MES' Abasaheb Garware College,

Karve Road, Pune - 411004

A

PROJECT REPORT

ON

Gym Management System

(Fitness Club)

FOR

OMVSAB IT SOLUTION

Submitted By

Kiran Shinde

IN PARTIAL FULFILLMENT OF THE

M.Sc. (Computer Science)

Savitribai Phule Pune University

2021-2022

Under the Guidance of

Mrs. Rasika Deshmukh

IT SOLUTION

OMVSAB IT SOLUTION

Ref: OmVSab IT Solution/HRD/2022 **Date: 30/05/2022**

Certificate Of Completion

To whom it may concern,

This is to certify that Mr.Kiran Abasaheb Shinde, student of final year MCS from Abasaheb Garware College, Pune has worked as an intern software Developer in this Organization. During his training in 'development team',He has completed project work on"GYM ERP System" from 3rd January 2022 to 30th May 2022.

He has worked as a team member and delivered the application on time and with expected Quality and efficiency.

We wish him all the best for his future assignment and work.

Mr. Vishal Katore

Managing Director

Omvsab IT Solution Pune

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• JR. COLLEGE CODE: 11.003
• AISHE CODE : C-41477

Date: __ / __/ ____

Department of Computer Science

This is to certify that __Kiran Abasaheb Shinde with Roll No.- 15611 from M. Sc. (CS) / M. Sc. (CA) Part II – SEM IV has successfully completed industrial training for the completion of the degree M. Sc. (Computer Science) / M. Sc. (Computer Application) in the academic year 2021-22.

Name of the Company: _OMVSAB IT SOLUTION

Name of the Internal Project Guide: _Mrs. Rasika Deshmukh

Internal Project Guide Head

1. Internal Examiner _____
2. External Examiner _____
3. IT Industry Expert _____

Acknowledgement

The success and end result of this project requires a lot of guidance and endorsement from many person and am fortunate to get all of these throughout my entire internship project. I was able to accomplish this project only with such assistance and supervision and therefore and therefore, will never forget to thank them.

As a part of my Industrial Training at **OMVSAB IT SOLUTION**.I would like to say that it was a wonderful opportunity to work in such a great organization.

I respect and thanks **Mr. Vishal Katore Sir(CEO)** who gave me the the opportunity to work on this specific project at **OMVSAB IT SOLUTION** .and gave me all the support and guidance that motivated me to complete the project properly.

My thanks to our project Team lead **Mrs. Supriya Ma'am** for providing us all the information we need to develop a better system and who showed their concern for my work ,encouraged me to keep my best foot forward and gave valuable suggestions which not only helped me in my project work but will be useful in future too.

Thanks to our internal project guide**, Mrs. .Rasika Deshmukh Ma'am**, Department of computer Science, at MES Abasaheb Garware College for her guidance and advice during this project work. I will never forget het timely support, guidance, encouragement and more until our project work get accomplished.

Internship Overview

Joining Date:- 01 January

Month	Description
January	• Requirement of Gathering. • Software and Hardware Requirements Specification • Core Java Basic Concepts ,Oops Concepts and practices. • Collection Framework and Practices. • Map, Exception and Practices. •
February	• HTML and JSP form Designing. • CSS and Designing. • Bootstrap, MVC and Designing. • Design Layout of Project
March	• Database Study. • Create database. • Table Creating, Table Mapping. • Model Designing and Relation of table. • Total Database Designing. •
April	• Spring ,Spring boot and Practices. • Spring MVC and Practices. • Hibernate and Practices. • Makes Different Model and their Coding. • Total Model Designing. •
May	• API and Practices. • Assignment Solving.

"FITNESS CLUB"

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Company Profile

BUSINESS PROFILE : "OMVSAB IT Solution" is a leading software development company with office in Pune.

Establishing **OMVSAB IT Solution** from 2011 aimed to provide an informal yet highly professional environment to our workforce and nurture them towards identifying the organization's goals as their personal targets.

- **OUR AIM :** "To be automated and to see automated"
- **OUR SOFTWARE SERVICES AND PRODUCTS :**

- **Business Soft:-**is widely deployed in the Service, Pharmaceutical, Manufacturing, Hospital ERP, Chemical and Sales & Distribution segments.
- **Retail Soft:-** is the sale of goods and services from individuals or businesses to the end-user**.** By considering this point of view we have following software products**.**

EduSoft:-is software that provides automations in educational management systems such as Library management, Admission process, Attendance system, Complete ERP software solution for managing college.

Introduction to Project

The application is being developed for Gym owners as well as their staff to carry out the following functionality:

- Register new member.
- Body Measurement
- Maintain reports of financial status of gym.
- And also individual body progress.

To use this feature in our application user is authenticated with username and password. With the help of this application we can channelize whole information of the members like registered date ,expired date, their photo id, phone no, fee dues, assigned personal trainer name ,attendance etc. also we can generate the reports like payment details and payment details by date, weak and month total pending fees, total payment details by id etc. Also we can make the members aware of fees, offers, birthday wish before dates through messages. And member will get the notification before date like pending fees, birthday, attendance, appointment etc.

1.2 Existing system:

- The existing system in RD Fitness Club 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. It's a limited system and less users friendly. Searching of particular information is very difficult and takes lot of time. It is very difficult to maintain records manually as manual systems are more prone to errors and data loss.

Need for New System:

Hence computerization of the existing system is proposed. The new system must completely remove all manual burdens and provides efficient on the entry system. The existing system is fully manual and requires the computerized system because of following reason:-

- To avoid complex work
- To save valuable time
- Transparency in a work
-
-

1.3 Scope of the System:

- The "Gym Management Software" is an application develope for Shivraj Fitness Club, enriched with the design facilities provided by Eclipse.
- The application has a great scope as it saves time and space required for storing and retrieving data.
- User-friendly interface helps the user in understanding the system properly and efficiently.
- Reduction in errors caused by manual system.
- Increase in the level of security as compared to the manual system.
- The application also keeps a track of the time required for processing a user's particular query.
- Admin can register new User
- Admin can Backup and Restore the data.
- User can add fitness goal.
- User can keep information about inquiry and do re-enquiry about information.
- User can keep details of the appointment details.
- User can keep information about personal trainer. And do updating and removal on Personal trainer details.
- User can do registration of new member and do various updating and removal.
- User can update the tax, take payment from members, and update payment details.
- User can create various types of the reports like payment details, total pending fees, Gym audit report.
- User can view the attendance of members by date and ID.
- User can maintain the expenses of the Gym.
- User can send email and message to the members of the gym

1.4 Hardware and software specification

The software will operate in the windows terminals from where users will be requesting to the server at some other end. The Environment is as under:

The operating environment, i.e. the minimum configuration of hardware and software which is needed for the Development and Functioning of the computerized System is as follows:

Client side Requirements:

Hardware:

1. Processor : P4 or above,
2. RAM : 512 MB and any monitor CRT or LCD
3. Printer : Laser or dot matrix

Server side requirements:

Hardware:

1. Minimum Dual Core 3.2 GHz
2. 1 GB RAM
3. 80 GB Hard Disk

Software:

1. Operating System (Windows 7,Windows 10, Linux)
2. Front End: HTML,CSS
3. Back End: MySQL
4. Tools : Spring, Hibernate
5. Code behind : Java

2.1 Proposed System

The Application would contain following modules:

- ✓ Administrator login.
- ✓ User Login.
- ✓ Account.
- ✓ Notification.
- ✓ Enquiry.
- ✓ Personal Trainer.
- ✓ Messaging and mailing System for Members.
- ✓ Various Reports.
- ✓ Attendance For members.
- ✓ Expenses for the Gym.

The development of this new system contains the following activities:

- Automation of the entire process keeping in the view of database integration approach.
- User Friendliness is provided in the application with various controls provided by system Rich User Interface.
- The system makes the overall Gym management much easier and flexible.
- The user information can be stored in centralized database which can be maintained by the system.
- This application can give the good security for user information as due to the authentication provided by this application only registered Users can access.
- There is no risk of data loss at any level while the project development is under process.

Feasibility Study

The feasibility study is useful to evaluate the cost & benefits of the system requested. The feasibility study tries to anticipate future scenario of Website development. There are three aspects of feasibility study. A feasibility study is to determine the possibility or probability of either improving the existence system or developing a completely new system. The feasibility study is necessary for every computer based system and website.

- **A. Technical Feasibility:-**

  The technical feasibility always focuses on the existing computer hardware, software and personnel. Here the available hardware and software is considered. It also include the need for more hardware or software or personnel.

- Accordingly the hardware and software installed, the computer is upgraded. The skilled personnel and their skills are taken into consideration and if training is required, it is given to operate the system efficiently.
- In this system there is use of ASP.NET for the front end and SQL Server 2008 for the back end.

B. Economic Feasibility:-

- Economical feasibility considers the cost and benefits analysis of the proposed project. The benefit is always expected to be over the cost.
- Economical feasibility is helpful to find the system investigation cost, software and hardware cost, training cost, maintenance cost etc. The hardware required is already present if not as per requirement, it may be purchased. This cost must be considered.

C. Operational Feasibility:-

- Operational feasibility considered the acceptability of the system. The project can be rejected due to operational non feasibility. This includes whether system will be used, if it is developed & implemented, the user is able to handle the system, whether the proposed system cause any trouble etc.

- The product can operate smoothly in all types of environmental. It is user friendly so that the new user can operate software easily. The developed software can handle large amount of data & thus it is operationally feasible to use the software.

Fact Finding Techniques

To study any system the analyst needs to do collect facts and all relevant information. The facts when expressed in quantitative form are termed as data. The success of any project is depended upon the accuracy of available data. Accurate information can be collected with help of certain methods/ techniques. These specific methods for finding information of the system are termed as fact finding techniques. Interview, Questionnaire, Record View and Observations are the different fact finding techniques used by the analyst.

Interview

This method is used to collect the information from groups or individuals. Analyst selects the people who are related with the system for the interview. In this method the analyst sits face to face with the people and records their responses. The interviewer must plan in advance the type of questions he/ she is going to ask and should be ready to answer any type of question. He should also choose a suitable place and time which will be comfortable for the respondent.

The information collected is quite accurate and reliable as the interviewer can clear and cross check the doubts there itself. This method also helps gap the areas of misunderstandings and help to discuss about the future problems. Structured and unstructured are the two sub categories of Interview. Structured interview is more formal interview where fixed questions are asked and specific information is collected whereas unstructured interview is more or less like a casual conversation where in-depth areas topics are covered and other information apart from the topic may also be obtained.

Questionnaire

It is the technique used to extract information from number of people. This method can be adopted and used only by an skillful analyst. The Questionnaire consists of series of questions formed together in logical manner. The questions are simple, clear and to the point. This method is very useful for attaining information from people who are concerned with the usage of the system and who are living in different countries. The questionnaire can be mailed or send to people by post. This is the cheapest source of fact finding.

