



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

# IJIRSET

International Journal of Innovative Research in  
**SCIENCE | ENGINEERING | TECHNOLOGY**



# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 11, Issue 5, May 2022

**ISSN** INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

Impact Factor: 8.118



9940 572 462



6381 907 438



ijirset@gmail.com



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# Gym Management System Using Java Hibernate

Pathan Shahebaz Khan Feroz Khan<sup>1</sup>, Pachpute Kshitija Mohan<sup>2</sup>, Kamble Prajakta Gautam<sup>3</sup>,  
Shaikh Alphiya Munir<sup>4</sup>, Prof. Nagaraju Bogiri<sup>5</sup>

Student, Department of Computer Engineering, KJ College of Engineering Management and research, Pune, India<sup>1,2,3,4</sup>

Associate Professor, Department of Computer Engineering, KJ College of Engineering Management and research,  
Pune, India<sup>5</sup>

**ABSTRACT:** The existing system is a manual system. Here the member needs to save his information in the Registers maintained by the Gym. There is no sharing is possible if the data is in the form of paper. The manual system gives very less security for saving data; some data may be lost due to mismanagement. To overcome this drawbacks the Gym Management Software is introduced which gives computerization of the existing system is proposed. The new system must completely remove all manual burdens and provides efficient on the entry system.

**KEYWORDS:** Database management, Struts Framework, Design system, Hibernate Query Language, Mapping.

## I. INTRODUCTION

The project is designed to facilitate a gym and fitness center to automate its operations of keeping's records and store them in of a large and user friendly database further facilitating easy access to the personnel. Our Gym Management Software is a complete gym and recreation facility system program which looks after all of your members, memberships and activities. It is designed for gyms, recreation centers, and health clubs. Our Gym management Software provides lots of functions such data entry of customer, keeping records of all the things about customer's fees, plan, and physical fitness which help to provide good quality of services to customer from Gym managers.

## II. RELATED WORK

As per [1] In order to this problem, a library management system based on struts and hibernate frame is put forward. This system has MVC architecture. System simplifies the work of library management and has good extensibility. As indicated by [2] Any business that does not have a website is missing out on one of the most powerful marketing tools available to them. The main reason that it is important for businesses to have a website is how people are likely to find you. These days most people will go online and research products and companies before they make a purchase. Usually, the client uses MS Excel or paper, and maintains their records, however it is not possible them to share the data from multiple system in multi user environment, there is lot of duplicate work, and chance of mistake. When the records are changed they need to update each and every excel file. The Smart Gym Management System eliminates most of the limitations of the existing software. Increasing efficiency and effectiveness, automation, accuracy, user-friendly interface, information availability, communication capacity, maintenance, cost reduction makes our system smarter than the existing system. As indicated by [3] Nowadays we come across a number of cases of cyber crime, manipulation of data by unauthenticated users, hacking of personal accounts etc. due to traditional password based security systems which could be hacked. In biometric authentication technology which could not be hacked as this system consists of software which identifies or validates the user by matching the data being fed with the digital images of the unique characteristics of the user. As per [4] The client uses MS Excel or paper, and maintains their records, however it is not possible for them to share the data from multiple system in multi user environment, there is lot of duplicate work, and chance of mishap. Every Excel file need to be updated once records are been changed. The Fitness Freak System rejects most of the disadvantages of the existing software. Increasing efficiency and effectiveness, automation, accuracy, user-friendly interface, information availability, communication capacity, maintenance, cost deduction makes our system smarter than the existing system. As indicated by [5] how to use the combined framework to realize the application and design of the management system for scientific research projects. This system can

efficiently solve the problem of the poor expansibility and poor maintainability in the application of traditional Java Web. As indicated by [6] This work presents a design for online database and transactions management. The design system can manage employee, member, facilities, payroll, receipts, and products information. It also provides the facility of search & advanced search for searching the records efficiently & immediately. This system provides data storing & report generation with a graphical user interface (GUI). As per [7] The project gym management system is prepared to eliminate the time required for existing system in the previous system there is no records secured as all the paper work was there and if the paper misplaced then all the records will gone so to avoid all these problems this gym management system project has been developed. Through these all the records are maintained and secured. It also requires software which store data about staff and persons. As indicated by [8] Attendance documentation is a crucial metric for determining a student's dedication, qualification, and status. Several types of systems have been developed for automated attendance. The majority of these implementations were built on a single factor template, representing a line of security error. In recent years, rapid development has taken place in several applications such as authorization, data access, and access control by implementing biometrics and radio frequency identification technologies. This research work focuses on designing a smart protocol for RFID authentication in combination with fingerprint biometric information, which guarantees confidentiality, identity verification, and data protection. Reaction time and event performance evaluation were the tests performed on the system. Ten students with unique fingerprints and RFID cards are assessed for the test. The test results show an average duration of 20.61 respective seconds for each student, and zero percent of false refusal rate was recorded in the implementation. Finally, the result shows the system is reliable and efficient. Each result revealed high-speed performance due to software and hardware coordination. Biometric systems provided data integrity and security, RFID provided limited complexity, and the proposed method's technical programming pattern provided an average run time.

