

## Online Library Management System

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**ABSTRACT:** The paper titled Library Management System is Library management software for monitoring and controlling the transactions in a library .The paper "Library Management System" is developed in java which mainly focuses on basic operations in a library like adding new member, new books, and updating new information, searching books and members and facility to borrow and return books. "Library Management System" is a windows application written for 32-bit Windows operating systems, designed to help users maintain and organize library. This software is easy to use for both beginners and advanced users.

**INTRODUCTION:** The purpose of the application is automation of library ,it provide facilities to student or member to search for the required books and it allows the administrator or librarian to Issue & return books to students and can create & delete membership of students. The software Library Management System has four main modules.  
Insertion to Database Module - User friendly input screen  
Extracting from Database module - Attractive Output Screen  
Report Generation module - borrowed book list & Available book list  
Search Facility system - search for books and members

### SYSTEM ANALYSIS EXISTING

**SYSTEM:** System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Here the key question is- what all problems exist in the present system what must be done to solve the problem Analysis begins when a user or manager begins a study of the program using existing system.

In our existing system all the transaction of books are done manually, So taking more time for a transaction like borrowing a book or returning a book and also for searching of members and books. Another major disadvantage is that to preparing the list of books borrowed and the available books in the library will take more time, currently it is doing as a one day process for verifying all records. So

after conducting the feasibility study we decided to make the manual Library management system to be computerized.

**PROPOSED SYSTEM:** Proposed system is an automated Library Management System. Through our software user can add members, add books, search members, search books, update information, edit information, borrow and return books in quick time. Our proposed system has the following advantages.

- User friendly interface
- Fast access to database
- Less error
- More Storage Capacity
- Search facility
- Look and Feel Environment

All the manual difficulties in managing the Library have been rectified by implementing computerization.

**SYSTEM REQUIREMENTS:** This management system can be used in windows 98 Windows2000, Windows XP and Windows NT, supported for other platform such as Applet Macintosh and UNIX. The system must be running Windows 98, Windows 98 or Windows NT4.0 operating system

and must meet the following hardware requirements.

- > For Windows 95 based computers, a 486 / 66 MHz or higher processor with 8MB
- > For Windows 98 based computers, a 500/88MHz or higher processor with 32 Mb of RAM
- > For Windows NT based computers, a 488 / 66 MHz or higher processor with 16 MB of RAM
- > For Windows 200 based computers, a 700/850 MHz or higher processor with 512 MB of RAM

### SYSTEM IMPLEMENTATION:

Implementation is the stage in the paper where the theoretical design is turned into a working system. The implementation phase constructs, installs and operates the new system. The most crucial stage in achieving a new successful system is that it will work efficiently and effectively.

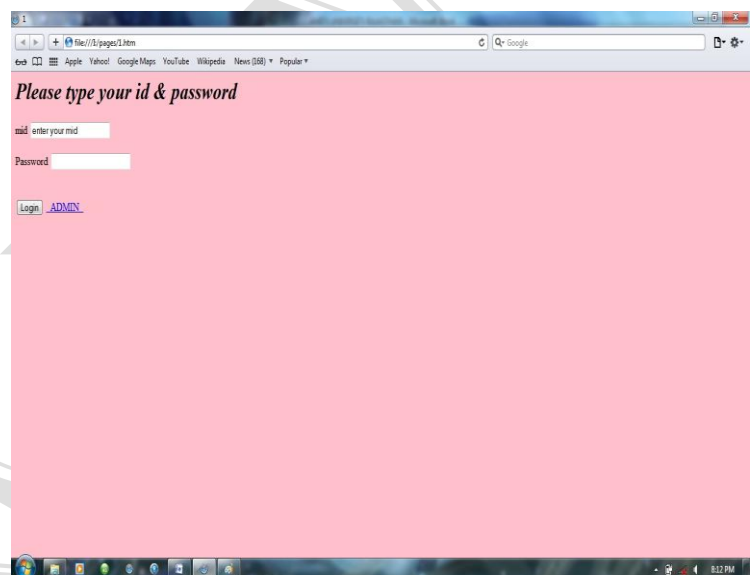
**Step1:** to design a code for login page so that user can login into online library by filling correct username and password.