Recorder view

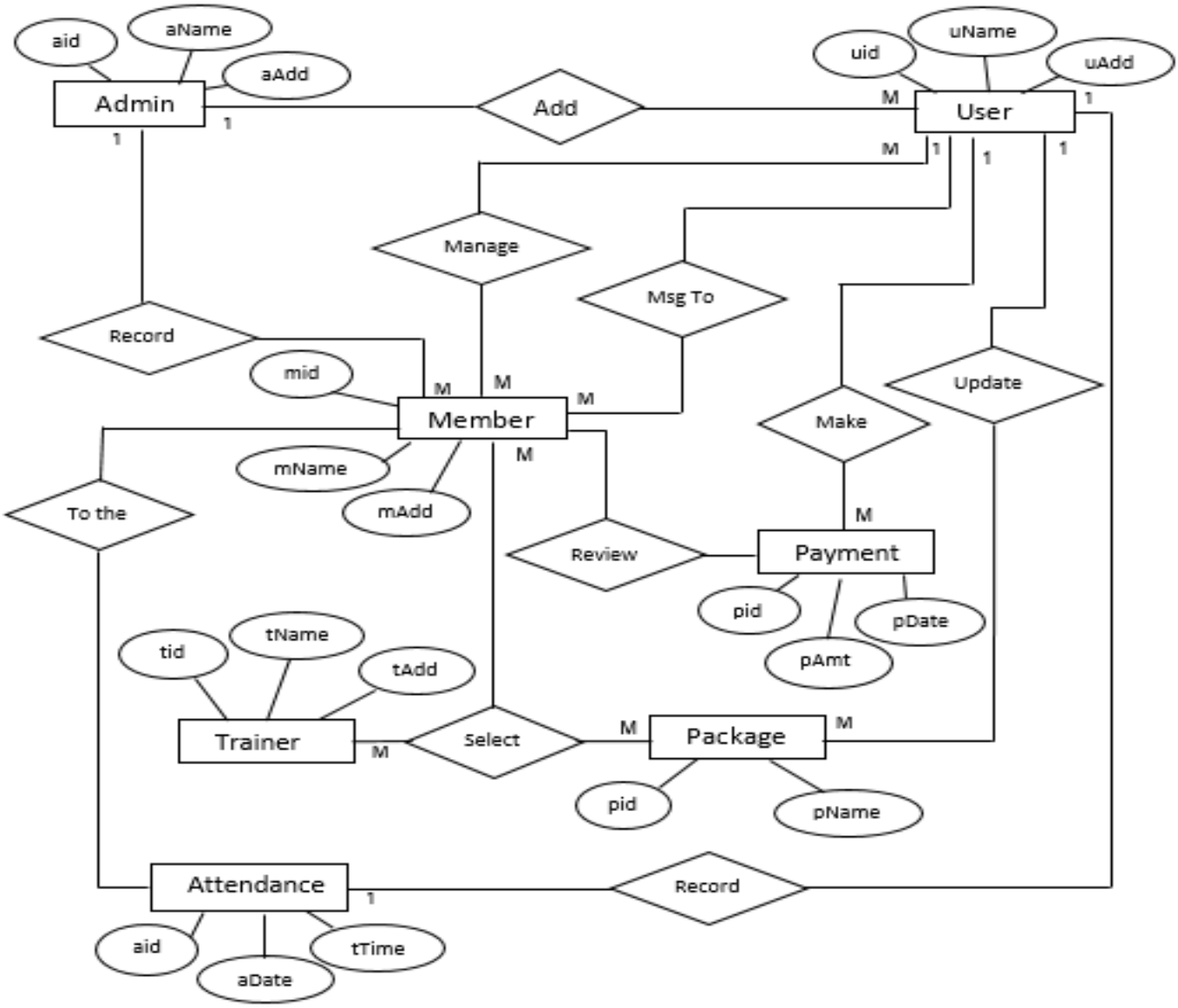
The information related to the system is published in the sources like newspapers, magazines, journals, documents etc. This record review helps the analyst to get valuable information about the system and the organization.

Observation

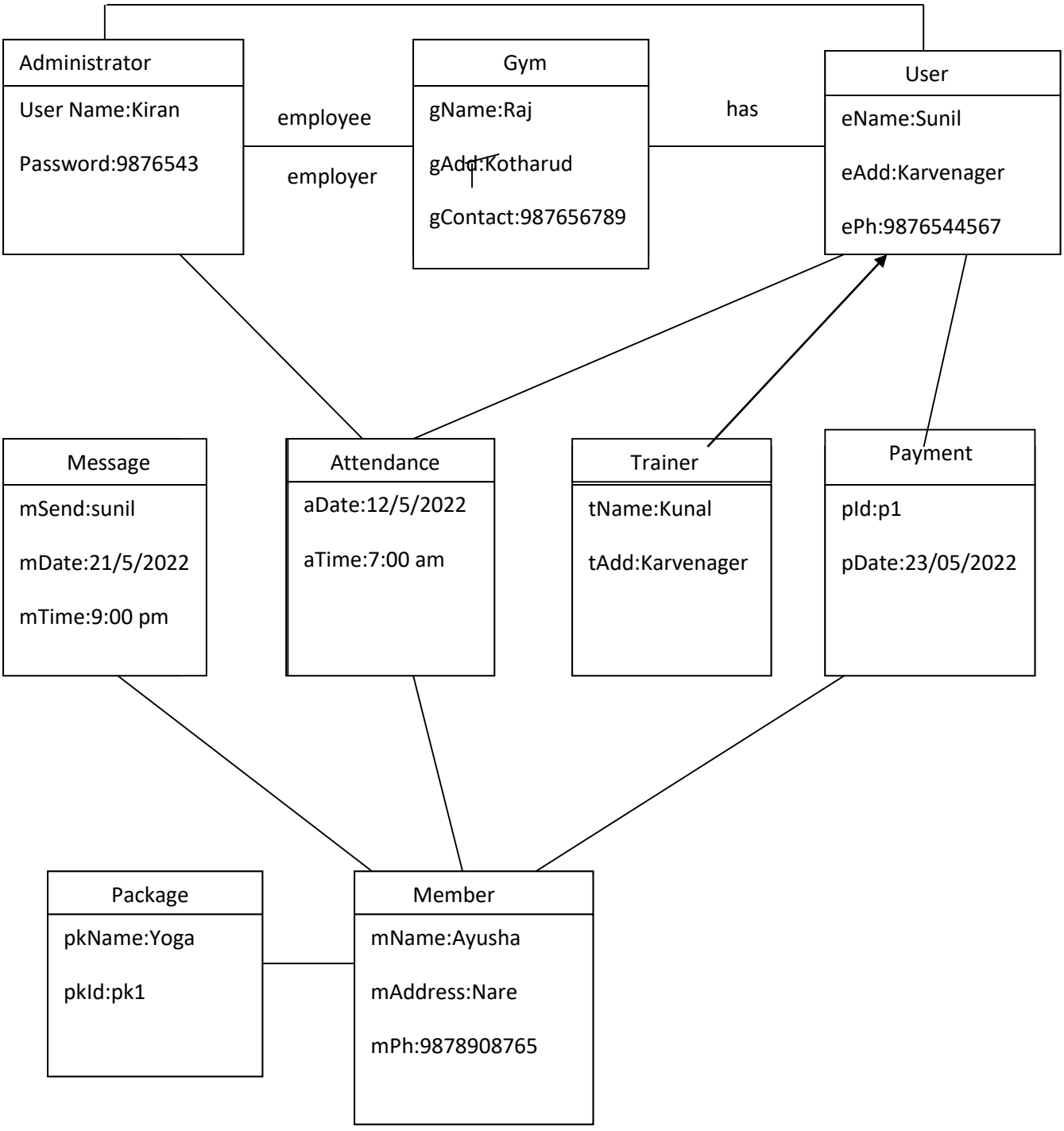
Unlike the other fact finding techniques, in this method the analyst himself visits the organization and observes and understand the flow of documents, working of the existing system, the users of the system etc. For this method to be adopted it takes an analyst to perform this job as he knows which points should be noticed and highlighted. In analyst may observe the unwanted things as well and simply cause delay in the development of the new system.

System Design

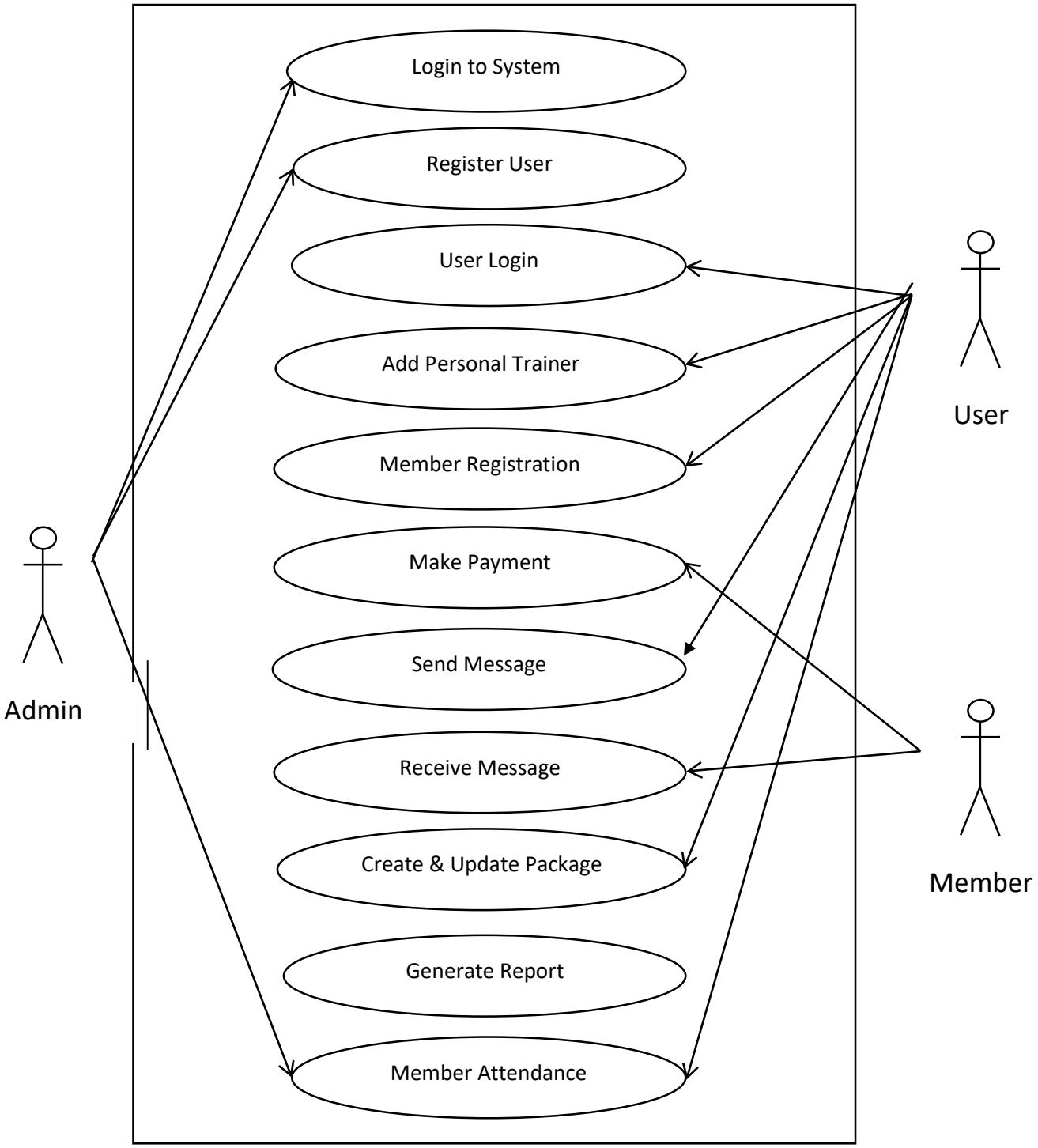
1. Entity Relationship Diagram (ERD)



