign investors, lack the access to an open, single, specialized, and collaborative source of information for investment opportunities. Niche open data web portals are special websites that satisfy specific markets by aggregating purposeful information from several sources and making it openly available to dedicated users. This study aims at developing a Bahraini investment open data portal to enhance the collaboration and effective information sharing between investors and the Bahraini investment sectors and enable decision-making by granting investors budget preferences and matching organizations, open statistical information in available investment sectors' projects. The research design was inspired by a waterfall system development life cycle (SDLC) methodology comprising of two phases and seven processes. Data collection is based on an interview with representatives of the ministry of industry and commerce, a systematic literature review (SLR) method, content analysis method, and two questionnaires. The interview assured problem existence and collected investor's contact details, while questionnaire 1 investigated the Bahraini investment ecosystem and collected user requirements. Questionnaire 2 evaluated the application's usability based on Nielsen heuristics. Empirically, findings revealed the existence of the problem, identified the requirements underpinning, informed development of a dynamic open web portal considering that 12 functional requirements

were collected, analyzed, and documented while user interfaces and database records were designed, implemented, installed, tested, and evaluated demonstrating 65% of usability.

Paper Link: <https://ieeexplore.ieee.org/document/9325636>

8) A Case Study Using National e-Government Portals to Investigate the Deployment of the Nmap Tool for Network Vulnerability Assessment

An open-source security scanning tool called Nmap (Network Mapper) is used to find hosts and services on a network and build a topological map of the network. Nmap is capable of a wide range of activities, including host discovery, port scanning, version detection, OS identification, and vulnerability scanning. It may be used to scan individual hosts or large networks. Nmap's capacity to conduct covert scans utilizing a variety of scanning methods, including SYN scan, TCP connect scan, and idle scan, is one of its primary characteristics. In order to test network defenses, it can also conduct aggressive scans. This article covers approximately fifty Indian government sites with regard to professional and network security-related problems, such as OS system guesses, the number of open/closed/filtered ports, the name of the Web server, etc. Using the Nmap (network mapper) tool, the results are examined from a security perspective.

Paper Link: <https://ieeexplore.ieee.org/document/10335785>

9) Developing an E-learning and Job Portal for IT Aspirants

There are many challenges that individuals face in today's job market to compete in the real world, they need to be coached in various aspects. This is a daunting task that requires the use of various resources and platforms: This study aims to solve the underlying problem by developing an e-learning web-based portal (named as, Career Rocket) where individuals (college graduates and working professionals) can learn, practice and test various Industry demanding skills and hone them. Career Rocket is a one stop solution to cater the placement needs of students and help job seekers sharpen industry demanding skills.

Paper Link: <https://ieeexplore.ieee.org/document/9792727>

10) An Interoperable Open Data Portal for Climate Analysis

This work proposes an open interoperable data portal that offers access to a Web-wide climate domain knowledge graph created for Ireland and England's NOAA climate daily data. There are three main components contributing to this data portal: the first is the upper layer schema of the knowledge graph –the climate analysis (CA) ontology – the second is an ad hoc SPARQL server by which to store the graph data and provide public Web access, the last is a dereferencing engine deployed to resolve URIs for entity information. Our knowledge graph form of NOAA climate data facilitates the supply of semantic climate information to researchers and offers a variety of semantic applications that can be built on top of it.

Paper Link: <https://ieeexplore.ieee.org/document/9703648>

SYSTEM SPECIFICATION

HARDWARE SYSTEM REQUIREMENT

Processor	- Pentium –III
Speed	- 1.1 Ghz
RAM	- 256 MB (min)
Hard Disk	- 20 GB
Floppy Drive	- 1.44 MB
Key Board	- Standard Windows Keyboard
Mouse	- Two or Three Button Mouse
Monitor	- SVGA

S/W SYSTEM REQUIREMENT

- ❖ **Operating System** : Windows 95/98/2000/NT4.0.
- ❖ **Application Server** : Tomcat6.0
- ❖ **Front End** : HTML, Java.
- ❖ **Scripts** : JavaScript.
- ❖ **Server side Script** : Java Server Pages.
- ❖ **Database** : MYSQL.
- ❖ **Database Connectivity**: JDBC.

SOFTWARE FEASIBILITY

FEASIBILITY STUDY:

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

- ❖ ECONOMICAL FEASIBILITY
- ❖ TECHNICAL FEASIBILITY
- ❖ SOCIAL FEASIBILITY

ECONOMICAL FEASIBILITY

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

SOCIAL FEASIBILITY

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

FUNCTIONAL REQUIREMENTS:

Functional requirements specify which output file should be produced from the given file they describe the relationship between the input and output of the system, for each functional requirement a detailed description of all data inputs and their source and the range of valid inputs must be specified.

NON FUNCTIONAL REQUIREMENTS:

Describe user-visible aspects of the system that are not directly related with the functional behavior of the system. Non-Functional requirements include quantitative constraints, such as response time (i.e. how fast the system reacts to user commands.) or accuracy ((.e. how precise are the systems numerical answers.)

PSEUDO REQUIREMENTS:

The client that restricts the implementation of the system imposes these requirements. Typical pseudo requirements are the implementation language and the platform on which the system is to be implemented. These have usually no direct effect on the user's view of the system.

SYSTEM TESTING

INTRODUCTION:

After finishing the development of any computer based system the next complicated time consuming process is system testing. During the time of testing only the development company can know that, how far the user requirements have been met out, and so on.

Following are the some of the testing methods applied to this effective project:

SOURCE CODE TESTING:

This examines the logic of the system. If we are getting the output that is required by the user, then we can say that the logic is perfect.

SPECIFICATION TESTING:

We can set with, what program should do and how it should perform under various condition. This testing is a comparative study of evolution of system performance and system requirements.

MODULE LEVEL TESTING:

In this the error will be found at each individual module, it encourages the programmer to find and rectify the errors without affecting the other modules.

UNIT TESTING:

Unit testing focuses on verifying the effort on the smallest unit of software-module. The local data structure is examined to ensure that the data stored temporarily maintains its integrity during all steps in the algorithm's execution. Boundary conditions are tested to ensure that the module operates properly at boundaries established to limit or restrict processing.

INTEGRATION TESTING:

Data can be tested across an interface. One module can have an inadvertent, adverse effect on the other. **Integration testing** is a systematic technique for constructing a program structure while conducting tests to uncover errors associated with interring.

VALIDATION TESTING:

It begins after the integration testing is successfully assembled. Validation succeeds when the software functions in a manner that can be reasonably accepted by the client. In this the majority of the validation is done during the

data entry operation where there is a maximum possibility of entering wrong data. Other validation will be performed in all process where correct details and data should be entered to get the required results.

RECOVERY TESTING:

Recovery Testing is a system that forces the software to fail in variety of ways and verifies that the recovery is properly performed. If recovery is automatic, re-initialization, and data recovery are each evaluated for correctness.

SECURITY TESTING:

Security testing attempts to verify that protection mechanism built into system will in fact protect it from improper penetration. The tester may attempt to acquire password through external clerical means, may attack the system with custom software design to break down any defenses to others, and may purposely cause errors.

PERFORMANCE TESTING:

Performance Testing is used to test runtime performance of software within the context of an integrated system. Performance test are often coupled with stress testing and require both software instrumentation.

BLACKBOX TESTING:

Black- box testing focuses on functional requirement of software. It enables to derive sets of input conditions that will fully exercise all functional requirements for a program.

Black box testing attempts to find error in the following category:

- Incorrect or missing function
- Interface errors
- Errors in data structures or external database access and performance errors.

OUTPUT TESTING:

After performing the validation testing, the next step is output testing of the proposed system since no system would be termed as useful until it does produce the required output in the specified format. **Output format** is considered in two ways, the **screen format** and the **printer format**.

USER ACCEPTANCE TESTING:

User Acceptance Testing is the key factor for the success of any system. The system under consideration is tested for user acceptance by constantly keeping in touch with prospective system users at the time of developing and making changes whenever required.