### III. PROPOSED METHODOLOGY

The Application would contain following modules:

2. User Login.
3. Account.
4. Enquiry.
5. Personal Trainer.
6. Messaging and mailing System for Members.
7. Various Reports.
8. Attendance For members.
9. Expenses for the Gym.

### IV. ARCHITECTURE DIAGRAM

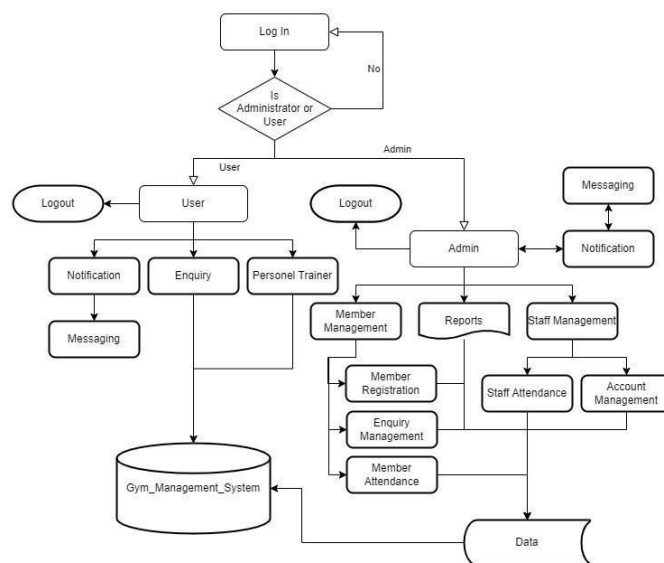


FIG. 1. ARCHITECTURE DIAGRAM

As consider of Above architecture diagram Fig.1, in that the first one is login with Username and Password if your admin then you log in into the admin Section .and If you Are user then you are log in into the user section. after

Login . In Admin Section the Admin has All access of system , it access all Modules like , Notification, Mail and Messaging and also Admin Perform the Member registration Module or Store that Data and more like report ,expenses and Also The Admin Send The Mail And Message To the clients, and that all Data are stored in The My SQL-Database. In The User section also user access the Module but only that modules are allowed by Admin.in witch also the All Data are Stored in MySQL-Database.

#### A. Functional Decomposition

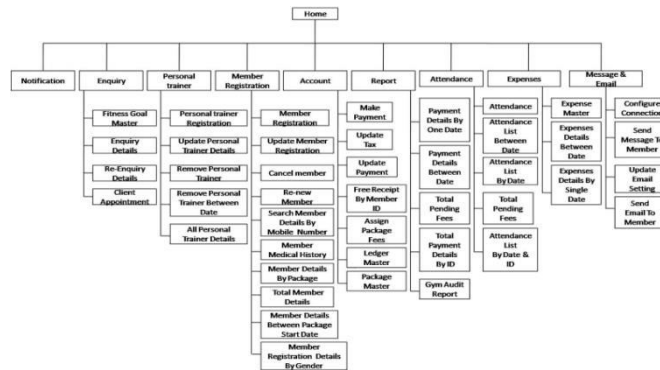
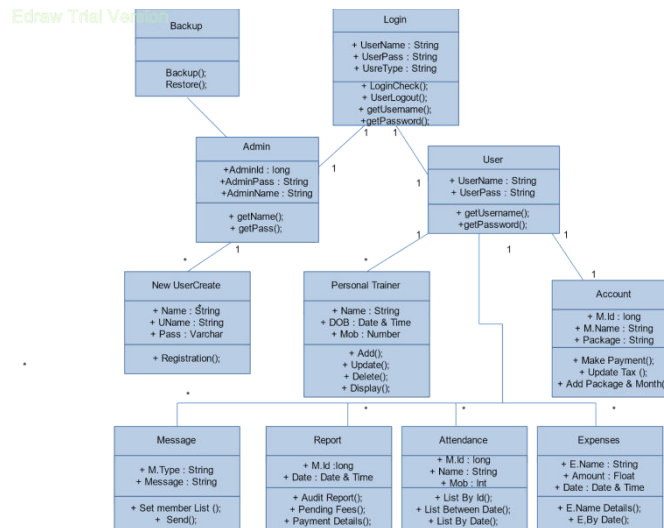