#### CODING OF LOGIN PAGE

```
< title>Registration Page</title>
<script type="text/ java script" language="java
script">
    Function Co-Validation ()
    {
        Variable mid = document.
Regform.mid;
        Variable pass=document.Regform.pw;
        Variable con pass=document.
Regform.con pw;
        If (mid. value=="")
        {
            Alert ("Enter mid");
            Mid. Focus ();
            Return false;
        }
        If (pass. value=="")
        {
            Alert ("Enter password");
            Pass .Focus ();
            Return false;
        }
        If (Con pass. value=="")
        {
            Alert ("Enter Conform Password");
            Con Pass .Focus ();
            Return false;
        }
        Variable pass1 = pass .value;
        Variable pass2 = compass .value;
        Variable value = pass1. Match (pass2);
```

```
//alert (value);
    If (value==null) {Alert
("Password and Conform Password didn't match)
compass .focus (); Return false;
    {Alert ("Password and Conform
Password didn't match) Con pass. Focus ();
```

**Output of step1:** the output of step1 is shown below is a login page consist of field name Mid (member id) & password user can login to online library by filling correct mid & password.



**Step 2:** to design a code for welcome page for online library

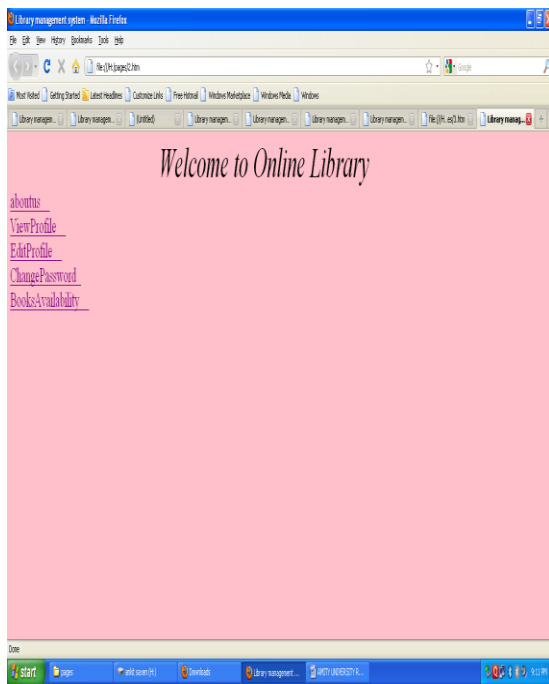
#### CODING OF WELCOME PAGE

```
< html >
< head >
    <title>Library management system</title>
</head>
<body b g color="pink" >
    <% String mid=(String) request get
Attribute("mid");
    %>
    <font size="20" color="black"
< I >Welcome to Online Library</ I>
</font>
    <font size="5" color="blue">
    < Br>
    <A h ref="aboutus.html">About Us</a>
    <Br> <a h ref='View profile'>View
Profile</a> <a h ref='View profile'>View
Profile</a>
    <Br> <a h ref="editprofile.jsp">Edit
Profile</a
```

```
<a h ref="editprofile.jsp">Edit Profile</a>
<a h ref="chngepassword.jsp">Change
Password</a> <a h
ref="bookavailability.jsp">Books
Availability</a></font></body></html>
```

**Output of step2:**

the output of step2 is given below is a welcome page which contain all the links of online library such as View Profile, Edit Profile, Change Password, Books Availability. User can use the service provided by online library by clicking on this links



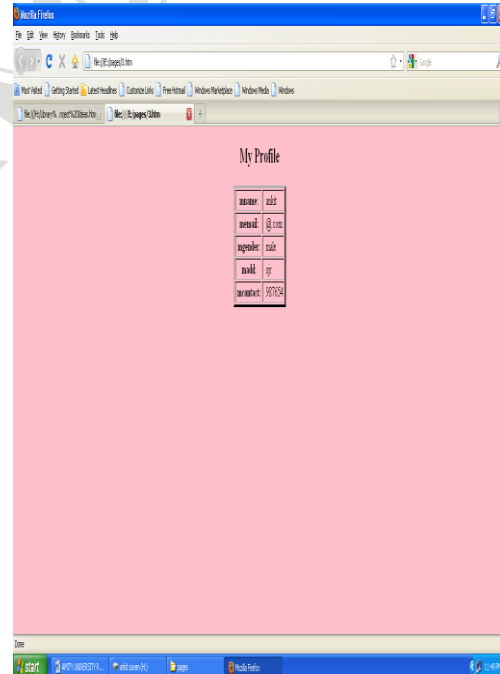
**Step3:** to design a code for View Profile web page so that user can view his profile