SOFTWARE ENVIRONMENT

Java Technology

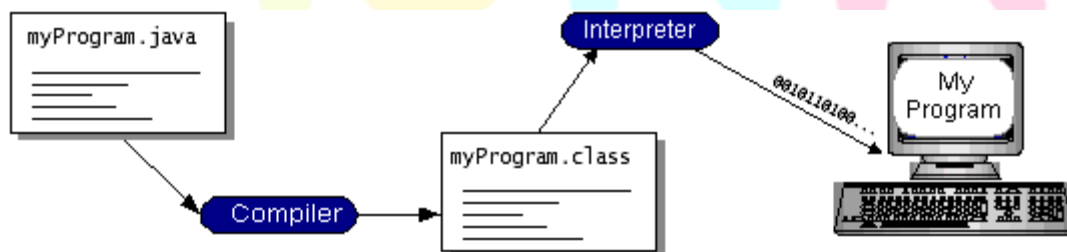
Java technology is both a programming language and a platform.

The Java Programming Language

The Java programming language is a high-level language that can be characterized by all of the following buzzwords:

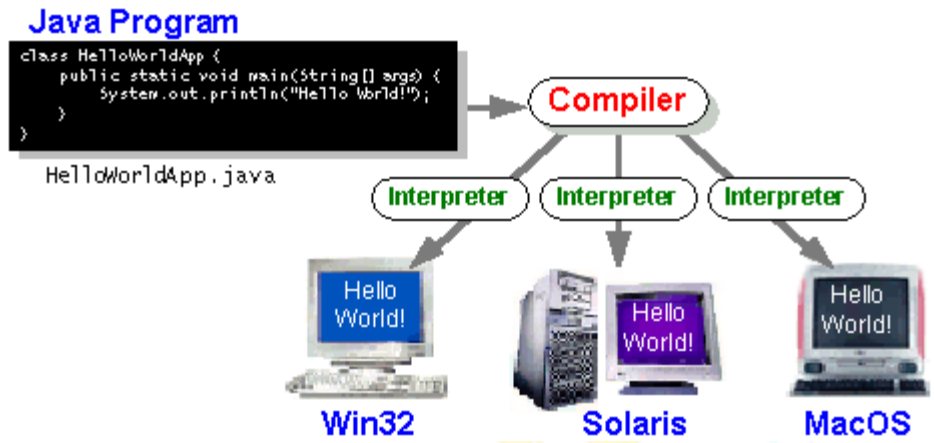
- Simple
- Architecture neutral
- Object oriented
- Portable
- Distributed
- High performance
- Interpreted
- Multithreaded
- Robust
- Dynamic
- Secure

With most programming languages, you either compile or interpret a program so that you can run it on your computer. The Java programming language is unusual in that a program is both compiled and interpreted. With the compiler, first you translate a program into an intermediate language called *Java byte codes* —the platform-independent codes interpreted by the interpreter on the Java platform. The interpreter parses and runs each Java byte code instruction on the computer. Compilation happens just once; interpretation occurs each time the program is executed. The following figure illustrates how this works.



You can think of Java byte codes as the machine code instructions for the *Java Virtual Machine* (Java VM). Every Java interpreter, whether it's a development tool or a Web browser that can run applets, is an implementation of the Java VM. Java byte codes help make “write once, run anywhere” possible. You can

compile your program into byte codes on any platform that has a Java compiler. The byte codes can then be run on any implementation of the Java VM. That means that as long as a computer has a Java VM, the same program written in the Java programming language can run on Windows 2000, a Solaris workstation, or on an iMac.



The Java Platform

A *platform* is the hardware or software environment in which a program runs. We’ve already mentioned some of the most popular platforms like Windows 2000, Linux, Solaris, and MacOS. Most platforms can be described as a combination of the operating system and hardware. The Java platform differs from most other platforms in that it’s a software-only platform that runs on top of other hardware-based platforms.

The Java platform has two components:

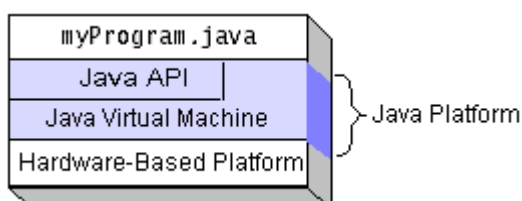
- The *Java Virtual Machine* (Java VM)
- The *Java Application Programming Interface* (Java API)

International Research Journal

You’ve already been introduced to the Java VM. It’s the base for the Java platform and is ported onto various hardware-based platforms.

The Java API is a large collection of ready-made software components that provide many useful capabilities, such as graphical user interface (GUI) widgets. The Java API is grouped into libraries of related classes and interfaces; these libraries are known as *packages*. The next section, What Can Java Technology Do? Highlights what functionality some of the packages in the Java API provide.

The following figure depicts a program that’s running on the Java platform. As the figure shows, the Java API and the virtual machine insulate the program from the hardware.



Native code is code that after you compile it, the compiled code runs on a specific hardware platform. As a platform-independent environment, the Java platform can be a bit slower than native code. However, smart compilers, well-tuned interpreters, and just-in-time byte code compilers can bring performance close to that of native code without threatening portability.

What Can Java Technology Do?

The most common types of programs written in the Java programming language are *applets* and *applications*. If you've surfed the Web, you're probably already familiar with applets. An applet is a program that adheres to certain conventions that allow it to run within a Java-enabled browser.

However, the Java programming language is not just for writing cute, entertaining applets for the Web. The general-purpose, high-level Java programming language is also a powerful software platform. Using the generous API, you can write many types of programs.

An application is a standalone program that runs directly on the Java platform. A special kind of application known as a *server* serves and supports clients on a network. Examples of servers are Web servers, proxy servers, mail servers, and print servers. Another specialized program is a *servlet*. A servlet can almost be thought of as an applet that runs on the server side. Java Servlets are a popular choice for building interactive web applications, replacing the use of CGI scripts. Servlets are similar to applets in that they are runtime extensions of applications.

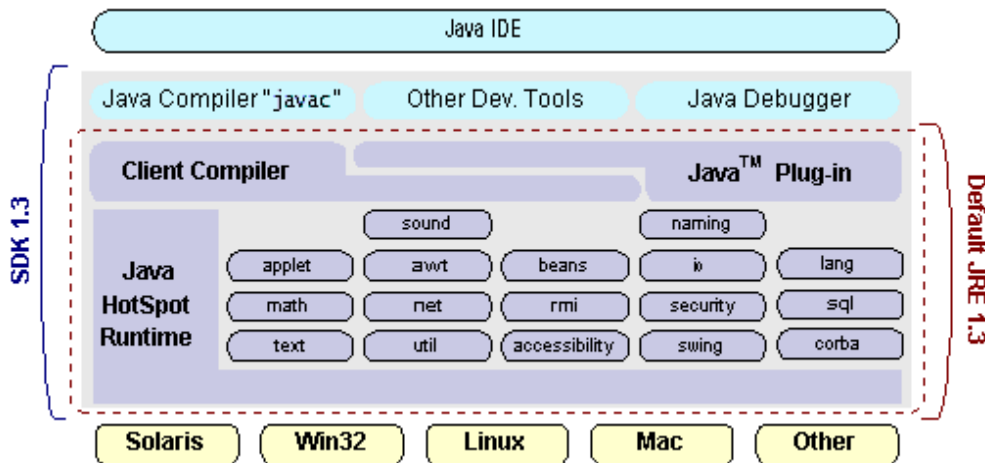
Instead of working in browsers, though, Servlets run within Java Web servers, configuring or tailoring the server.