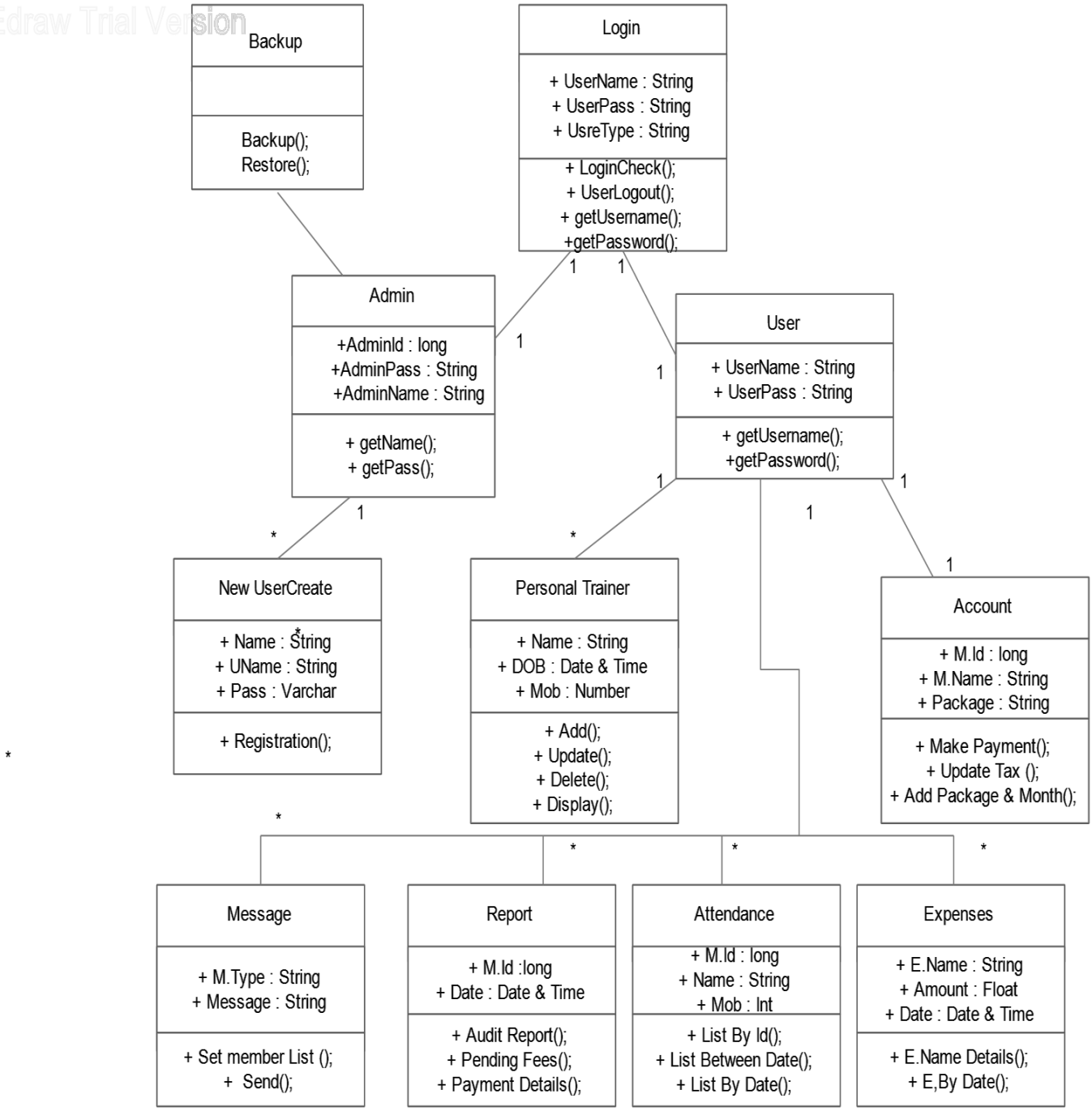
2.Object Diagram



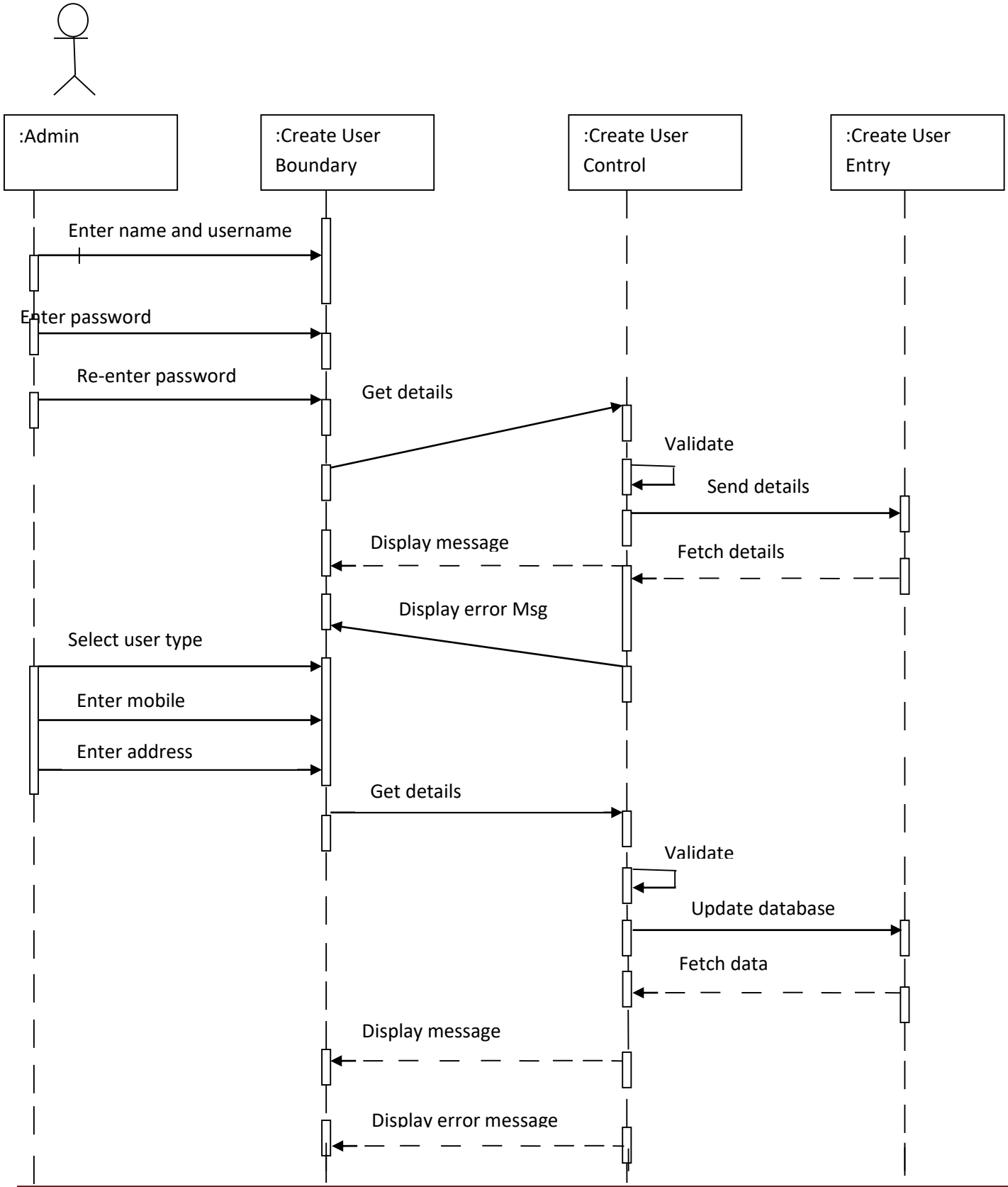
3. Use Case


Login to System
Register User
User Login
Add Personal Trainer
Member Registration
Make Payment
Send Message
Receive Message
Create & Update Package
Generate Report
Member Attendance
Admin
User
Member

