

## CHAPTER 1

### INTRODUCTION

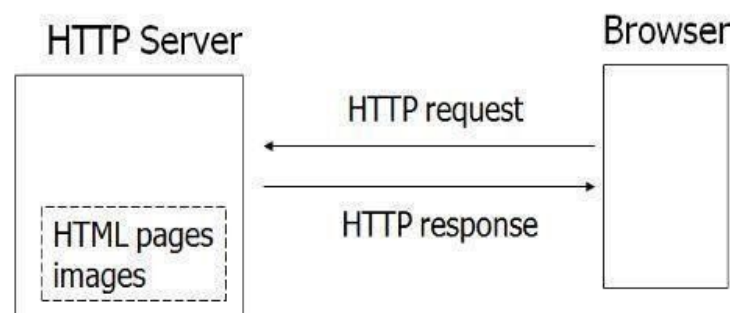
The term web application refers to a software system that provides a user interface through a web browser. Examples of web applications include blogs, online shopping, search engines, etc.

Web applications can be simple, consisting of only static web pages or they can be dynamic and interactive. Static web pages are stored in the file system of web server usually displays the same information to all visitors. Whereas dynamic pages are constructed by a program that produces the HTML. This type of web application provide individual information to the user and let them personalize the content according to their preferences.

#### 1.1 How the static web page work?

We already know that to open a web page we enter URL or click on link and web browser displays web page that we request. Let's discuss the steps that happen behind the scene.

- The user enters a URL in the browser.
- The browser sends a request to the web server over the internet.
- Web Server examines the request and based on the request server finds the requested page already stored in its local drive.
- Web Server sends the response to the web client(browser).
- Browser gets the HTML and renders it into a display for the user.

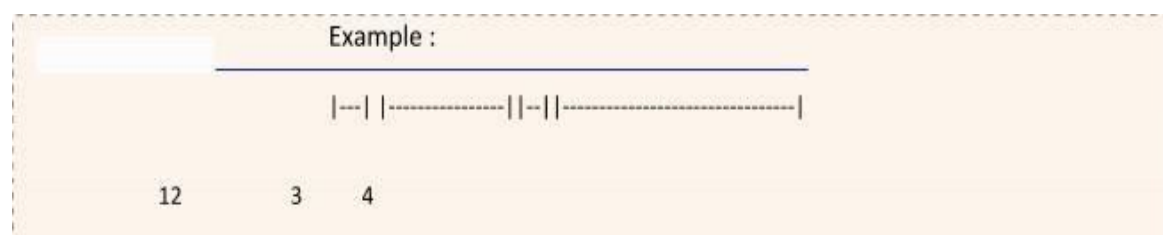


**Figure**

**1.1: Static Web page**

#### 1.1.1 URL (Uniform Resource Locator)

You have undoubtedly used URLs to access HTML pages from the Web. An http URL may be broken down as shown below:



The first part, http, is the protocol name. It is followed by a colon (:) and two slash characters (//).

The second part is the hostname of the computer on which the document resides.

The third part, which is optional, is the port number. Internet hosts have a certain number of ports. HTTP usually runs on port 80, but this is not necessary. If it is running on port 80 in the machine you named in the hostname part, then you don't need to specify a port number. If it is running on a different port, a colon (:) followed by the port number is required to point to that port.

The fourth part is the path to the document you are requesting. The path is a set of characters separated by slashes (/).