How does the API support all these kinds of programs? It does so with packages of software components that provides a wide range of functionality. Every full implementation of the Java platform gives you the following features:

- **The essentials:** Objects, strings, threads, numbers, input and output, data structures, system properties, date and time, and so on.
- **Applets:** The set of conventions used by applets.
- **Networking:** URLs, TCP (Transmission Control Protocol), UDP (User Datagram Protocol) sockets, and IP (Internet Protocol) addresses.
- **Internationalization:** Help for writing programs that can be localized for users worldwide. Programs can automatically adapt to specific locales and be displayed in the appropriate language.
- **Security:** Both low level and high level, including electronic signatures, public and private key management, access control, and certificates.
- **Software components:** Known as JavaBeans™, can plug into existing component architectures.

- **Object serialization:** Allows lightweight persistence and communication via Remote Method Invocation (RMI).
- **Java Database Connectivity (JDBC™):** Provides uniform access to a wide range of relational databases.

The Java platform also has APIs for 2D and 3D graphics, accessibility, servers, collaboration, telephony, speech, animation, and more. The following figure depicts what is included in the Java 2 SDK.



How Will Java Technology Change My Life?

We can't promise you fame, fortune, or even a job if you learn the Java programming language. Still, it is likely to make your programs better and requires less effort than other languages. We believe that Java technology will help you do the following:

- **Get started quickly:** Although the Java programming language is a powerful object-oriented language, it's easy to learn, especially for programmers already familiar with C or C++.
- **Write less code:** Comparisons of program metrics (class counts, method counts, and so on) suggest that a program written in the Java programming language can be four times smaller than the same program in C++.
- **Write better code:** The Java programming language encourages good coding practices, and its garbage collection helps you avoid memory leaks. Its object orientation, its JavaBeans component architecture, and its wide-ranging, easily extendible API let you reuse other people's tested code and introduce fewer bugs.
- **Develop programs more quickly:** Your development time may be as much as twice as fast versus writing the same program in C++. Why? You write fewer lines of code and it is a simpler programming language than C++.
- **Avoid platform dependencies with 100% Pure Java:** You can keep your program portable by avoiding the use of libraries written in other languages. The 100% Pure Java™ Product Certification Program has a repository of historical process manuals, white papers, brochures, and similar materials online.
- **Write once, run anywhere:** Because 100% Pure Java programs are compiled into machine-independent byte codes, they run consistently on any Java platform.

- **Distribute software more easily:** You can upgrade applets easily from a central server. Applets take advantage of the feature of allowing new classes to be loaded “on the fly,” without recompiling the entire program.

ODBC

Microsoft Open Database Connectivity (ODBC) is a standard programming interface for application developers and database systems providers. Before ODBC became a *de facto* standard for Windows programs to interface with database systems, programmers had to use proprietary languages for each database they wanted to connect to. Now, ODBC has made the choice of the database system almost irrelevant from a coding perspective, which is as it should be. Application developers have much more important things to worry about than the syntax that is needed to port their program from one database to another when business needs suddenly change.

Through the ODBC Administrator in Control Panel, you can specify the particular database that is associated with a data source that an ODBC application program is written to use. Think of an ODBC data source as a door with a name on it. Each door will lead you to a particular database. For example, the data source named Sales Figures might be a SQL Server database, whereas the Accounts Payable data source could refer to an Access database. The physical database referred to by a data source can reside anywhere on the LAN.

The ODBC system files are not installed on your system by Windows 95. Rather, they are installed when you setup a separate database application, such as SQL Server Client or Visual Basic 4.0. When the ODBC icon is installed in Control Panel, it uses a file called ODBCINST.DLL. It is also possible to administer your ODBC data sources through a stand-alone program called ODBCADM.EXE. There is a 16-bit and a 32-bit version of this program and each maintains a separate list of ODBC data sources.

From a programming perspective, the beauty of ODBC is that the application can be written to use the same set of function calls to interface with any data source, regardless of the database vendor. The source code of the application doesn't change whether it talks to Oracle or SQL Server. We only mention these two as an example. There are ODBC drivers available for several dozen popular database systems. Even Excel spreadsheets and plain text files can be turned into data sources. The operating system uses the Registry information written by ODBC Administrator to determine which low-level ODBC drivers are needed to talk to the data source (such as the interface to Oracle or SQL Server). The loading of the ODBC drivers is transparent to the ODBC application program. In a client/server environment, the ODBC API even handles many of the network issues for the application programmer.

The advantages of this scheme are so numerous that you are probably thinking there must be some catch. The only disadvantage of ODBC is that it isn't as efficient as talking directly to the native database interface. ODBC has had many detractors make the charge that it is too slow. Microsoft has always claimed that the critical factor in performance is the quality of the driver software that is used. In our humble opinion, this is true. The availability of good ODBC drivers has improved a great deal recently. And anyway, the criticism about performance is somewhat analogous to those who said that compilers would never match the speed of pure

assembly language. Maybe not, but the compiler (or ODBC) gives you the opportunity to write cleaner programs, which means you finish sooner. Meanwhile, computers get faster every year.

JDBC

In an effort to set an independent database standard API for Java; Sun Microsystems developed Java Database Connectivity, or JDBC. JDBC offers a generic SQL database access mechanism that provides a consistent interface to a variety of RDBMSs. This consistent interface is achieved through the use of “plug-in” database connectivity modules, or *drivers*. If a database vendor wishes to have JDBC support, he or she must provide the driver for each platform that the database and Java run on.

To gain a wider acceptance of JDBC, Sun based JDBC’s framework on ODBC. As you discovered earlier in this chapter, ODBC has widespread support on a variety of platforms. Basing JDBC on ODBC will allow vendors to bring JDBC drivers to market much faster than developing a completely new connectivity solution.

JDBC was announced in March of 1996. It was released for a 90 day public review that ended June 8, 1996. Because of user input, the final JDBC v1.0 specification was released soon after.

The remainder of this section will cover enough information about JDBC for you to know what it is about and how to use it effectively. This is by no means a complete overview of JDBC. That would fill an entire book.

MYSQL DESCRIPTION

What is Database?

A database is a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing, managing, searching, and replicating the data it holds.

Other kinds of data stores can be used, such as files on the file system or large hash tables in memory but data fetching and writing would not be so fast and easy with those type of systems.

So now days we use relational database management systems (RDBMS) to store and manager huge volume of data. This is called relational database because all the data is stored into different tables and relations are established using primary keys or other keys known as foreign keys.

A **Relational DataBase Management System (RDBMS)** is a software that:

- Enables you to implement a database with tables, columns, and indexes.
- Guarantees the Referential Integrity between rows of various tables.
- Updates the indexes automatically.
- Interprets an SQL query and combines information from various tables.

RDBMS Terminology:

Before we proceed to explain MySQL database system, let's revise few definitions related to database.

- **Database:** A database is a collection of tables, with related data.
- **Table:** A table is a matrix with data. A table in a database looks like a simple spreadsheet.
- **Column:** One column (data element) contains data of one and the same kind, for example the column postcode.
- **Row:** A row (= tuple, entry or record) is a group of related data, for example the data of one subscription.
- **Redundancy:** Storing data twice, redundantly to make the system faster.
- **Primary Key:** A primary key is unique. A key value can not occur twice in one table. With a key you can find at most one row.
- **Foreign Key:** A foreign key is the linking pin between two tables.
- **Compound Key:** A compound key (composite key) is a key that consists of multiple columns, because one column is not sufficiently unique.
- **Index:** An index in a database resembles an index at the back of a book.
- **Referential Integrity:** Referential Integrity makes sure that a foreign key value always points to an existing row.

MySQL Database:

MySQL is a fast, easy-to-use RDBMS used being used for many small and big businesses. MySQL is developed, marketed, and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons.