1. Class Diagram

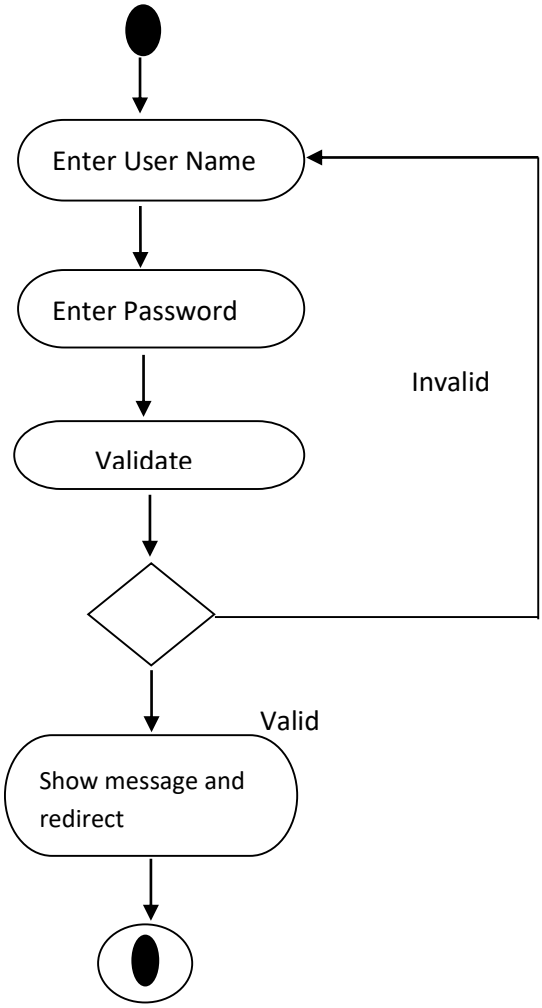


5. Sequence Diagram

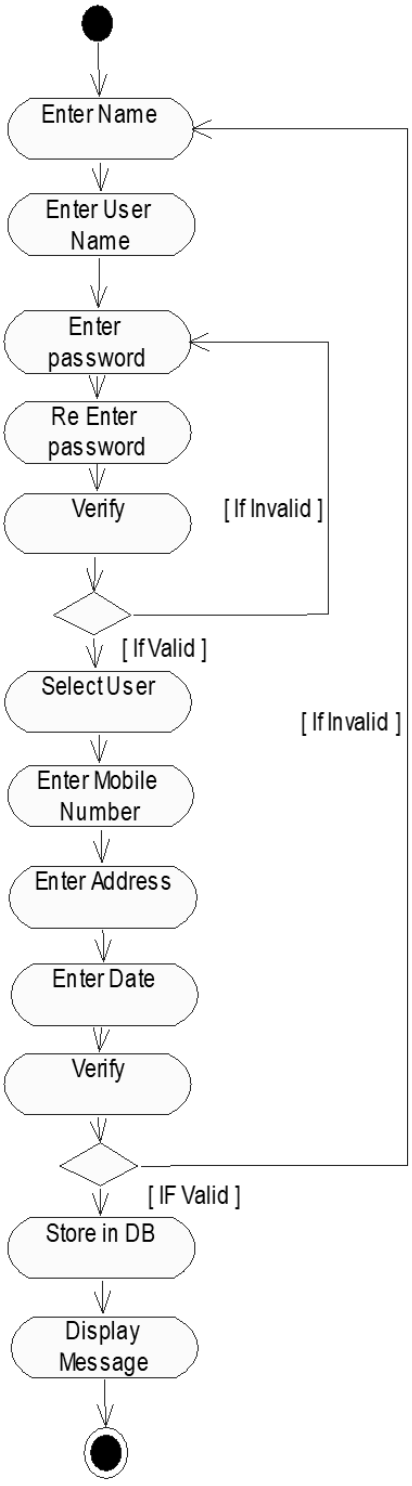


6. Activity Diagram -:

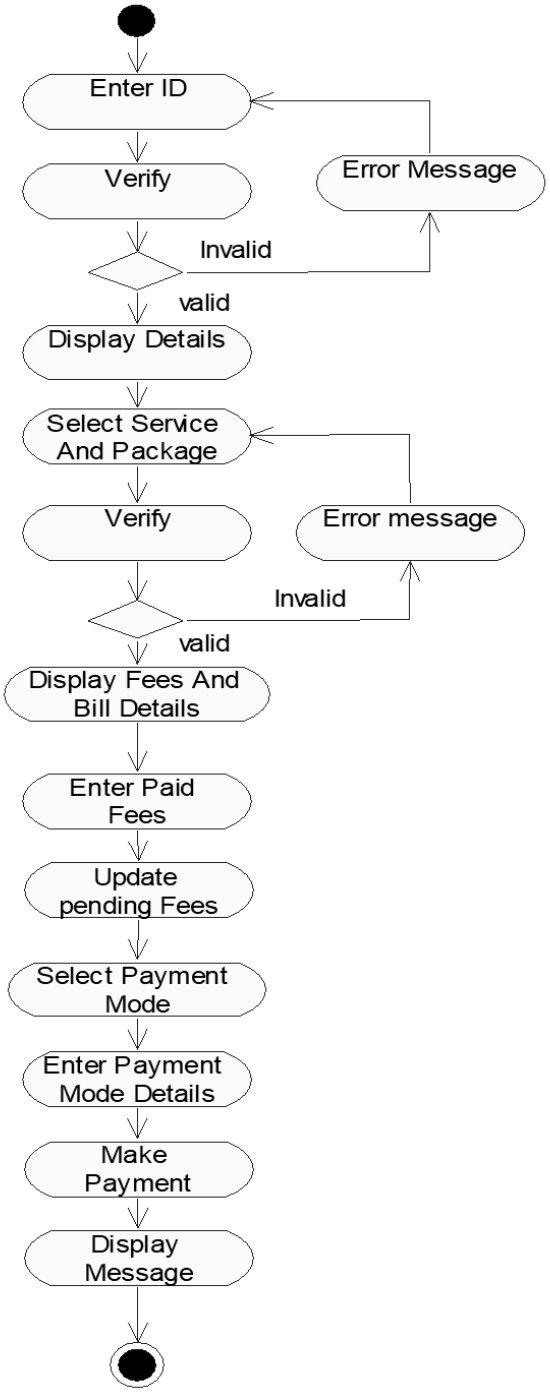
Login



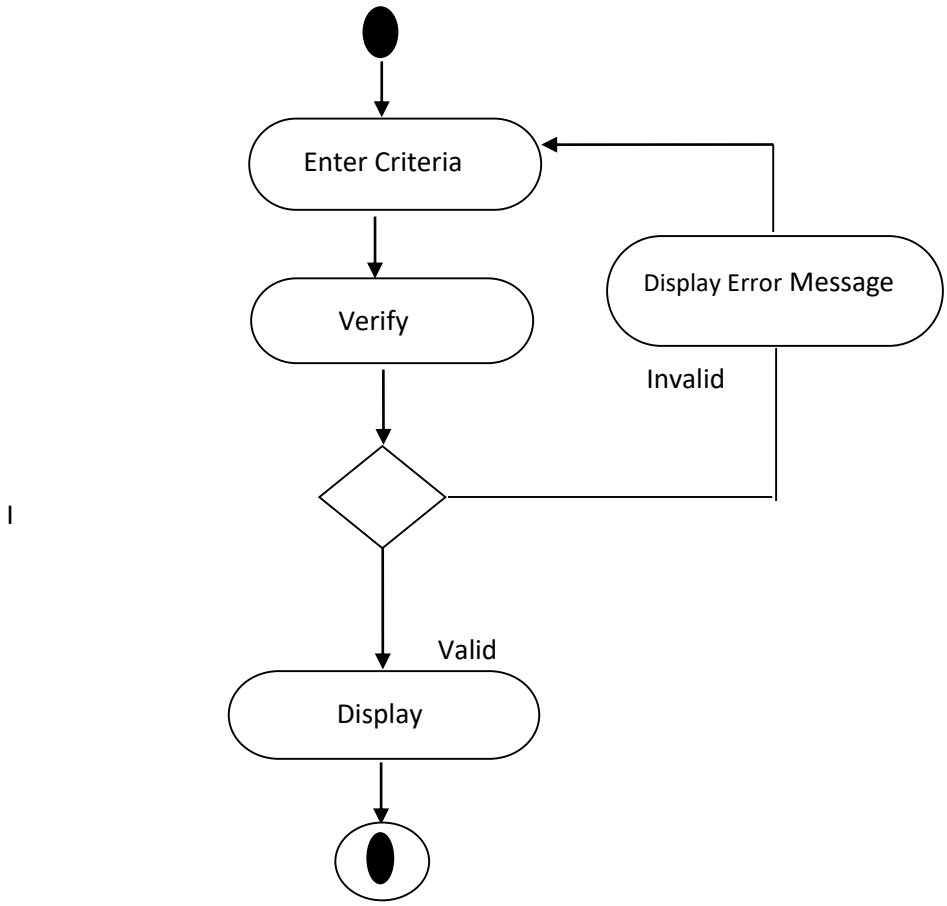
Create new user:



Make Payment:

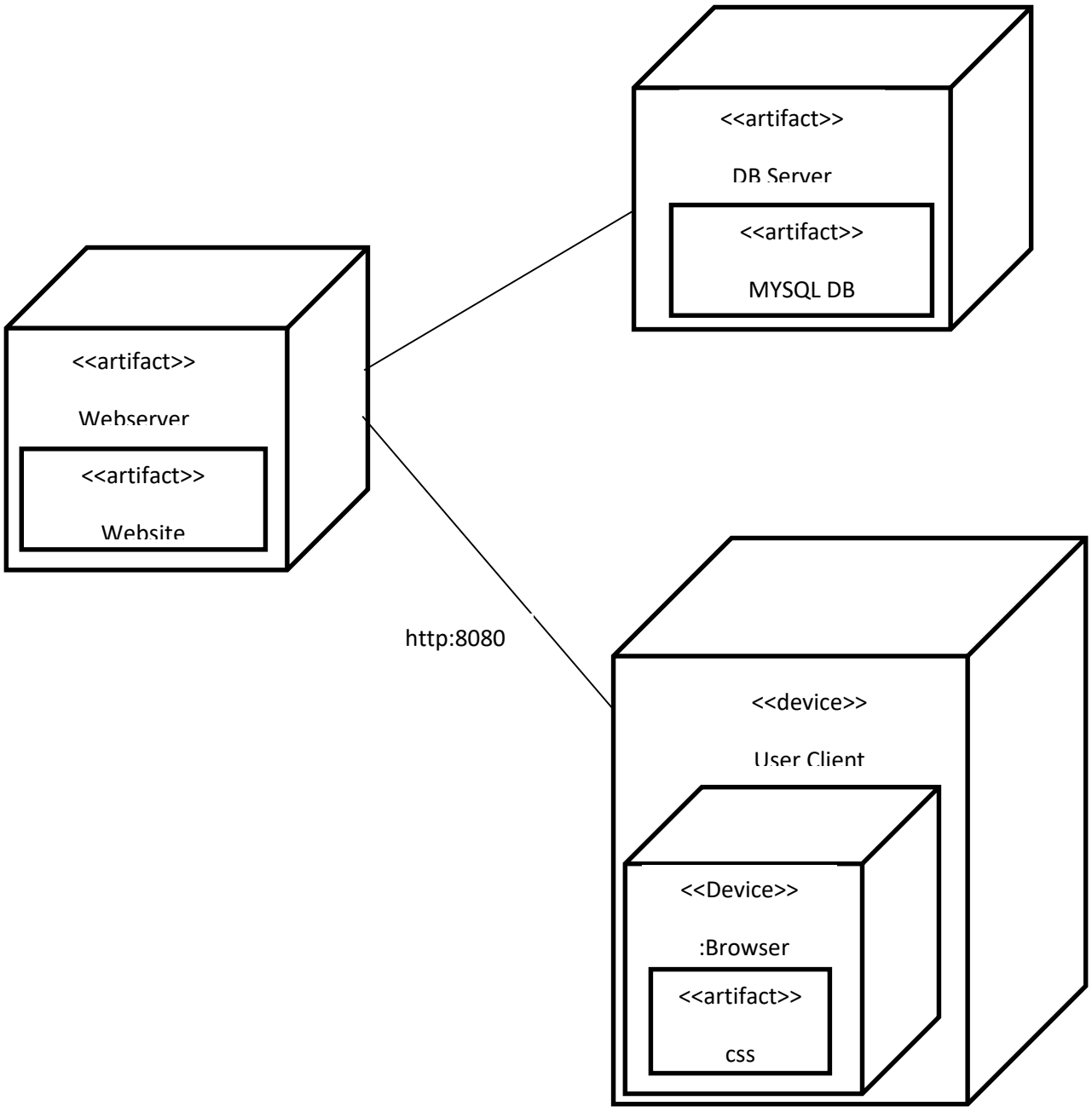


Report


Enter Criteria
Verify
Display Error Message
Invalid
Valid
Display

I

7. Deployment Diagram



Data Dictionary

1. Expensesdetail

Sr.No.	Column Name	DataType	Constraint	Description
1	expenseId	INT(11)	Primary key	Auto Increment
2	Amount	Varchar(255)		Amount of Expense
3	Date	Varchar(255)		Date Of Expense
4	Expense name	Varchar(255)		Name of Expense

2. LedgerFess

Sr.No.	Column Name	DataType	Constraint	Description
1	ledgerfessId	INT(11)	Primary Key	Auto Increment
2	DueDate	Varchar(255)		Due Date
3	EndDate	Varchar(255)		End Date
4	fessStatus	Varchar(255)		Fess status
5	LedgerId	INT(11)	Foreign key	Ledger Id
6	LedgerTotalFess	FLOAT		Ledger Total Fess
7	PackageId	INT(11)	Foreign key	Package Id
8	StartDate	Varchar(255)		Start Date
9	memberId	INT(11)	Foreign key	Member Id

3. Ledgerfeespaid

Sr.No.	Column Name	DataType	Constraint	Description
1	LedgerFessPaidId	INT(11)	Primary key	Auto Increment
2	LedgerAlreadyPaidFess	FLOAT		Already Paid Fess
3	LedgerPaidFess	FLOAT		Paid Fess
4	LedgerPendingFess	FLOAT		Pending Fess
5	LedgerFessPaid	INT(11)	Foreign Key	Fess Id
6	TransactionDetails	INT(11)	Foreign Key	Transaction Details

4.Ledgermaster

Sr.No.	Column Name	Datatype	Constraint	Description
1	ledgerId	INT(11)	Primary Key	Auto Increment
2	ledgerName	Varchar(255)		Ledger name

5. Ledgerpackagemaster

Sr.No.	Column Name	Datatype	Constraint	Description
1	PackageId	INT(11)	Primary Key	Auto Increment
2	Month	INT(11)		Month
3	PackageFess	FLOAT		Package Fess
4	LedgerId	INT(11)	Foreign Key	Ledger Id.