### 1.1.2 Create Web Page using HTML

With HTML, you can create your own web page. HTML is the core technology in which all pages are written. HTML use markup tags to describe web pages. You can use notepad to type HTML code. Here is an example code.

```
<html>
<head>
  <title>My Web page title </title>
</head>
<body>
  <h1>My First Heading</h1>
  <p>My first paragraph</p>
</body>
</html>
```

**Figure 1.2:** Code Snippet

Save this file using .html extension. When you open this file in a browser, it displays as web page. The browser does not display Html tag (Keywords surrounded by angle brackets) but use the tags to interpret the content of the page

In previous code example, The text between <html> and </html> describes the Web page. The text between <body> and </body> is the visible page content. The text between <h1> and </h1> is displayed as a heading. The text between <p> and </p> is displayed as paragraph.  
Output will look like this:



**Figure 1.3:** Code Snippet Output

The following is an HTML Quick List:

## Heading Element

```
<h1></h1>
<h2></h2>
<h3></h3>
<h4></h4>
<h5></h5>
<h6></h6>
```

## Text Element

```
<p></p> paragraph
<br> line break
<hr> horizontal rule
```

## Physical Style

```
<b></b> bold
<i></i> italic
```

## Unordered (bullet) List

```
<ul>
  <li>First Item</li>
  <li>Second Item</li>
</ul>
```

## Ordered (Number) List

```
<ol>
  <li>First Item</li>
  <li>Second Item</li>
</ol>
```

## Tables

```
<table border="1">
  <tr>
    <th>some heading</th>
    <th>some heading</th>
  </tr>
  <tr>
    <td>some text</td>
    <td>some text</td>
  </tr>
</table>
```

## Forms

```
<form action="" method="post">
  <p>Name:</p>
  <p><input type="text" name="name" value="Your name"></p>
```

```

<p>Comments: </p>
<p><textarea name="comments" rows="5" cols="20">Your comments
</textarea></p> <p>Gender:</p>
<p><input type="radio" name="gender" value="male"> Male</p>
<p><input type="radio" name="gender" value="female"> Female</p>
<p><input type="submit"></p>
</form>

```

## Image Element

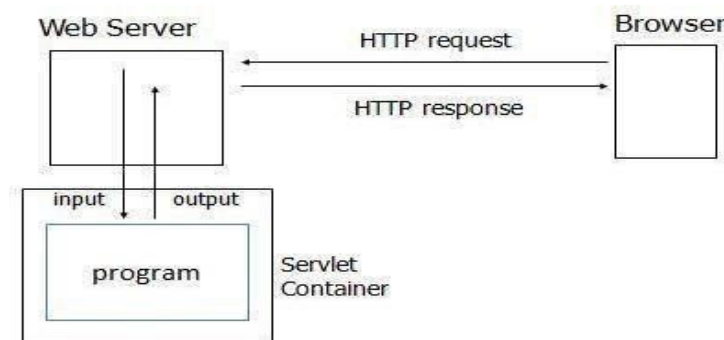
```
<img src ="" />
```

## Links

```
<a href ="http://www.examples.com/"> This is a link </a>
```

## 1.2 How the dynamic web page work?

Dynamic web content is the content that changes with every user request. This type of web application let the users personalize the content according to their preferences. To build such a powerful web app, you need Java technologies, like servlet, JS, and JQuery. Web Server is mostly designed to serve static HTML content.



**Figure 1.4:** Dynamic Webpage

## 1.3 Storage with respect to database

According to the principles of database systems, the data is stored in such a way that it acquires lot less space as the redundant data (duplicate data) has been removed before storage. Let's take a layman example to understand this- In a banking system, suppose a customer is having two accounts, one is saving account and another is salary account. Let's say bank stores saving account data at one place (these places are called tables we will learn them later) and salary account data at another place, in that case if the customer information such as customer name, address etc. are stored at both places then this is just a wastage of storage (redundancy/ duplication of data), to organize the data in a better way the information should be stored at one place and both the accounts should be linked to that information somehow. The same thing we achieve in DBMS.

**1.3.1 Fast Retrieval of data:** Along with storing the data in an optimized and systematic manner, it is also important that we retrieve the data quickly when needed. Database systems ensure that the data is retrieved as quickly as possible.