- MySQL is released under an open-source license. So you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
- MySQL is customizable. The open source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

SOURCE CODE

Database.java

```
/*
```

```
* To change this template, choose Tools | Templates
```

```
* and open the template in the editor.
```

```
*/
```

```
package com.apps.Database;
```

```
import com.apps.ResourceBundle.AppBundle;
```

```
import com.apps.Logcreation.Log;
```

```
import java.sql.*;
```

```
public class DatabaseFile
```

```
{
```

```
    public static DatabaseFile objDatabaseFile = null;
```

```
    public static Connection con = null;
```

```
    public static Statement st = null;
```

```
    public static ResultSet rs = null;
```

```
    public static DatabaseFile getInstance()
```

```
    {
```

```
        Log.logger.info("DatabaseFile-->getInstance()");
```

```
        if(objDatabaseFile == null)
```

```
        {
```

```
            objDatabaseFile = new DatabaseFile();
```

```
            Log.logger.info("DatabaseFile Instance Created");
```

```
        }
```

```
        return objDatabaseFile;
```



```

}

public static Connection getConnection()
{
    Log.logger.info("DatabaseFile-->getConnection()");

    try
    {
        Class.forName(AppBundle.getInstance().loadpropertyfile("driver", "Projectconfig"));

        con = DriverManager.getConnection(
            AppBundle.getInstance().loadpropertyfile("dbpath", "Projectconfig") +
            AppBundle.getInstance().loadpropertyfile("databaseName", "Projectconfig"),
            AppBundle.getInstance().loadpropertyfile("username", "Projectconfig"),
            AppBundle.getInstance().loadpropertyfile("password", "Projectconfig"));

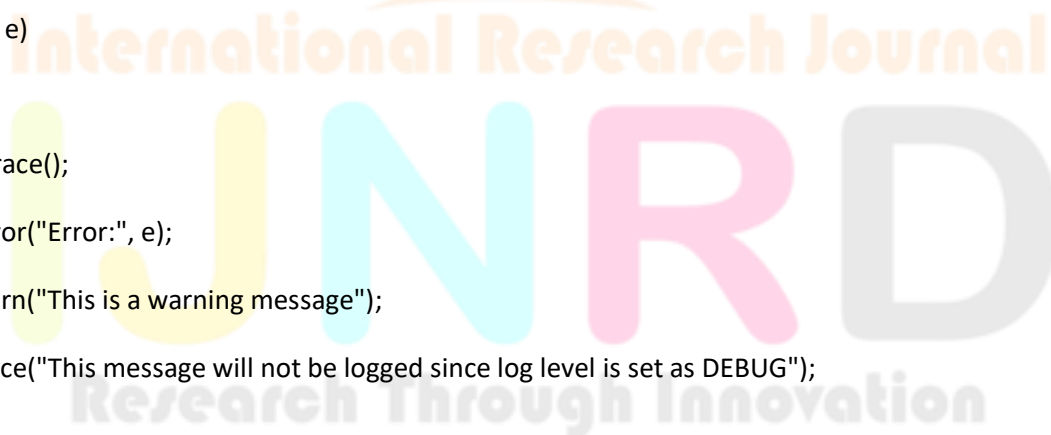
        return con;
    }
    catch(Exception e)
    {
        e.printStackTrace();
        Log.logger.error("Error:", e);
        Log.logger.warn("This is a warning message");
        Log.logger.trace("This message will not be logged since log level is set as DEBUG");

        con = null;
    }

    Log.logger.info("DB Connection:" + con);

    return con;
}

```




```
}
```

```
//select code here
```

```
public ResultSet codeselect(String sql)
```

```
{
```

```
Log.logger.info("DatabaseFile-->codeselect()");
```

```
try
```

```
{
```

```
st = getConnection().createStatement();
```

```
rs = st.executeQuery(sql);
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
e.printStackTrace();
```

```
Log.logger.error("Error:", e);
```

```
rs = null;
```

```
}
```

```
return rs;
```

```
}
```

```
//insert code here
```

```
public void codeinsert(String sql)
```

```
{
```

```
Log.logger.info("DatabaseFile-->codeinsert()");
```

```
try
```



```
{  
    st = getConnection().createStatement();  
  
    st.executeUpdate(sql);  
}  
catch(Exception e)  
{  
    e.printStackTrace();  
    Log.logger.error("Error:", e);  
    Log.logger.warn("This is a warning message");  
    Log.logger.trace("This message will not be logged since log level is set as DEBUG");  
}  
finally  
{  
    try  
    {  
        closeStatement(st, con);  
    }  
    catch(Exception e)  
    {  
        e.printStackTrace();  
        Log.logger.error("Error:", e);  
        Log.logger.warn("This is a warning message");  
        Log.logger.trace("This message will not be logged since log level is set as DEBUG");  
    }  
}  
}
```

//update code here

public void codeupdate(String sql)

```
{  
    Log.logger.info("DatabaseFile-->codeupdate()");  
  
    try  
    {  
        st = getConnection().createStatement();  
  
        st.executeUpdate(sql);  
    }  
    catch(Exception e)  
    {  
        e.printStackTrace();  
        Log.logger.error("Error:", e);  
        Log.logger.warn("This is a warning message");  
        Log.logger.trace("This message will not be logged since log level is set as DEBUG");  
    }  
    finally  
    {  
        try  
        {  
            closeStatement(st, con);  
        }  
        catch(Exception e)  
        {  
            e.printStackTrace();  
            Log.logger.error("Error:", e);  
            Log.logger.warn("This is a warning message");  
            Log.logger.trace("This message will not be logged since log level is set as DEBUG");  
        }  
    }  
}
```



```
}
```

```
//delete code here
```

```
public void codedelete(String sql)
```

```
{
```

```
Log.logger.info("DatabaseFile-->codedelete()");
```

```
try
```

```
{
```

```
st = getConnection().createStatement();
```

```
st.executeUpdate(sql);
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
e.printStackTrace();
```

```
Log.logger.error("Error:", e);
```

```
Log.logger.warn("This is a warning message");
```

```
Log.logger.trace("This message will not be logged since log level is set as DEBUG");
```

```
}
```

```
finally
```

```
{
```

```
try
```

```
{
```

```
closeStatement(st, con);
```

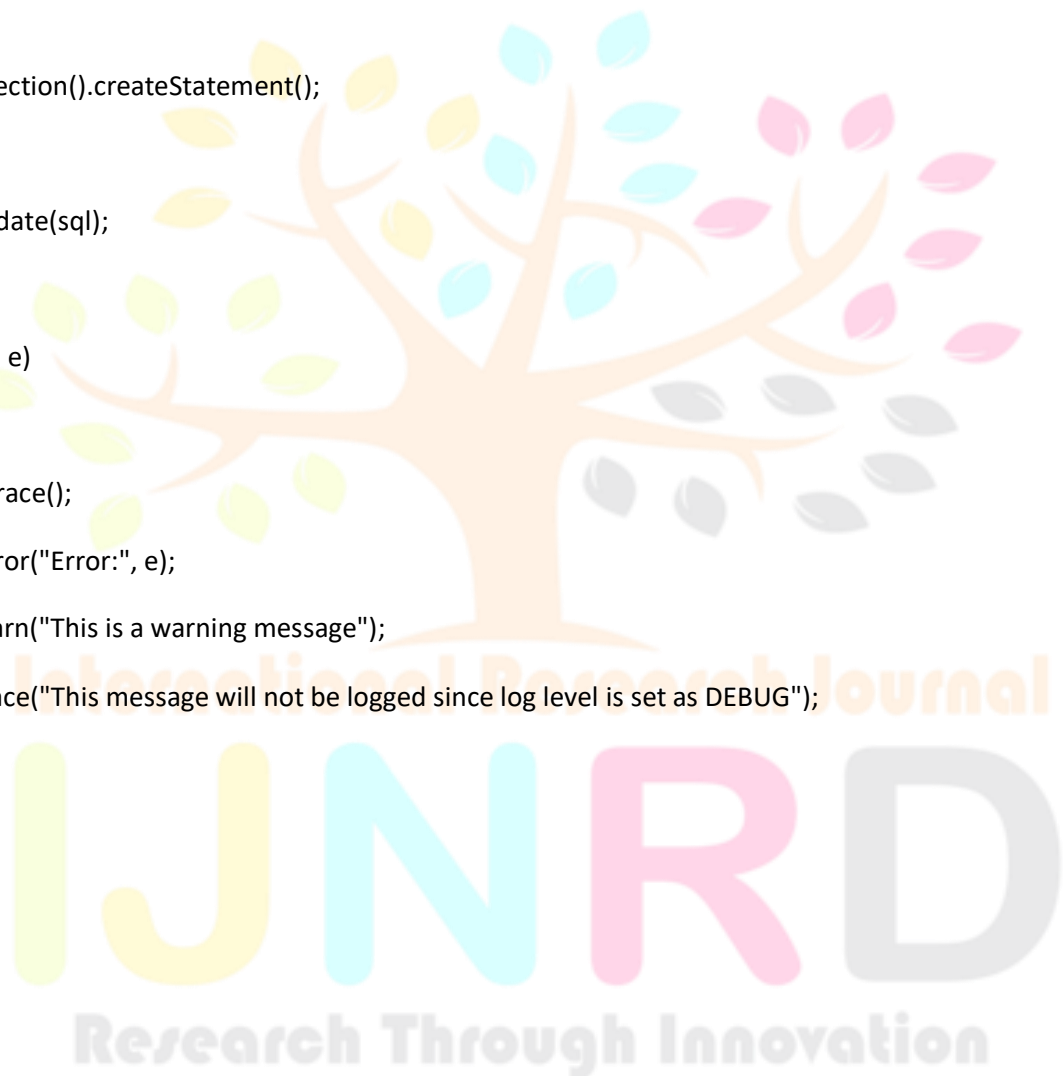
```
}
```

```
catch(Exception e)
```

```
{
```

```
e.printStackTrace();
```

```
Log.logger.error("Error:", e);
```



```

Log.logger.warn("This is a warning message");

Log.logger.trace("This message will not be logged since log level is set as DEBUG");

}

}

}