6. Packagemonth

Sr.No.	Column Name	Datatype	Constraint	Description
1	Package MonthId	INT(11)	Primary Key	Auto Increment
2	PackageMonth	INT(11)		Package Month

7.Taxmodel

Sr.No.	Column Name	Datatype	Constraint	Description
1	Id	INT(11)	Primary Key	Auto Increment
2	taxAmount	FLOAT		Tax Amount

8. Transactiondetails

Sr.No.	Column Name	Datatype	Constraint	Description
1	TransactionDetailsId	INT(11)	Primary Key	Auto Increment
2	BankName	Varchar(255)		Bank Name
3	Discount	FLOAT		Discount
4	FinalReciept	Varchar(255)		Final Reciept
5	FinalRecieptNo	INT(11)		FinalReciept No
6	PaymentMode	Varchar(255)		Payment Mode
7	ReceiptDate	Varchar(255)		Receipt Date
8	RecieptNo	INT(11)		Reciept No
9	RecieptType	Varchar(255)		Reciept Type
10	Tax	FLOAT		Tax
11	TaxType	Varchar(255)		Tax Type
12	TaxValue	FLOAT		Tax Value
13	transactionDate	Varchar(255)		Transaction Date
14	transactionNo	Varchar(255)		Transaction No

9. Usermaster

Sr.No.	Column Name	Datatype	Constraint	Description
1	UserId	INT(11)	Primary Key	Auto Increment
2	Address	Varchar(255)		Address
3	Date	Varchar(255)		Date
4	Id	Varchar(255)		Id
5	IsDelete	Varchar(255)		IsDelete
6	mobileNo	Varchar(255)		mobileNo
7	Name	Varchar(255)		Name
8	Password	Varchar(255)		Password
9	Username	Varchar(255)		User name
10	UserType	Varchar(255)		User Type

10. MemberRegistration

Sr.No.	Column Name	Datatype	Constraint	Description
1	MemberId	INT(11)	Primary Key	Auto Increment
2	First Name	Varchar(255)		First Name
3	Last Name	Varchar(255)		Last Name
4	Address	Varchar(255)		Address
5	Age	Int		age
6	enquiryId	Int	F k	enquiryId
7	PersTranierName	Varchar(255)		PersTranierName
8	Mobileno	Varchar(255)		mobileNo
9	anniversarydate	Varchar(255)		anniversarydate
10	Date ofBirth	Varchar(255)		Date of Birth
11	Emailed	Varchar(255)		emailed
12	firstName	Varchar(255)		firstName
13	Gender	Varchar(255)		Gender
14	Height	Varchar(255)		Height
15	joiningDate	Varchar(255)		joiningDate
16	Marital status	Varchar(255)		Marital status
17	Status	Varchar(255)		status

11. Member body details

Sr.No.	Column Name	DataType	Constraint	Description
1	MemberbodyId	INT(11)	Primary key	Auto Increment
2	Arms	Varchar(255)		arms
3	bodyAge	Varchar(255)		bodyAge
4	bodyFat	float		bodyFat
5	bodyMassIndex	Varchar(255)		bodyMassIndex
6	From date	Varchar(255)		bodyMassIndex
7	Height	Varchar(255)		height
8	Legs	Varchar(255)		legs
9	Member Name	Varchar(255)		Member Name
10	MemberId	Varchar(255)		MemberId
11	restingMetabolism	Varchar(255)		restingMetabolism
12	segmentalSkMuscle	float		segmentalSkMuscle
13	segmentalSubFat	float		segmentalSubFat
14	Weight	Varchar(255)		weight

Test Procedure & Implementation

In the fast changing and highly competitive web-based business environment, it is critical for organizations to test their web sites and web applications. Testing should ensure that the web applications/web sites/web services usual functionality works correctly, provides the ability to reuse and extend the tests across multiple browsers/platforms/ languages/databases/servers and ensure that all the users accessing the web applications get results in an acceptable time.

There are several types of testing depending upon the usability. Some of them are

- **Compatibility Testing** –

  Test Web Applications/Web Sites to ensure that it is compatible with different browsers, operating systems, languages, databases and servers.

- **Unit Testing** –

  It is testing the individual module. Generally done at developer site.focus on verification effort on smallest unit of software design .unit testing means test programs , module or procedure.

Output Testing

Test Cases

Login Form

Valid User Name and Password

Implementation of Test Case

No	Test Step	Test Data	Expected Result	Actual Result	Status
1	User Name and Password is not enter and click on login button	User Name= ” ” Password = ” ”	User Should be login	Show error message * Enter User Name & Password *	Pass
2	Enter Valid User Name and Invalid Password	User Name = ” II ” Password = ” ** ”	Re-Enter the Password	Show error message * Enter Correct Password *	Pass
3	Enter Invalid User Name and Invalid Password	User Name = ”IIII ” Password = ” *** ”	Invalid User	Show error message * Your User Id & Password does not match *	Pass
4	Enter Valid User Name and Password	User Name = ” II ” Password = ” *** ”	Login Successfully	Login Successfully	Pass

Test Case – II

Change Password Form

Change Password

Input- Old Password, New Password, Confirm Password

Output- Display Password Change Message

Implementation of Test Case

No	Test Step	Test Data	Expected Result	Actual Result	Status
1	Old Password and New Password is not Enter and click on Change Password	Old Password=" " New Password=" " Confirm Password =" "	System Should generate error message "Empty Fields"	System generate error message	Pass
2	Enter Valid Old Password and Not enter in New Password and Confirm Password	Old Password="**" New Password=" " Confirm Password =" "	Error message "Empty Fields"	Show Error message "Empty Fields"	Pass
4	Enter Valid Old Password and New Password and enter same New Password for Confirm Password	Old Pass = " *** " New Pass = " ***** " Confirm Pass = " ***** "	Password Changed Successfully	Password Changed Successfully	Pass

Test Case – III

Registration Form

Implementation of Test Case

No	Test Step	Test Data	Expected Result	Actual Result	Status
1	Enter Special symbol in artist name	Name get checked for symbol	System Should generate error message .	Error should display that only character allowed	Pass
2	Enter character and more than 10 digit in mobile no.	Mobile no checked for validity	Error message “please enter 10 digit”	Show Error message mobile no contain 10 digit only	Pass
3	Keep any mandatory text blank	Blank field get checked	Should display error	Show Message “This field is mandatory”	Pass

3.10 User Interface Design:

a) The Home Screen:

The Home page contains all the menus for managing gym, generating reports, making payment, attendance, add, update, delete member's & personal trainer information.

b) Admin Login:

When you click here you will navigate to the page of the Admin Login by entering the valid use id, Password and user name "administrator".

c) Admin Home Page:

Shows three menus Home, Add new user, back-up & restore of data.

Admin can add new user.

e) Payment:

In this menu User able to do payment for member, update tax & payment, also user can generate receipt for fees payment.

f) Reports:

This part contains reports like Total pending fees, Payment details & Total gym audit part.

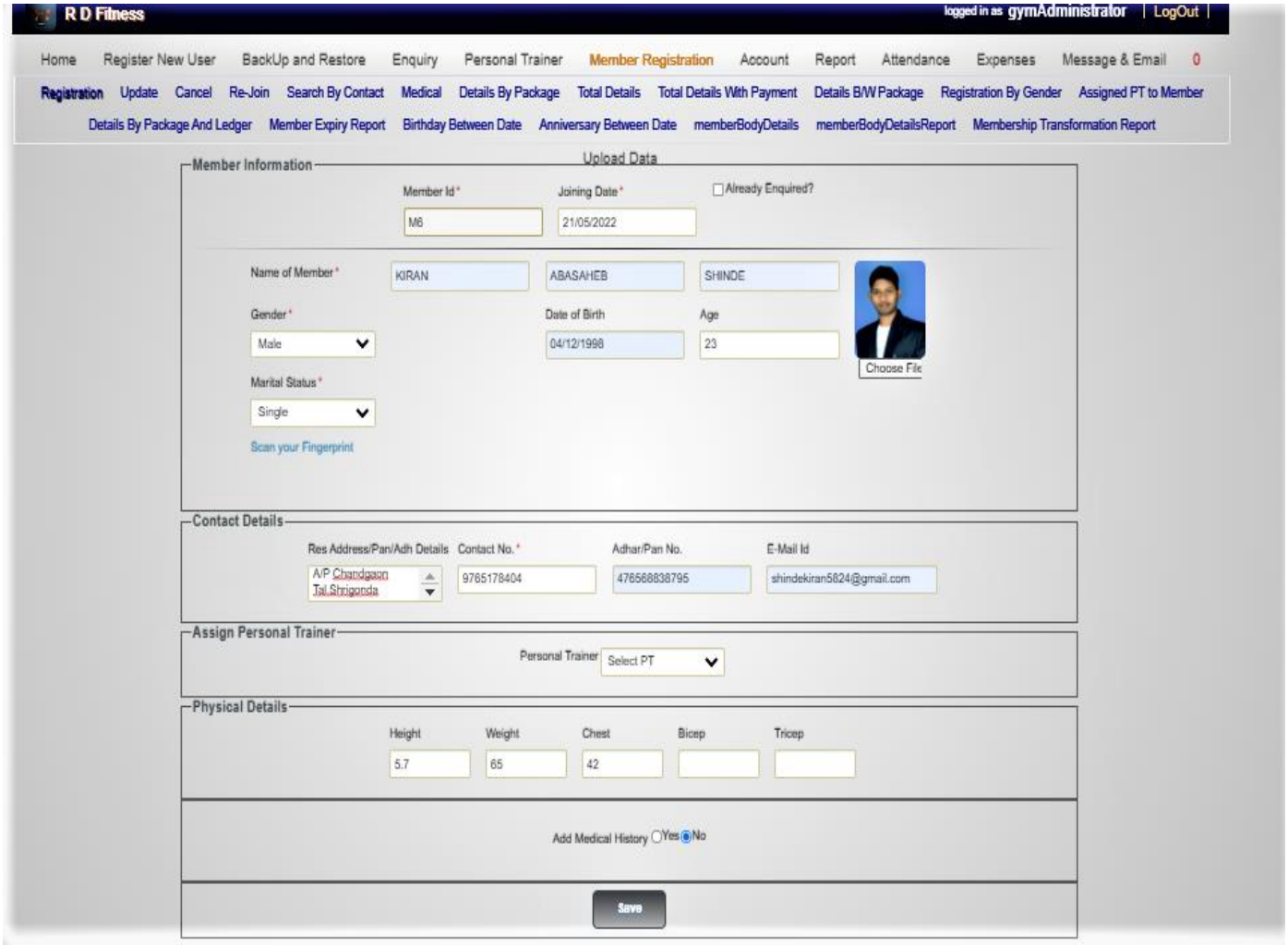
h) Expenses:

In this menu user can add expense & also see all report of all expenses by individual date or between two dates.