**CODING OF VIEW PROFILE PAGE**

```
%>
<% @page language="java" %>
<%
Array List = (Array List) request. Get Attribute
("view User Record");
String m name= (String) list .get (0);
String m email= (String) list .get (1);
String m gender= (String) list .get (2);
String m add= (String) list .get (3);
String m contact= (String) list .get (4);
%>
<Html>
<body b g color="pink">
```

```
<center><h2>My Profile</h2>
<table border="3">
<TR>
<TH>m name</TH>
<Td><%=m name %></TD>
</TR>
<TR>
<TH>m email</TH>
<TD><%=m email %></TD>
</TR>
<TR>
<TH>m gender</TH>
<TD><%=m gender %></TD>
</TR>
<TR>
<TH>m add</TH>
<TD><%= m add %></TD>
</TR>
<TR>
<TH>m contact</TH>
<TD><%=m contact %></TD>
</TR></table></center></body></html>
```

**Output of step3:** output of step3 is a page which is display the profile of login user.



**Step 4:** to design a code for change password page

**CODING OF CHANGE PASSWORD PAGE**

```
<Html>
<Head>
```

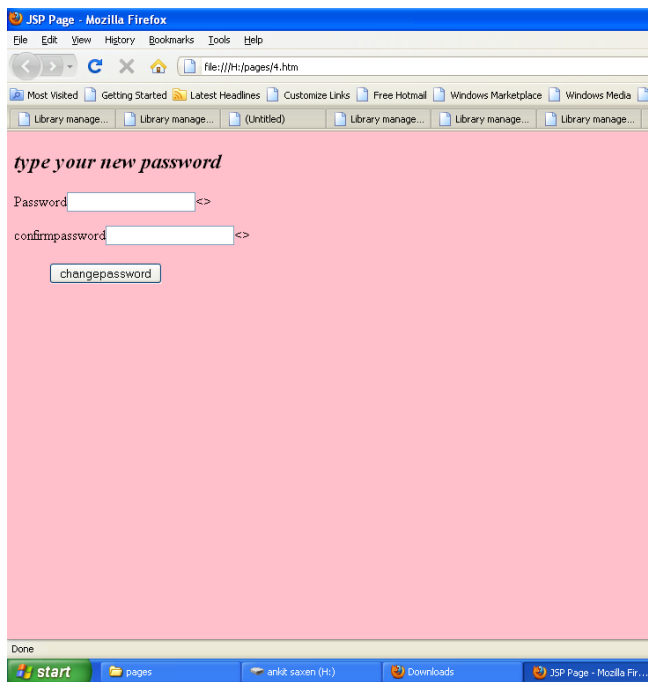
```

<title>JSP Page</title>
</head>
<body b g color="pink">
  <h2><I>type your new password</I></h2>
  <form name="change password form"
action="change Password">
  <p>Password<input type="password"
name="pw"></p>
  <p>confirm password<input
type="password" name="con pw"></p>

  <input type="submit" value="change
password"/>
</form>
</body>
</html>

```

**Output of step 4:** the output of step 4 is given below through which user can change his password.



**Step5:** to design a code for check books availability form so that user can search for the required Books in library are available or not.