```

```

public static void closeStatement(Statement st, Connection con)

```

```

{
    Log.logger.info("DatabaseFile-->closeStatement()");

    try
    {
        if(st != null)
        {
            st.close();
        }
    }

    catch(Exception e)
    {
        e.printStackTrace();
        Log.logger.error("Error:", e);
        Log.logger.warn("This is a warning message");
        Log.logger.trace("This message will not be logged since log level is set as DEBUG");
    }

    try
    {
        if(con != null)
        {
            con.close();

```



```
    }  
}  
catch(Exception e)  
{  
    e.printStackTrace();  
    Log.logger.error("Error:", e);  
    Log.logger.warn("This is a warning message");  
    Log.logger.trace("This message will not be logged since log level is set as DEBUG");  
}  
}  
  
public void closeAllConnection(ResultSet rss)  
{  
  
    Log.logger.info("DatabaseFile-->closeStatement()");  
  
    try  
    {  
        if(st != null)  
        {  
            st.close();  
        }  
    }  
    catch(Exception e)  
    {  
        e.printStackTrace();  
        Log.logger.error("Error:", e);  
        Log.logger.warn("This is a warning message");  
        Log.logger.trace("This message will not be logged since log level is set as DEBUG");  
    }  
}
```



```
try
{
    if(rss != null)
    {
        rss.close();
    }
}
catch(Exception e)
{
    e.printStackTrace();
    Log.logger.error("Error:", e);
    Log.logger.warn("This is a warning message");
    Log.logger.trace("This message will not be logged since log level is set as DEBUG");
}
try
{
    if(rs != null)
    {
        rs.close();
    }
}
catch(Exception e)
{
    e.printStackTrace();
    Log.logger.error("Error:", e);
    Log.logger.warn("This is a warning message");
    Log.logger.trace("This message will not be logged since log level is set as DEBUG");
}
```



```

try
{
    if(con != null)
    {
        con.close();
    }
}
catch(Exception e)
{
    e.printStackTrace();
    Log.logger.error("Error:", e);
    Log.logger.warn("This is a warning message");
    Log.logger.trace("This message will not be logged since log level is set as DEBUG");
}
}
}

```

index.jsp

```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="EN" lang="EN" dir="ltr">
<head profile="http://gmpg.org/xfn/11">
<title>Management System</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<meta http-equiv="imagetoolbar" content="no" />
<link rel="stylesheet" href="styles/layout.css" type="text/css" />
<%@page errorPage="ErrorPage.jsp"%>
</head>
<body id="top">
<div class="wrapper row1">
<div id="header" class="clear">

```



```
<div class="fl_left">
```

```
<h1><a href="index.jsp">Project Management System</a></h1>
```

```
<p>Management System</p>
```

```
</div>
```

```
<div class="fl_right">
```

```
<ul> </ul>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<!--
```

```
#####  
#### -->
```

```
<div class="wrapper row2">
```

```
<div class="rnd">
```

```
<!-- ##### -->
```

```
<div id="topnav">
```

```
<ul>
```

```
<li class="active"><a href="index.jsp">Employee</a></li>
```

```
<li><a href="adminlogin.jsp">Admin</a></li>
```

```
</ul>
```

```
</div>
```

```
<!-- ##### -->
```

```
</div>
```

```
</div>
```

```
<!--
```

```
#####  
#### -->
```

```
<div class="wrapper row3">
```

```
<div class="rnd">
```

```
<div id="container" class="clear">
```

```
<!--
```

```
#####  
#### -->
```



```
<h1>Employee Login Page</h1>
```

```
<form action="codeindex.jsp" method="post">
```

```
<table align="center" border="0px" width="100px">
```

```
<tr style="color: red;">
```

```
<td>Username:</td><td><input type="text" name="username" size="35px"/></td>
```

```
</tr>
```

```
<tr style="color: red;">
```

```
<td>Password:</td><td><input type="password" name="password" size="35px"/></td>
```

```
</tr>
```

```
<tr>
```

```
<td>&nbsp;</td>
```

```
<td><input type="submit" value="Submit"/><input type="reset" value="Reset"/></td>
```

```
</tr>
```

```
</table>
```

```
</form>
```

```
<%
```

```
//getting response
```

```
out.println("<font color = 'red' >");
```

```
try
```

```
{
```



```
if( (request.getParameter("msg") != null) && (!(request.getParameter("msg").trim().equals(""))) )
{
    out.println(request.getParameter("msg"));
}
}
catch(Exception e)
{
    e.printStackTrace();
}

out.println("<font>");
%>

</div>

</div>

</div>

</body>

</html>
```

codeindex.jsp

```
<%@page import="java.io.PrintWriter"%>
<%@page import="java.io.BufferedWriter"%>
<%@page import="java.io.File"%>
<%@page import="java.io.Writer"%>
<%@page import="com.apps.Logcreation.Log"%>
<%@page import="com.apps.Database.DatabaseFile"%>
<%@page import="java.sql.*" %>
```



```
<%@page session="true" %>
```

```
<%
```

```
try
```

```
{
```

```
Log objLog = objLog = new Log();
```

```
//getting value from
```

```
String username = request.getParameter("username");
```

```
String password = request.getParameter("password");
```

```
//session
```

```
session.setAttribute("x", username);
```

```
int count = 0;
```

```
ResultSet rs = null;
```

```
String Position = "";
```

```
//jdbc coding
```

```
try
```

```
{
```

```
if (((username!=null) && (!username.trim().equals("")) && ((password!=null) && (!password.trim().equals(""))))
```

```
{
```