Screenshot

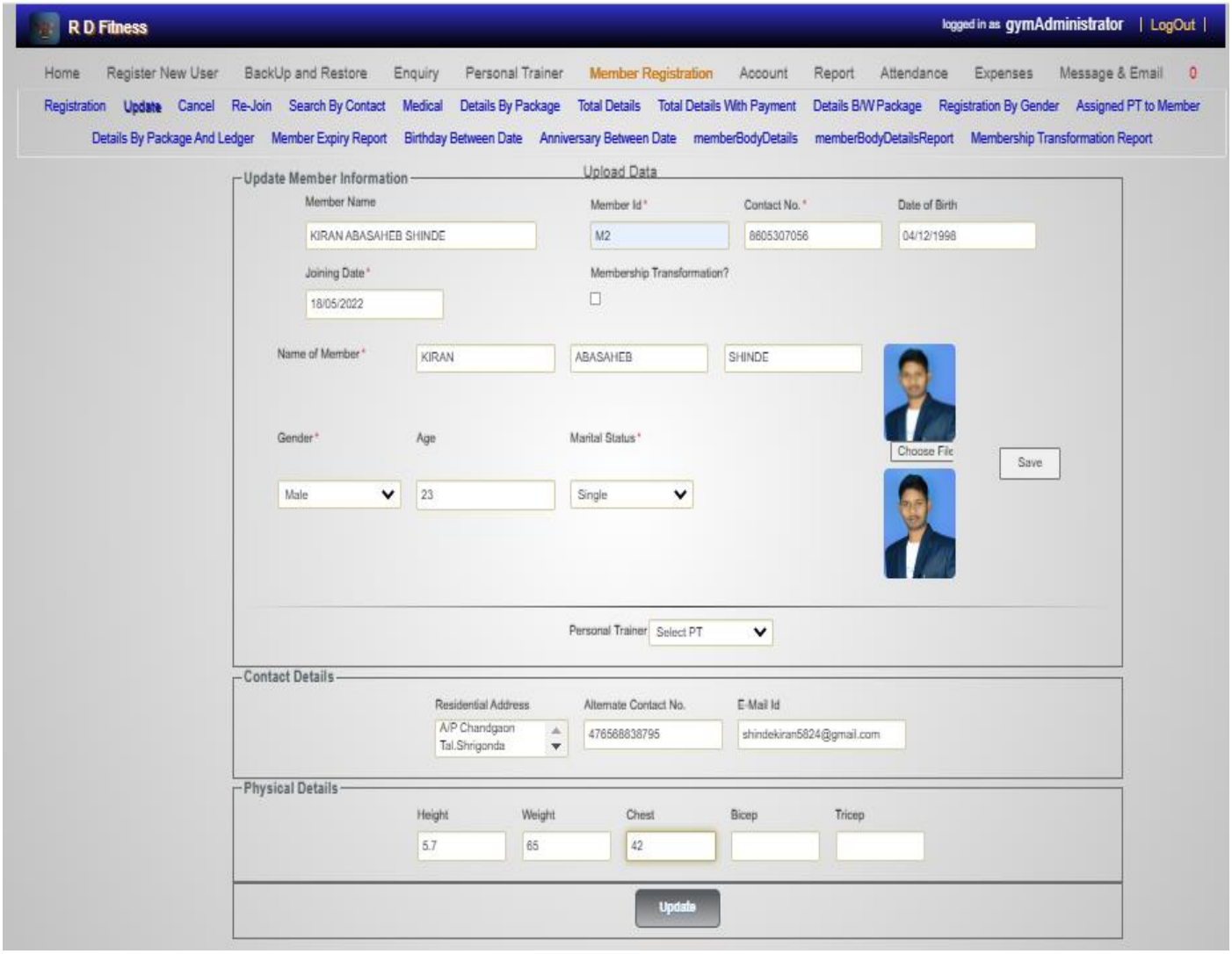
Admin Login

Member Registration

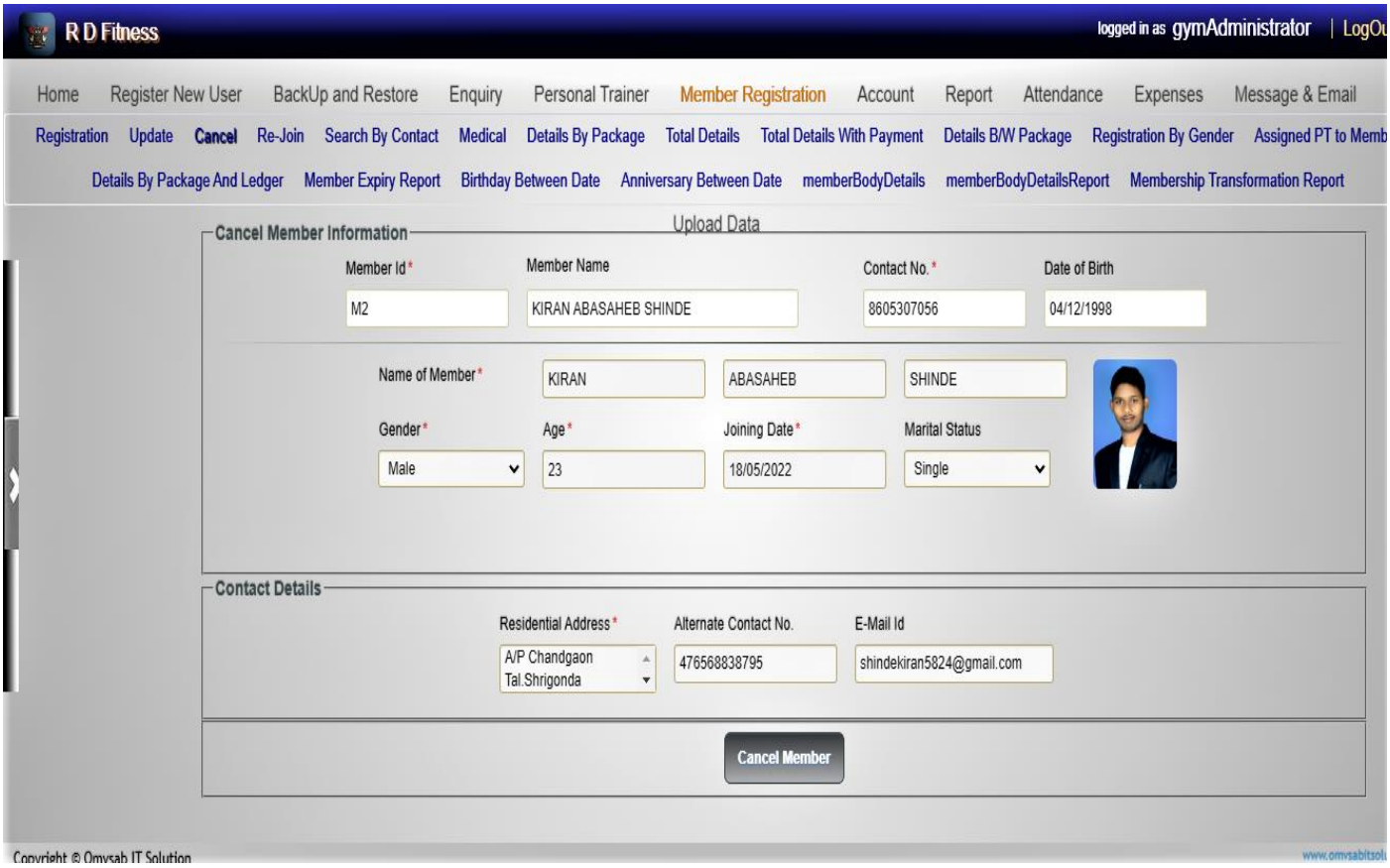


Update Member Info

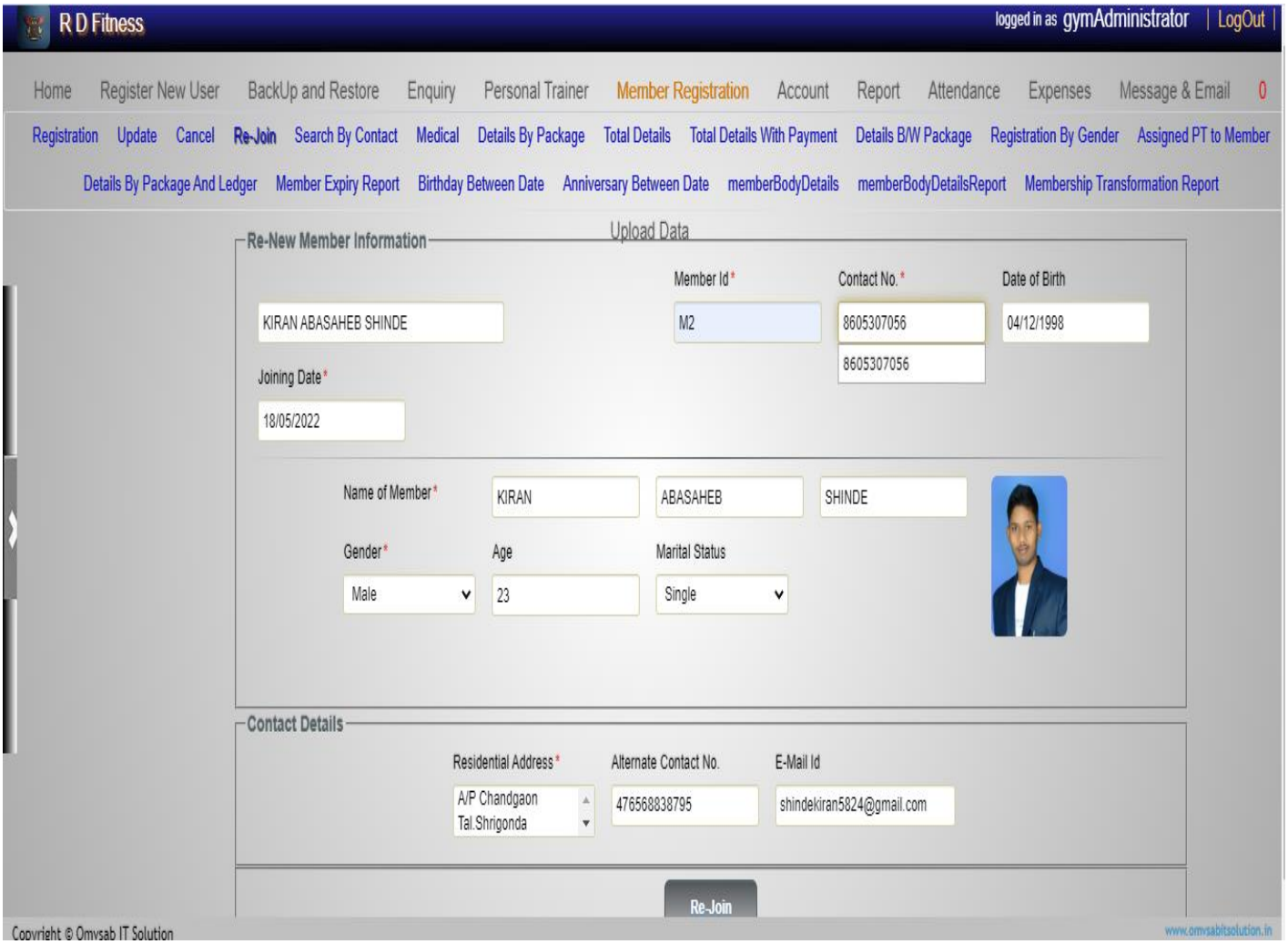
-



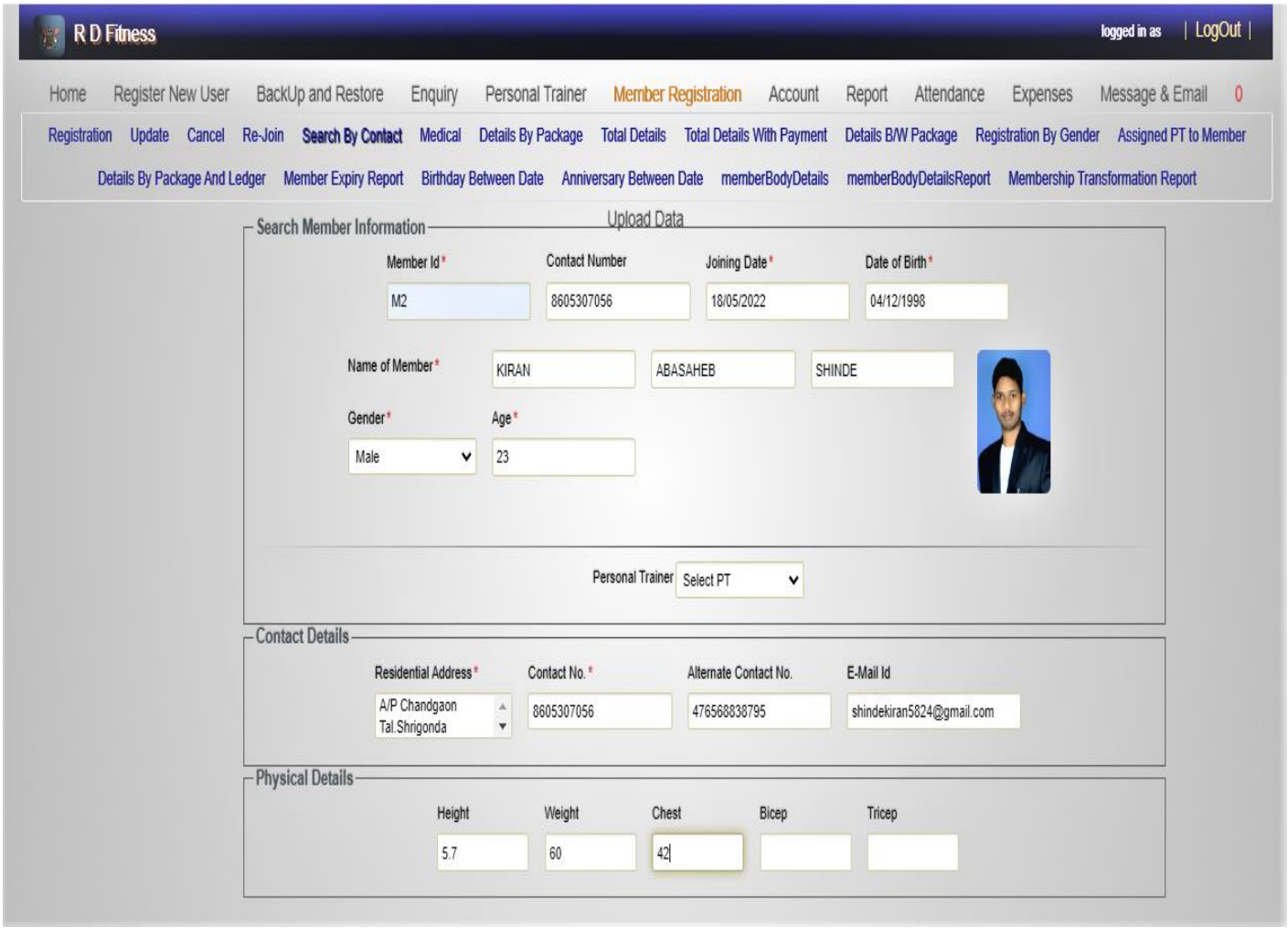
Cancel Member



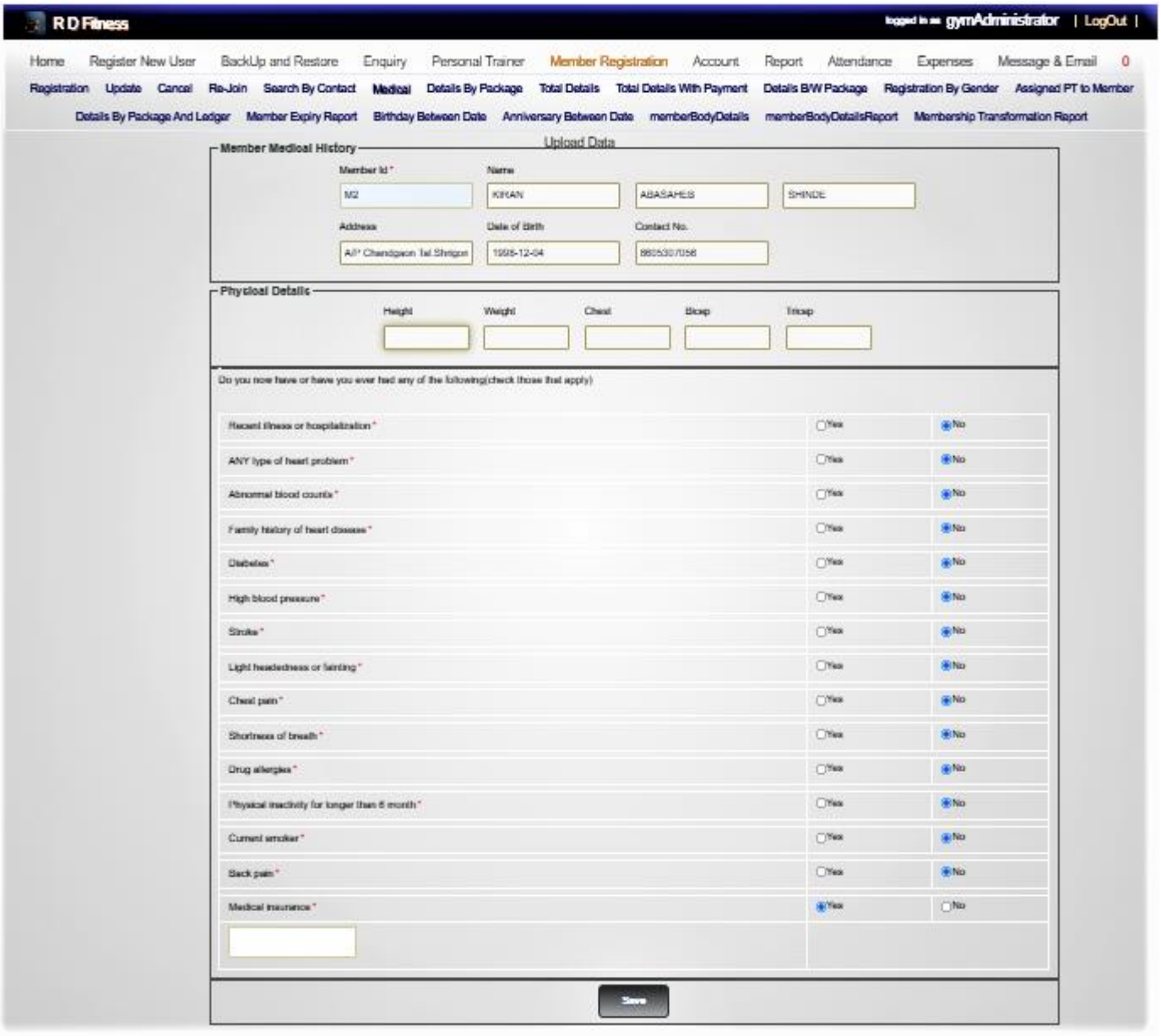
Re-Join Member



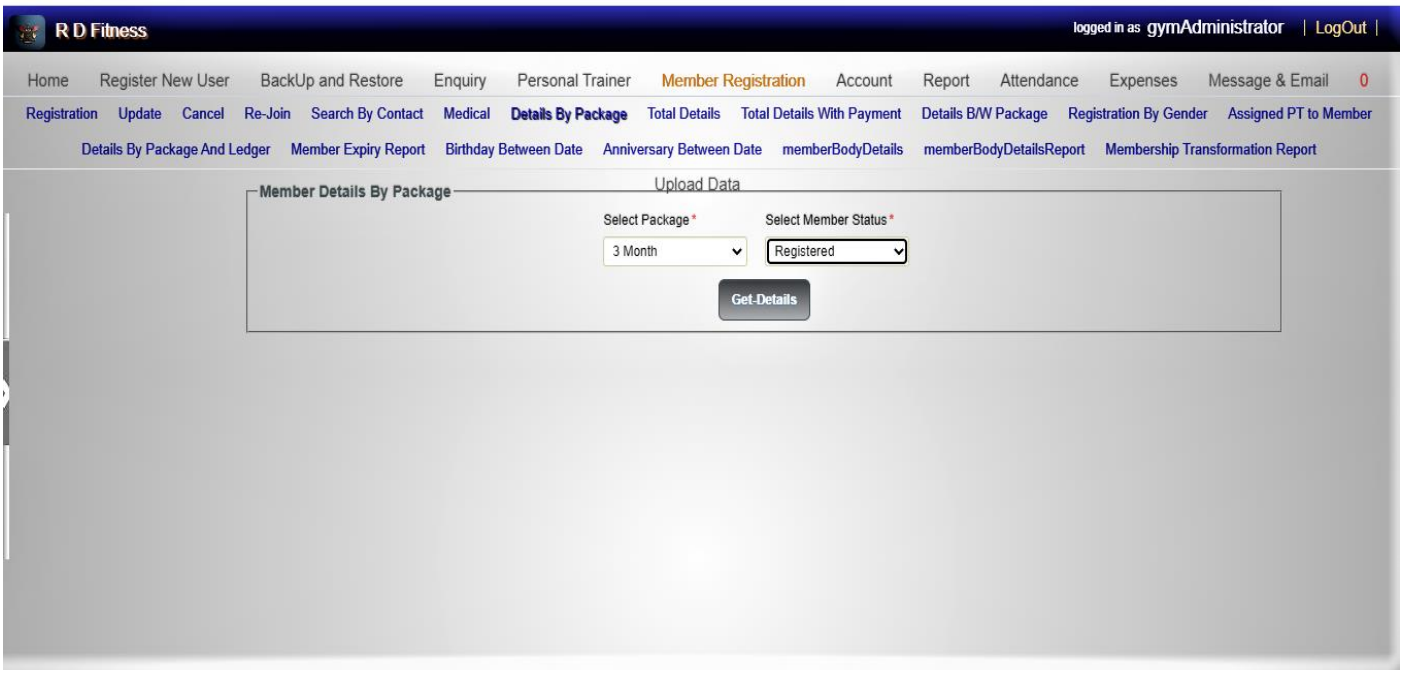
Search by Contact



Medical Information



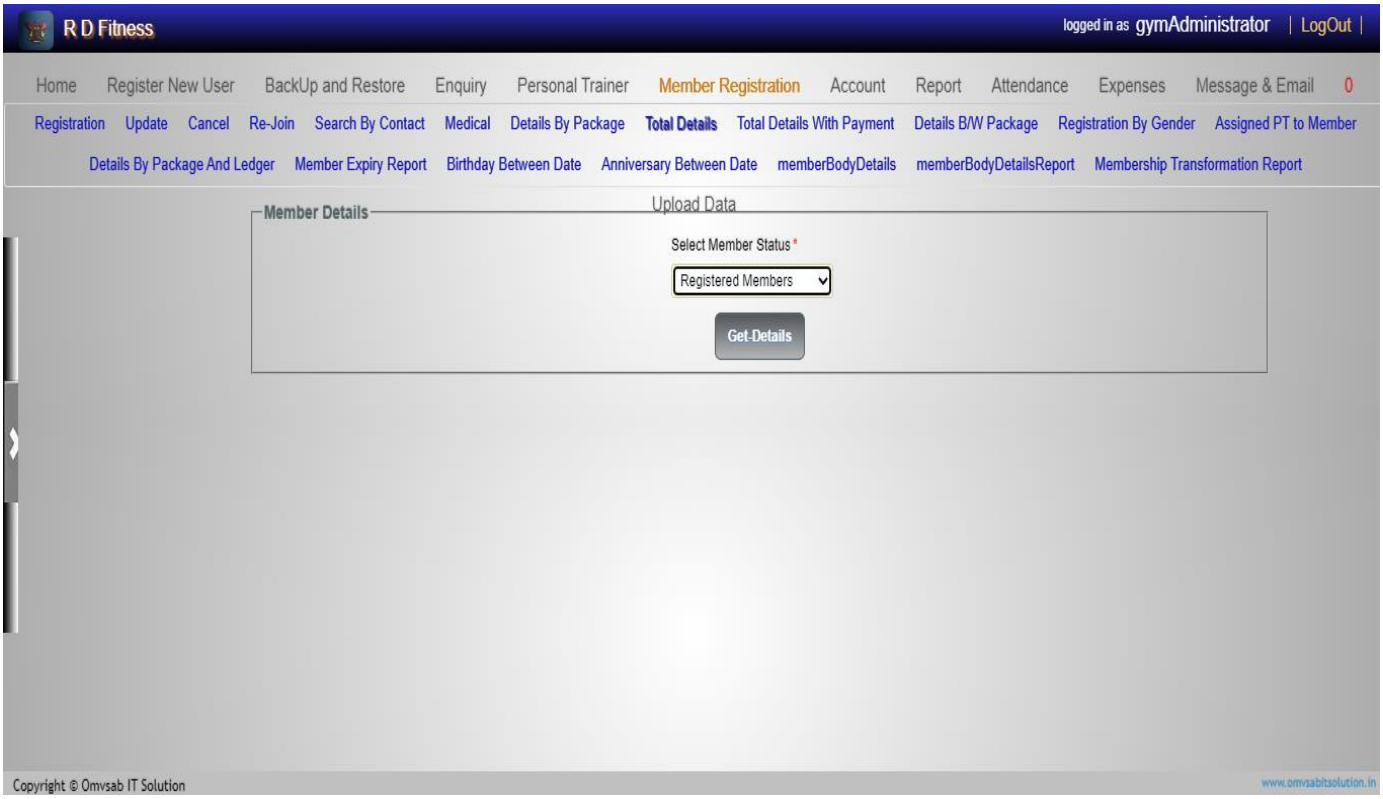
Member Detail by package



Registered Members Details By Package

Sr. No.	Member Id	Name	Contact No	Ledger Name	Package	Start Date	End Date
1	M2	KIRAN ABASAHEB SHINDE	8605307056	Gym	1 Month	01/05/2022	31/05/2022

Total Details

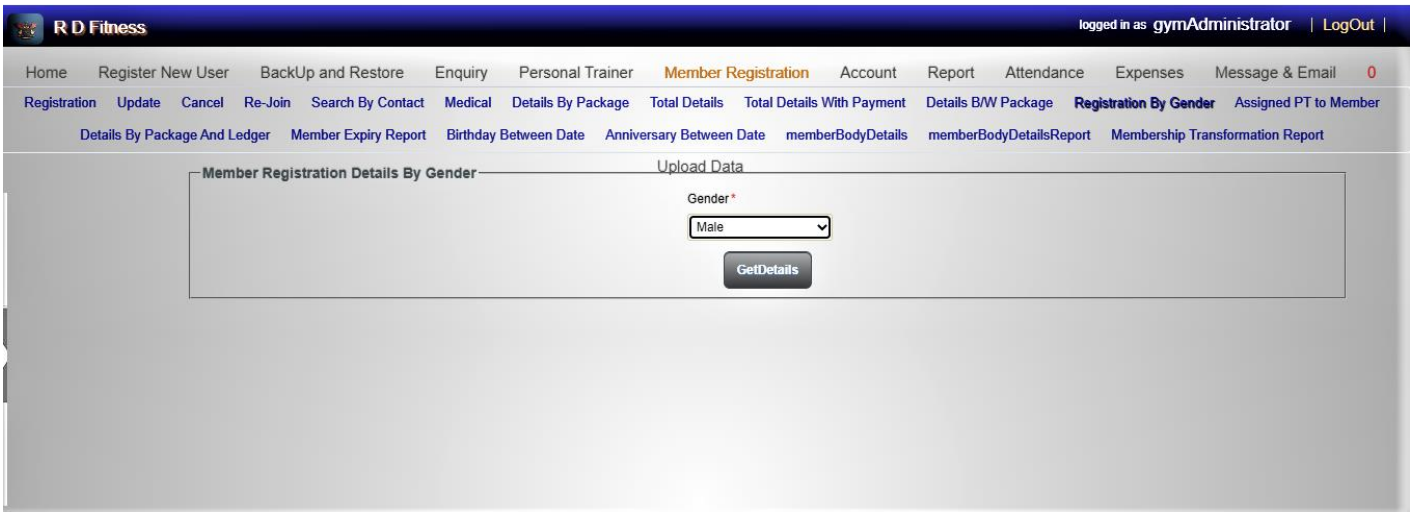


Member Details

Total Members Details

Sr No.	Member Photo	MemberId	Full Name	Status	Contact No	Adhar/Pan no	Gender	Start Date	End Date