- The choice of a database product is often influenced by factors such as:
- the computing platform (i.e., hardware, operating system)
- the volume of data to be managed
- the number of transactions required per second
- existing applications or interfaces that an organization may have
- support for heterogeneous and/or distributed computing
- cost
- vendor support

### **1.3.2 Design and Modeling:**

The first task of a database designer is to produce a conceptual data model that reflects the structure of the information to be held in the database. A common approach to this is to develop an entity-relationship model, often with the aid of drawing tools. Another popular approach is the Unified Modeling Language.

A successful data model will accurately reflect the possible state of the external world being modeled: for example, if people can have more than one phone number, it will allow this information to be captured.

## **1.4 Objective**

Fitness is certainly a solo phenomenon; however, efficiency and consistency are increased ten-folds when it has a sense of community. The community provides us a sense of belonging which keeps us motivated to achieve personal fitness goals.

This soul reason brought us the idea of creating a community of people who share a common interest in physical fitness and mental health. We live in an era of absolute uncertainty. What we can promise ourselves is a healthy life. Just taking 30 min of our time out today to be fit is all it takes to build a strong and healthy tomorrow.

## **1.5 Problem Statement**

To build an online community, to collaborate with like-minded people and to create awareness about physical and mental health. There exists an immense lack of motivation and companionship for fitness, to overcome this there is a need for community which gives us the sense of belonging.

## **1.6 Scope of the report**

The essential framework of this report would be to elaborate the design of E.R-diagram, Schema Diagram and to display how the functionalities of the website works in order to achieve the most of it.

## CHAPTER 2

# SYSTEM AND SOFTWARE REQUIREMENTS AND SPECIFICATIONS

The program works on Desktop PC and is executed using a PHP 5 interface which interacts with a MySQL database running on localhost.

### 2.1 FUNCTIONAL REQUIREMENTS

A description of the facility or feature required. Functional requirements deal with what the system should do or provide for users. They include description of the required functions, outlines of associated reports or online queries, and details of data to be held in the system.

#### 2.1.1 Interface Requirements:

- Login interface (Admin & User)
- Comment feature
- Messaging feature
- UI friendly admin dashboard
- Fully dynamic & responsive website
- Searching posts with keyword

### 2.2 NON-FUNCTIONAL REQUIREMENTS:

Non-functional requirements define the overall qualities or attributes of the resulting system.

#### 2.2.1 Usability

Usability is the ease with which a user can use the website and get the most of it.

#### 2.2.2 Security

Security requirements are included in a system to ensure:

- A user has to login for messaging and commenting on a post.
- User passwords are encrypted and stored

#### 2.2.3 Reliability

Reliability is the ability of a system to perform its required functions under stated conditions for a specific period of time. Constraints on the run-time behavior of the system can be considered under two separate headings:

- Availability: is the system available for service when requested by end-users.
- Failure rate: how often does the system fail to deliver the service as expected by end- users.

## 2.3 SOFTWARE REQUIREMENTS

Programming language	:	PHP, MYSQL
Operating system	:	ANY OS (Recommended: Windows8, Windows XP, Windows 10)
Application required	:	Standalone desktop application & Xampp
Coding language	:	PHP, HTML, CSS, Javascript.

## 2.4 HARDWARE REQUIREMENTS

CPU	:	Pentium IV 2.4 GHz or Above
Memory (Primary)	:	512 MB, 1 GB or Above
Hard Disk	:	40 GB or above
Monitor	:	15 VGA color

## CHAPTER 3

# SYSTEM DESIGN

This chapter of the report describes the structure of the project and the Use Case diagram.

### 3.1 Server Architecture

A server is a type of computer or device on a network that manages network resources. Servers are often dedicated, meaning that they perform no other tasks besides their server tasks. On multiprocessing operating systems, however, a single computer can execute several programs at once.



**Fig 3.1:** Web server architecture

The server in our case the server is a firebase web server. A web server is server software, or hardware dedicated to running such software, that can satisfy World Wide Web client requests. A web server can, in general, contain one or more websites. A web server processes incoming network requests over HTTP and several other related protocols.