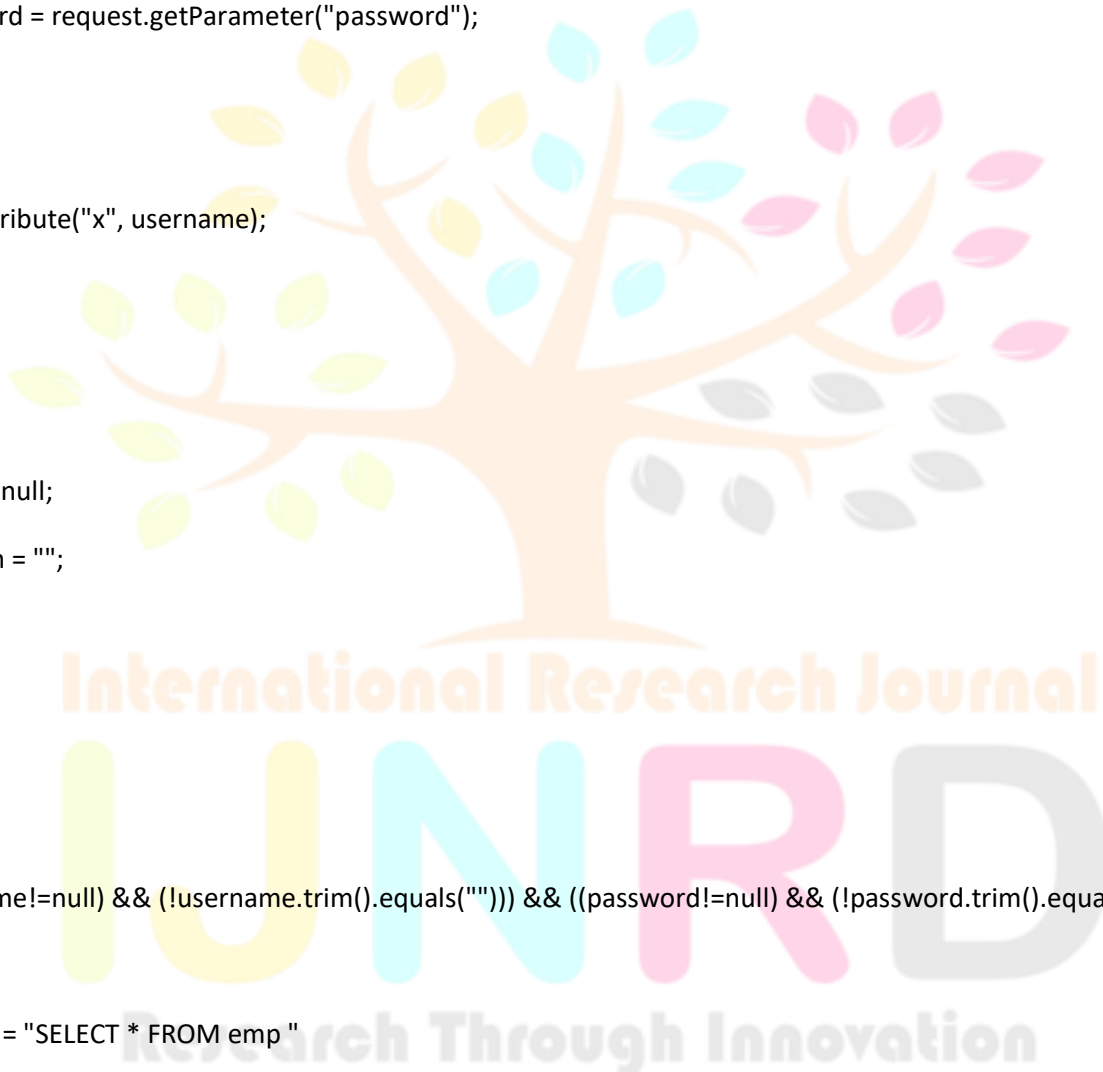
```
String sql = "SELECT * FROM emp "
```

```
+ " WHERE Username = '"+username+"' and Password = '"+password+"'";
```

```
Log.logger.info("sql:"+sql);
```

```
//CALLING DATABASE Class
```

```
rs = DatabaseFile.getInstance().codeselect(sql);
```



```
while(rs.next())
{
    count = rs.getInt(1);

    Log.logger.info("count:"+count);

    Position = rs.getString("Position");

    if(Position.equalsIgnoreCase("Project Manager") || Position.equalsIgnoreCase("Project Lead") ||
    Position.equalsIgnoreCase("Team Lead"))
    {
        //page redirection
        %>
        <jsp:forward page="Management.jsp"></jsp:forward>
        <%
    }
    else if(Position.equalsIgnoreCase("Testing") || Position.equalsIgnoreCase("Senior Testing"))
    {
        //page redirection
        %>
        <jsp:forward page="Testing.jsp"></jsp:forward>
        <%
    }
}
%>
<jsp:forward page="index.jsp">
    <jsp:param name="msg" value="Incorrect Username or Password"/>
</jsp:forward>
<%
```



```
}  
else  
{  
    //page redirection  
    %>  
    <jsp:forward page="index.jsp">  
        <jsp:param name="msg" value="Please Fill Username or Password"/>  
    </jsp:forward>  
    <%  
    }  
    }  
catch(Exception e)  
{  
    e.printStackTrace();  
    Log.logger.error("Error:", e);  
}  
finally  
{  
    if(rs != null)  
    {  
        DatabaseFile.getInstance().closeAllConnection(rs);  
    }  
}  
}  
catch(Exception e)  
{  
    e.printStackTrace();  
}  
%>
```



Project.jsp

```

<%@page import="com.apps.Database.DatabaseFile"%>

<%@page import="java.sql.ResultSet"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="EN" lang="EN" dir="ltr">

  <head profile="http://gmpg.org/xfn/11">

    <title>Management System</title>

    <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />

    <meta http-equiv="imagetoolbar" content="no" />

    <link rel="stylesheet" href="styles/layout.css" type="text/css" />

    <link rel="stylesheet" href="styles/jquery-ui.css" type="text/css" />

    <script src="scripts/jquery-1.5.js"></script>

    <script src="scripts/jquery-ui-1.8.17.custom.min.js"></script>

    <script type="text/javascript">

      $(function() {

        $("#datepicker1").datepicker({ dateFormat: "yy-mm-dd" }).val()

      });

      $(function() {

        $("#datepicker2").datepicker({ dateFormat: "yy-mm-dd" }).val()

      });

    </script>

    <%@page errorPage="ErrorPage.jsp"%>

    <%@page session="true" %>

  </head>

  <body id="top">

    <div class="wrapper row1">

      <div id="header" class="clear">

        <div class="fl_left">

          <h1><a href="index.jsp">Project Management System</a></h1>

          <p>Management System


```

```
<span style="padding-left: 250px; color: red;"> Welcome : <%=session.getAttribute("x")%></span>

</p>

</div>

<div class="fl_right">

  <!--   <ul>

    <li><a href="#">Home</a></li>

    <li><a href="#">Contact Us</a></li>

    <li><a href="#">A - Z Index</a></li>

    <li class="last"><a href="#">Admin Login</a></li>

    <li class="last"><a href="#">Staff Login</a></li>

  </ul>

  <form action="#" method="post" id="sitesearch">

    <fieldset>

      <strong>Search:</strong>

      <input type="text" value="Search Our Website&hellip;" onfocus="this.value=(this.value=='Search Our Website&hellip;')? " : this.value ;" />

      <input type="image" src="images/search.gif" id="search" alt="Search" />

    </fieldset>

  </form-->

</div>

</div>

</div>

<!--
#####
#### -->

<div class="wrapper row2">

  <div class="rnd">

    <!-- ##### -->

    <div id="topnav">

      <ul>

        <li class="active"><a href="Project.jsp">Project</a></li>
```




```

<li><a href="Support.jsp">Support</a></li>

<li><a href="Employee.jsp">Employee</a></li>

<li class="last"><a href="Signout.jsp">Sign Out</a></li>

</ul>

</div>

<!-- ##### -->

</div>

</div>

<!--
#####
#### -->

<div class="wrapper row3">

  <div class="rnd">

    <div id="container" class="clear">

      <!--
#####
#### -->

      <h1>Project Form</h1>

      <form action="codeProject.jsp" method="post">

        <table align="center" border="0px" width="100px">

          <tr>

            <td>Project Name:</td><td><input type="text" name="projectname" size="54px"
maxlength="10"/></td>

          </tr>

          <tr>

            <td>Project Description:</td><td><input type="text" name="projectdesc" size="54px"/></td>

          </tr>