**CODING OF BOOKAVAILABILITY FORM**

```

<html>
  <head
  < Title >JSP Page< /Title >
  </head>
  <body b g color="pink">
  <h2><I>type book title OR book
author</i></h2>

```

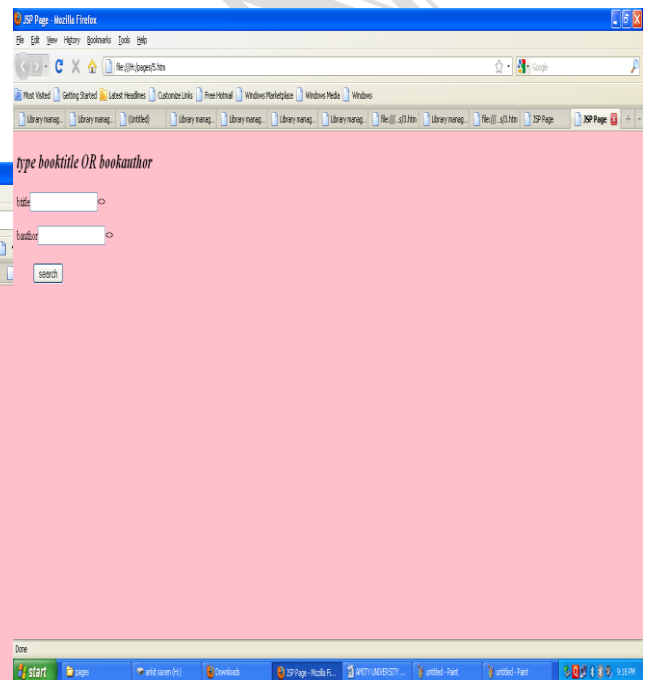
```

<form name="Book Stock" action="stock">
  <p>b title<input type="text" name="b t" </p>
  <p>b author<input type="text" name="b a"
</p>
  <Br>
  <input type="submit" value="search"/>

  </form>
</body>
</html>

```

**Output of step5:** output of step5 is given below is a web page from which user can search for books in library by specifying book title & book author



**Step 6:** to design a code for admin login page so that admin or librarian can login to admin page by filling correct username & password.

**CODING OF ADMIN LOGIN PAGE**

```

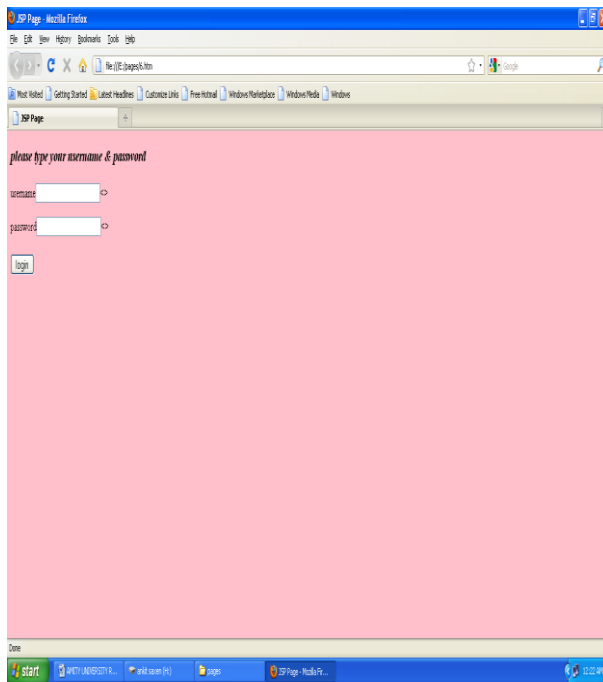
<html>
  <head>
  <title>JSP Page</title>
  <body b g color="pink">
  <form name="admin form" action="admin"/>
  <h3> <I>please type your username &
password</ I ></h3>
  <p>username<input type="text" name="un"
</p>

```

```

<p>password<input type="password"
name="pw" </p>
<Br><Br><input type="submit"
value="login" >
</body>
</html>
    
```