1		M2	KIRAN ABASAHEB SHINDE	registered	8605307056	476568838795	Male	01/05/2022	31/05/2022

Registration by gender

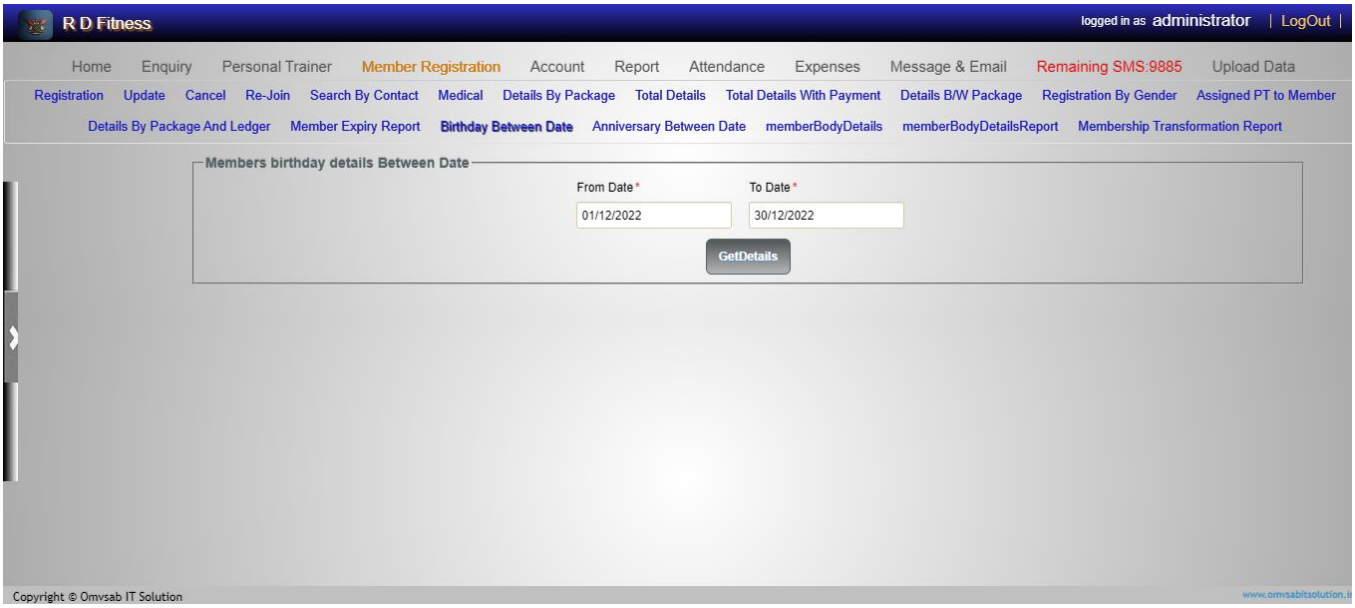


Member Registration Details By Gender

Gender : Male

Sr No.	MemberId	Full Name	Contact No	Alternate No	Start Date	End Date
1	M2	KIRAN ABASAHEB SHINDE	8605307056	476568838795	01/05/2022	31/05/2022

Birthday b/w Date



Members Birthday Details Between Date

From Date : 01/12/2022 To Date : 25/12/2022

Sr No.	Member Id	Member Name	Gender	Date Of Birth	Contact No
1	2	KIRAN ABASAHEB SHINDE	Male	1998-12-04	8605307056
2	4	GANESH BANSODE P	Male	1998-12-04	8654246799

Drawbacks & Limitations

7.1Drawbacks:

Major efforts have been taken to complete this system but still it has some drawbacks. The main drawbacks of the system are –

- Help facility and information about the system would be insufficient.
- Computer being an electronic machine its feature are always incompatible to human being.
- The System is not fully automated system.

7.2 Limitations:

System has following limitations –

- The backend technology if changed at some later times may consume much time to get implemented.
- Parallel implementation cannot be rendered at a time.
- System is not customizable to its look and feel.
- User needs some sorts of training before using the system.
- User should be able to understand all the technical terms associated with the system before handling it.

Future Enhancement

- We can develop android app as well for it.
- We can develop user friendly application desktop

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