```



```

<tr>
    <td>Priority:</td><td><input type="text" name="priority" size="54px"/></td>
</tr>

<tr>
    <td>Start Date:</td><td><input type="text" name="datepicker1" id="datepicker1" size="54px"/></td>
</tr>

<tr>
    <td>Finish Date:</td><td><input type="text" name="datepicker2" id="datepicker2" size="54px"/></td>
</tr>

<tr>
    <td>&nbsp;</td>
    <td><input type="submit" value="Submit"/><input type="reset" value="Reset"/></td>
</tr>
</table>
</form>
<h1>Project List</h1>
<%
    ResultSet rs = null;

    try
    {
        int g = 1;

```



```

out.println("<table border='2px' style='text-align: center;' width='100%'>");
out.println("<tr>");
out.println("<th>Sno</th>");
out.println("<th>Project Name</th>");
out.println("<th>Project Desc</th>");
out.println("<th>Priority</th>");
out.println("<th>Start Date</th>");
out.println("<th>Finish Date</th>");
out.println("<th>Created Date</th>");
out.println("<th>Edit</th>");
out.println("<th>Delete</th>");
out.println("</tr>");

String sql = " SELECT Project_ID, ProjectName, ProjectDesc, Priority, StartDate, FinishDate,
CreatedDate "
    + " FROM project ";

rs = DatabaseFile.getInstance().codeselect(sql);

while(rs.next())
{
    out.println("<tr>"
        + "<td>" + g++ + "</td>"
        + "<td>" + rs.getString(2) + "</td>"
        + "<td>" + rs.getString(3) + "</td>"
        + "<td>" + rs.getString(4) + "</td>"
        + "<td>" + rs.getString(5) + "</td>"
        + "<td>" + rs.getString(6) + "</td>"
        + "<td>" + rs.getString(7) + "</td>"

```

```

        + "<td><a href='codeprojecteditlist.jsp?index="+ rs.getInt("Project_ID") +'><img
src='images/Edit.png'></img></a></td>"

        + "<td><a href='codeprojectDelete.jsp?index="+ rs.getInt("Project_ID") +'><img
src='images/Delete.png'></img></a></td>"

        + "</tr>");
    }

    if(rs != null)
    {
        rs.close();
        rs = null;
    }

    out.println("</table>");
}
catch(Exception e)
{
    e.printStackTrace();
}
finally
{
    if(rs != null)
    {
        rs.close();
    }
}
%>

</div>

<%

```



```

//getting response

try {

    out.println("<font color = 'red'>");

    if ((request.getParameter("msg") != null) && (!(request.getParameter("msg").trim().equals("")))) {

        out.println(request.getParameter("msg"));

    }

    out.println("</font>");
} catch (Exception e) {
    e.printStackTrace();
}
%>
<!--
#####
#### -->

</div>

</div>

</div>

<!--
#####
####

<div class="wrapper row4">
    <div class="rnd">
        <div id="footer" class="clear">

#####
####

        <div class="fl_left clear">

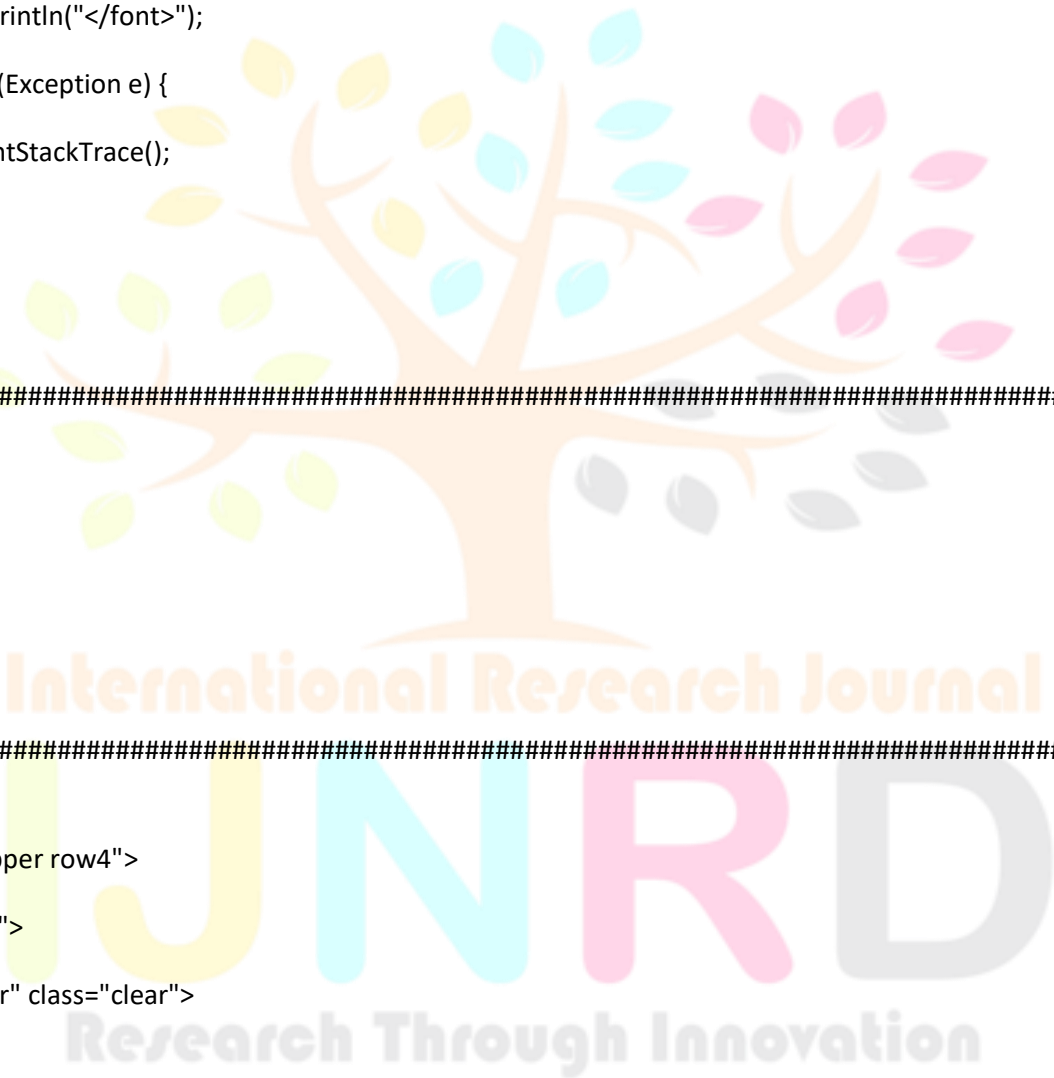
            <div class="fl_left center"><br />

            <a href="#">Find Us With Google Maps &raquo;</a></div>

        <address>

            Address Line 1<br />

```



Address Line 2

Town/City

Postcode/Zip

Tel: xxxx xxxx xxxxxx

Email: contact@domain.com

</address>

</div>

<div class="fl_right">

<div id="social" class="clear">

<p>Stay Up to Date With Whats Happening</p>

Twitter

LinkedIn

Facebook

Flickr

RSS

</div>

<div id="newsletter">

<form action="#" method="post">

<fieldset>

<legend>Subscribe To Our Newsletter:</legend>

<input type="text" value="Enter Email Here…" onfocus="this.value=(this.value=='Enter Email Here…')? '': this.value ;" />