Fig. 2. Functional Decomposition diagram

#### B. Class Diagram



### V. TEST PROCEDURE

#### 1. Test Case ID-1:

**Test Case Name :** To test functionality of login form.

**Prerequisite :** Login form should get loaded.

**Objective :** To find out bugs in login form if exist.



Sr.No	Steps to be executed	Expected Result	Actual Result	Pass/Fail
	Username Textbox Test cases			
1	Enter Username with less than 6 characters. 2. Enter correct password. 3. Click on Submit button.	"Enter username with minimum 6characters."	"Enter username with minimum 6characters."	Pass
2	Enter Username with 6 characters. 2. Enter correct password. 3. Click on Submit button.	It should display homepage.	It display homepage.	Pass
3	Enter Username with Greater than 30 characters. 2. Enter correct password. 3. Click on Submit button.	It should display error message "Enter username with maximum 30 characters"	It does not accept username with greater than 30 characters	Pass

Sr.No	Steps to be executed	Expected Result	Actual Result	Pass/Fail
4	Enter Username with 10 characters. 2. Enter correct password. 3. Click on Submit button.	It should display homepage.	It display homepage.	Pass
5	Enter Username as a Blank Field. 2. Enter correct password. 3. Click on Submit button.	It should display error message "Enter Username"	It displays error message "Enter username"	Pass
	Password Textbox Test cases			
1	Enter Correct Username. 2. Enter Correct Password with less than 6 characters. 3. Click on Submit button.	It should display error message "Enter password with minimum 6characters."	It displays error message "Enter password with minimum 6 characters".	Pass
2	Enter Correct Username. 2. Enter Correct Password with greater than 10 characters. 3. Click on Submit button.	It should display error message "Enter password with maximum 10characters."	It displays error message "Enter password with maximum 10 characters".	Pass

Sr.No	Steps to be executed	Expected Result	Actual Result	Pass/Fail
	First name Textbox Test cases			
1	1.Enter first name as blank field. 2. Click on submit button.	It should display error message "Enter frame"	It display error message "Enter frame"	Pass
2	1.Enter first name with digits. 2. Click on submit button.	It should display error message "Enter alphabets only."	It display error message "Enter alphabets only."	Pass
3	1.Enter first name with greater than 50 characters. 2. Click on submit button.	It should display error message "Enter frame with maximum 50 characters"	It accepts frame with greater than 50 characters	Pass
4	1.Enter first name with digits and characters. 2. Click on submit button.	It should display error message "Enter alphabets only."	It display error message "Enter alphabets only."	Pass

## Test Case ID-2:

**Test Case Name :** To test functionality of registration form.

**Prerequisite :** Registration form should get loaded.

**Objective :** To find out bugs in Registration form.

Sr.No	Steps to be executed	Expected Result	Actual Result	Pass/Fail
5	1.Enter first name as character. 2. Click on submit button.	It should display home page.	It display home page.	Pass
	Last name Textbox Test cases			
1	1.Enter first name as blank field. 2. click on submit button.	It should display home page	It display home page	Pass
2	1.Enter Last name with digits. 2. Click on submit button.	It should display error message "Enter alphabets only."	It display error message "Enter alphabets only."	Pass
3	1.Enter first name with greater than 50 characters. 2. Click on submit button.	It should display error message "Enter frame with maximum 50 characters"	It accepts frame with greater than 50 characters	Pass
4	1.Enter Last name with digits and characters. 2. Click on submit button.	It should display error message	It display error message	Pass

Sr.No	Steps to be executed	Expected Result	Actual Result	Pass/Fail
3	Enter Correct Username. 2. Enter Correct Password with 10 characters. 3. Click on Submit button.	It should display homepage	It displays homepage	Pass
4	Enter correct Username 2. Enter password as a Blank Field.. 3. Click on Submit button.	It should display error message "Enter password"	It display error message "Enter password"	Pass
5	Enter Correct Username. 2. Enter Password with characters digits and special characters. 3. Click on Submit button.	It should display error message "Enter password with alphabets and/or digits only."	It displays error message "Enter password with alphabets and/or digits only."	Pass

## VI. CONCLUSION

In this Paper, We Have Created a program for maintaining the details of all the members ,employees and inventory. The system developed is able to meet all the basic requirements .the management of the records both members and employee will also benefited by the proposed system.

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**Impact Factor: 8.118**



**ISSN** INTERNATIONAL  
STANDARD  
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