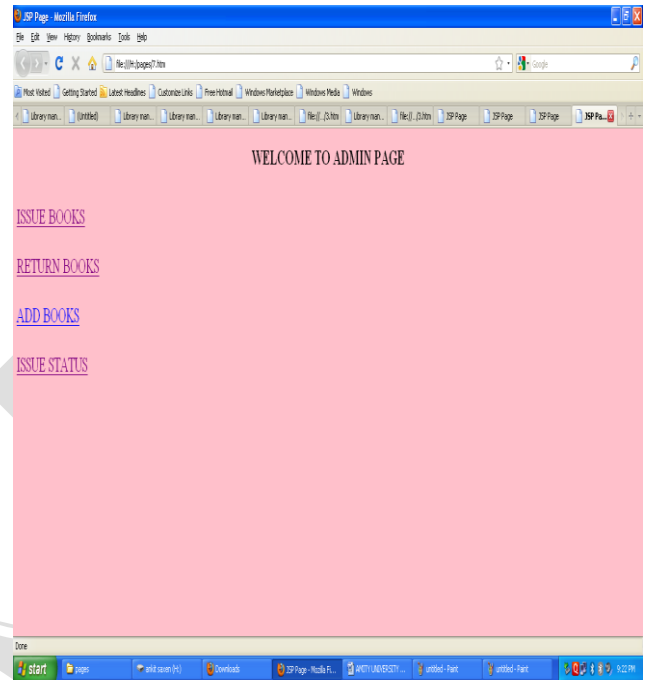
**Output of step 6:** the output of step 6 is given below



```

<Br>
<Br>
<a href="seeissue.jsp">ISSUE STATUS</a>
</font></body></html>
    
```

**Output of step 7:** output of step 7 is given below admin can access the services of issuing, returning & adding of books by clicking on the respective links



**Step 7:** to design a code for admin home page which consist of links such as issue books, return books, add books

**CODING OF ADMIN HOME PAGE**

```

<html>
<head>
<title>JSP Page</title>
</head>
<body b g color="pink" >
<center>
<h2 > WELCOME TO ADMIN PAGE </h2>
</center>
<Br>
<font size="5" color="blue">
<a href="issue.jsp">ISSUE BOOKS</a>
<Br>
<Br>
<a href="return.jsp">RETURN BOOKS</a>
<Br>
<Br>
<a href="status.jsp">ADD BOOKS</a>
    
```

**Step 8:** to design a code for book issuing form so that admin can issue books to student by filling Details like ISBN no. of book member id, issuing date & due date

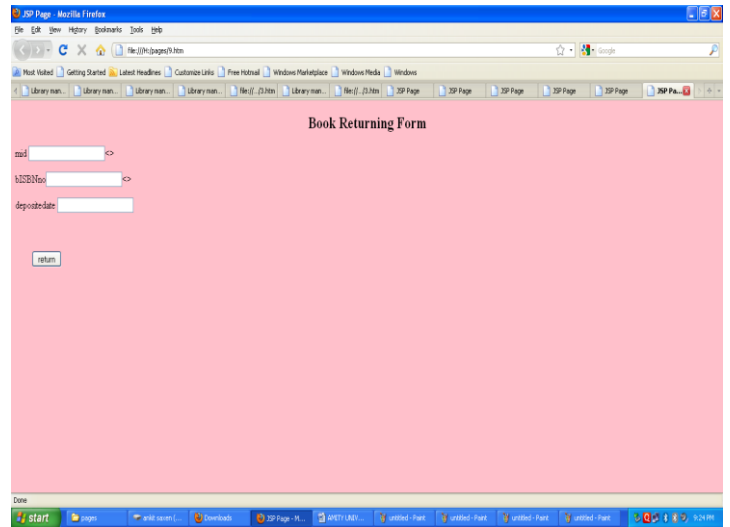
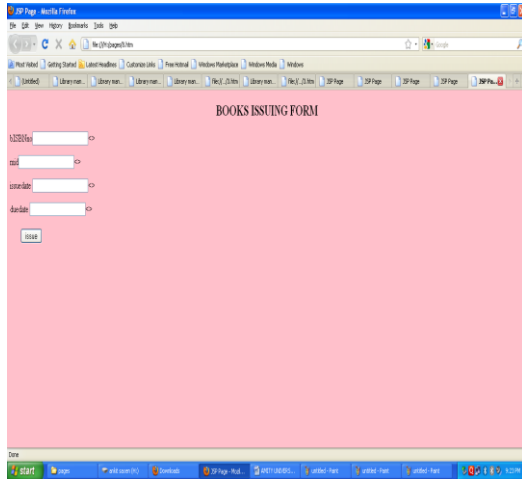
**CODING OF BOOK ISSUING FORM**

```

<html>
<head>
<title>JSP Page</title>
</head>
<body b g color="pink">
<center>
<h2>BOOKS ISSUING FORM</h2>
</center>
<form name="issuing form" action="issue">
<p><b> ISBN no<input type="text" name="I
s b n"></p>
<p>mid<input type="text" name="mid" </p>
<p>issue date <input type="text" name="date"
</p>
<p>due date <input type="text"
name="date"></p>
<input type="submit" value="issue"/>
</form>
    
```

</body>  
</html>

**Output of step 8:** the output of step 8 is given below is a book issuing form.



**Step 9:** to design a code for book returning form so that admin can return the books by filing The details deposited date, ISBN no, mid.