<input type="text" id="subscribe" value="Submit" />

</fieldset>

</form>

</div>

</div>

```
#####
####

</div>

</div>

</div>

#####
####
```

```
<div class="wrapper">

  <div id="copyright" class="clear">

    <p class="fl_left">Copyright &copy; 2011 - All Rights Reserved - <a href="#">Domain Name</a></p>

    <p class="fl_right">Template by <a href="http://www.os-templates.com/" title="Free Website Templates">OS
Templates</a></p>

  </div>

</div-->

</body>

</html>
```



International Research Journal
IJNRD
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codeProject.jsp

```
<%@page import="com.apps.Logcreation.Log"%>
<%@page import="com.apps.Database.DatabaseFile"%>
<%@page import="java.sql.*"%>

<%

try
{

  Log objLog = objLog = new Log();

  //session

  HttpSession hs = request.getSession(true);
```

```

//argument

String username = hs.getAttribute("x").toString();

//getting values from design page

String projectname = request.getParameter("projectname");

String projectdesc = request.getParameter("projectdesc");

String priority = request.getParameter("priority");

String startdate = request.getParameter("datepicker1");

String finishdate = request.getParameter("datepicker2");

if( ((projectname!=null) && (!projectname.trim().equals("")) && ((projectdesc!=null) &&
(!projectdesc.trim().equals(""))
    && ((priority!=null) && (!priority.trim().equals("")) && ((startdate!=null) && (!startdate.trim().equals(""))
    && ((finishdate!=null) && (!finishdate.trim().equals(""))))
{
//jdbc connection
try
{
String sql = "INSERT INTO project(ProjectName, ProjectDesc, Priority, StartDate, FinishDate, CreatedDate)"
    + " VALUES('"+projectname+"', '"+projectdesc+"', '"+priority+"', '"+startdate+"', '"+finishdate+"', now())";

DatabaseFile.getInstance().codeinsert(sql);

%>
<jsp:forward page="Project.jsp">

    <jsp:param name="msg" value="Project Created Sucessfully!"></jsp:param>

</jsp:forward>

<%

}

catch(Exception e)

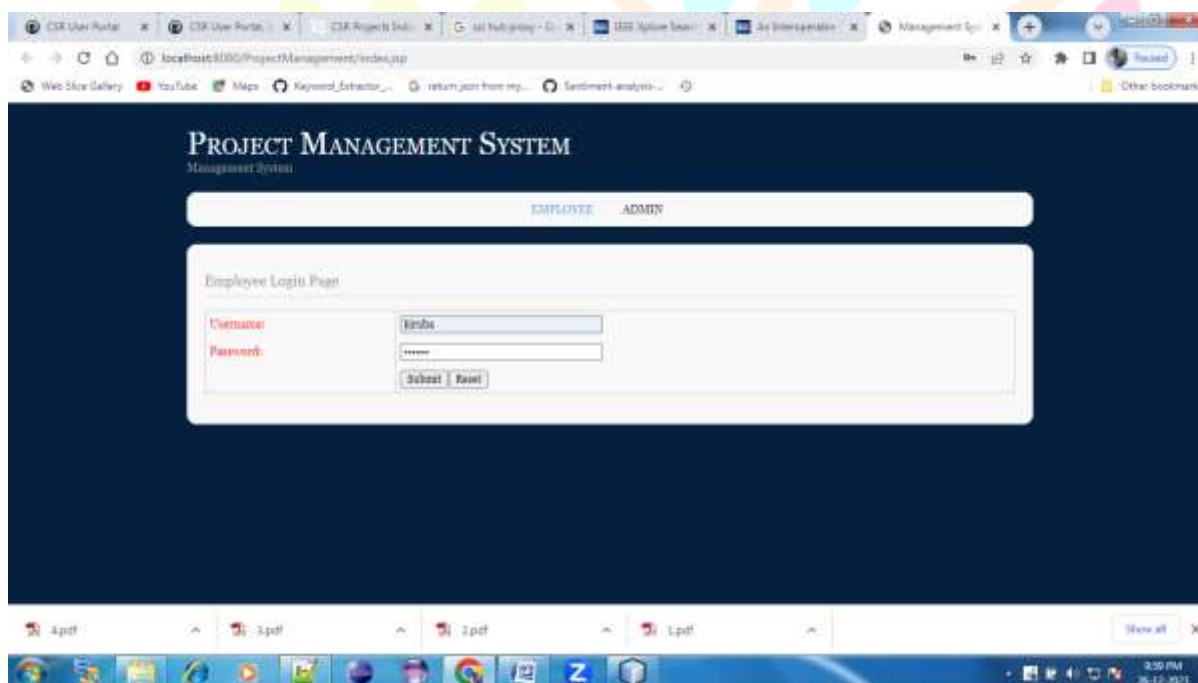
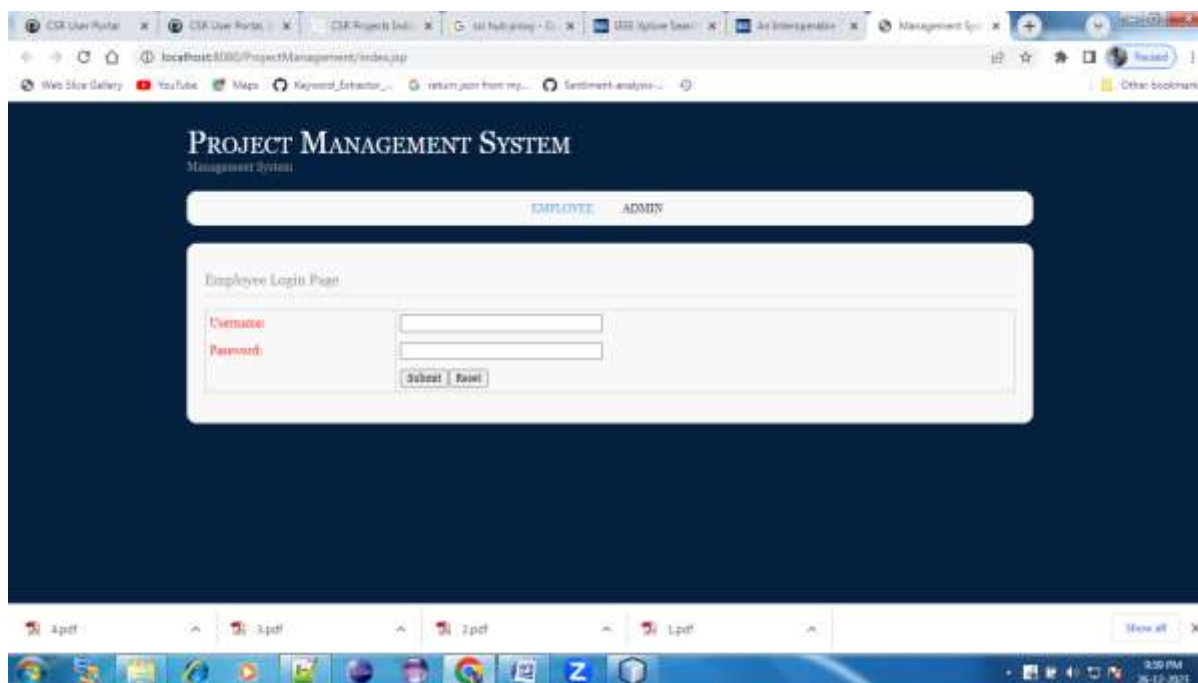
```



```
{
    e.printStackTrace();
}
else
{
    %>
    <jsp:forward page="Project.jsp">
        <jsp:param name="msg" value="Please Fill All Details"></jsp:param>
    </jsp:forward>
    <%
}
}
catch(Exception e)
{
    e.printStackTrace();
}
%>
```



SCREEN SHOTS



CONCLUSION

In future the same portal can be mounted to the public or private cloud environment to provide global support. For distributed environment we can move this portal to Block Chain Technology in future depending on current requirement. Our framework involves fundamental parts, for example, Latest News, CSR Insights, Companies, NGO's, Innovators, Platform, etc. Based on the developed web application, the performance of CSR Project and Corporate Performance will be monitored.

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