#### CODING OF BOOK RETURNING FORM

```
<html>
<head>
<title>JSP Page</title>
</head>
<body b g color="pink">
<Center>
<h2>Book Returning Form</h2>
</center>
<form name="return book form"
action="return">
<p>mid <input type="text" name="mid"></p>
<p>b ISBN no<input type="text"
name="ISBN"></p>
<p>deposited date <input type="text"
name="deposited" />
</p>
<Br>
<Br>
<input type="submit" value="return"/>
</form>
</body>
```

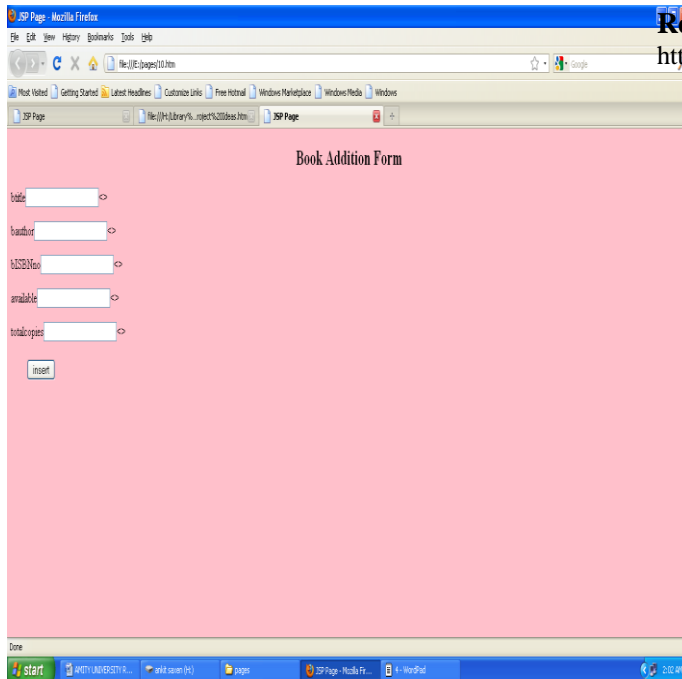
**Output of step 9:** the output of step 9 is given below is a book returning form by which admin can return book of member.

**Step 10:** to design a code for book addition form

#### CODING OF ADD BOOKS FORM

```
<html>
<head>
<title>JSP Page</title>
</head>
<body b g color="pink"
<form name="books collection"
action="insert">
<p>b ISBN no<input type="text"
name="ISBN"/></p>
<p>b title<input type="text" name="book
title"/></p>
<p>b author<input type="text" name="b
author"/></p>
<p>b publisher<input type="text" name="b
publisher"/></p>
<p>b price<input type="text"
name="pc"/></p>
<p>total copies<input type="text"
name="total copies"/></p>
<p>date of arrival<input type="text"
name="date"/> </p>
<input type="submit" value="insert"/>
</form>
</body>
</html>
```

**Output of step 10:** the output of step 10 is the book addition form by which admin can add books to online library by filling book title, book author, available copies etc.



## References

<http://www.java2s.com/>

1. <http://www.javaworld.com/javaworld/jw-01...eview.html>
2. Database Programming with JDBC and Java by O'Reilly
3. Head First Java 2nd Edition
4. <http://java.sun.com/javase/technologies/de-sktop/>

**RESULT:** the combination of all the above web pages result in a web application named Library Management System, which works as online library.

Library. Several user friendly coding have also adopted. This package shall prove to be a powerful package in satisfying all the need.

**CONCLUSION:** This paper is only a humble venture to satisfy the needs in a made within a limited time frame at the beginning of the software paper and should be updated regularly as the paper progresses requirements of the organization.