### 3.2 ER Diagram with relationships and cardinality ratio

An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. An entity is a piece of data-an object or concept about which data is stored.

The cardinality or fundamental principle of one data aspect with respect to another is a critical feature. The relationship of one to the other must be precise and exact between each other in order to explain how each aspect links together. In simple words Cardinality is a way to define the relationship between two entities.

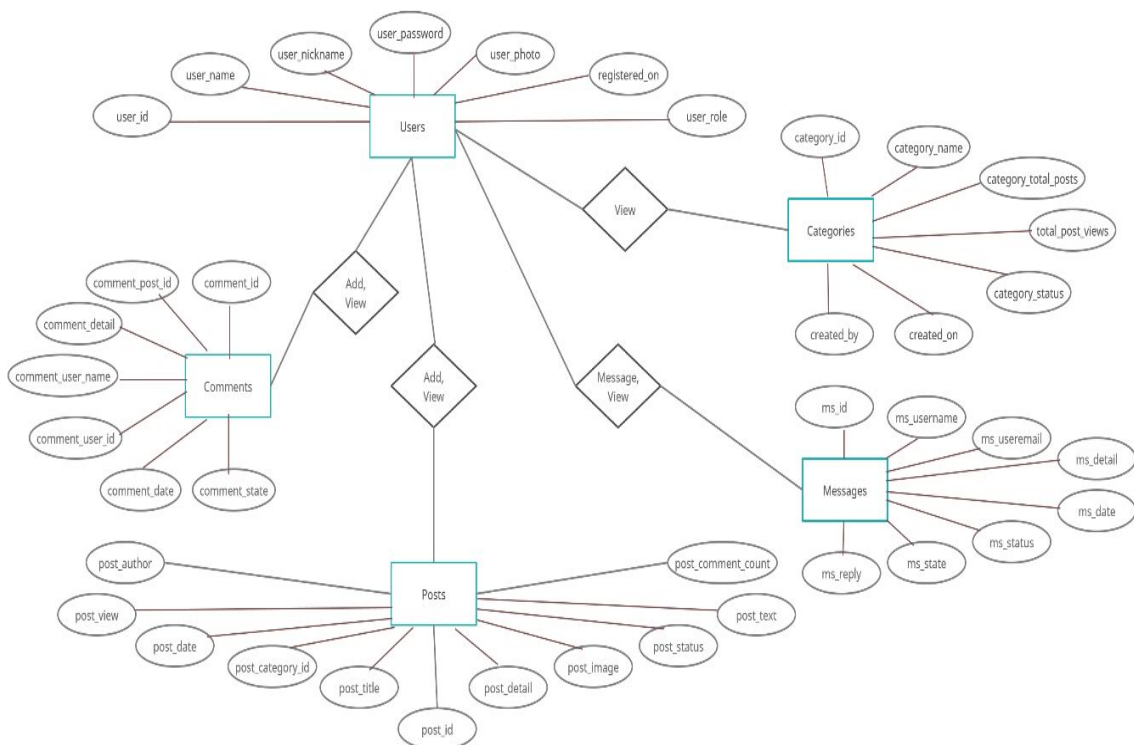
The following are the notations of the ER diagram:



Symbol	Meaning
	ENTITY TYPE
	WEAK ENTITY TYPE
	RELATIONSHIP TYPE
	IDENTIFYING RELATIONSHIP TYPE
	ATTRIBUTE
	KEY ATTRIBUTE
	MULTIVALUED ATTRIBUTE
	COMPOSITE ATTRIBUTE
	DERIVED ATTRIBUTE
	TOTAL PARTICIPATION OF $E_2$ IN $R$
	CARDINALITY RATIO 1:N FOR $E_1:E_2$ IN $R$
	STRUCTURAL CONSTRAINT (min, max) ON PARTICIPATION OF $E$ IN $R$

**Fig 3.1: Notations for ER Diagrams**

The ER diagram below shows the relationship between the many tables that exist in the database for the functioning of WinWalk website.

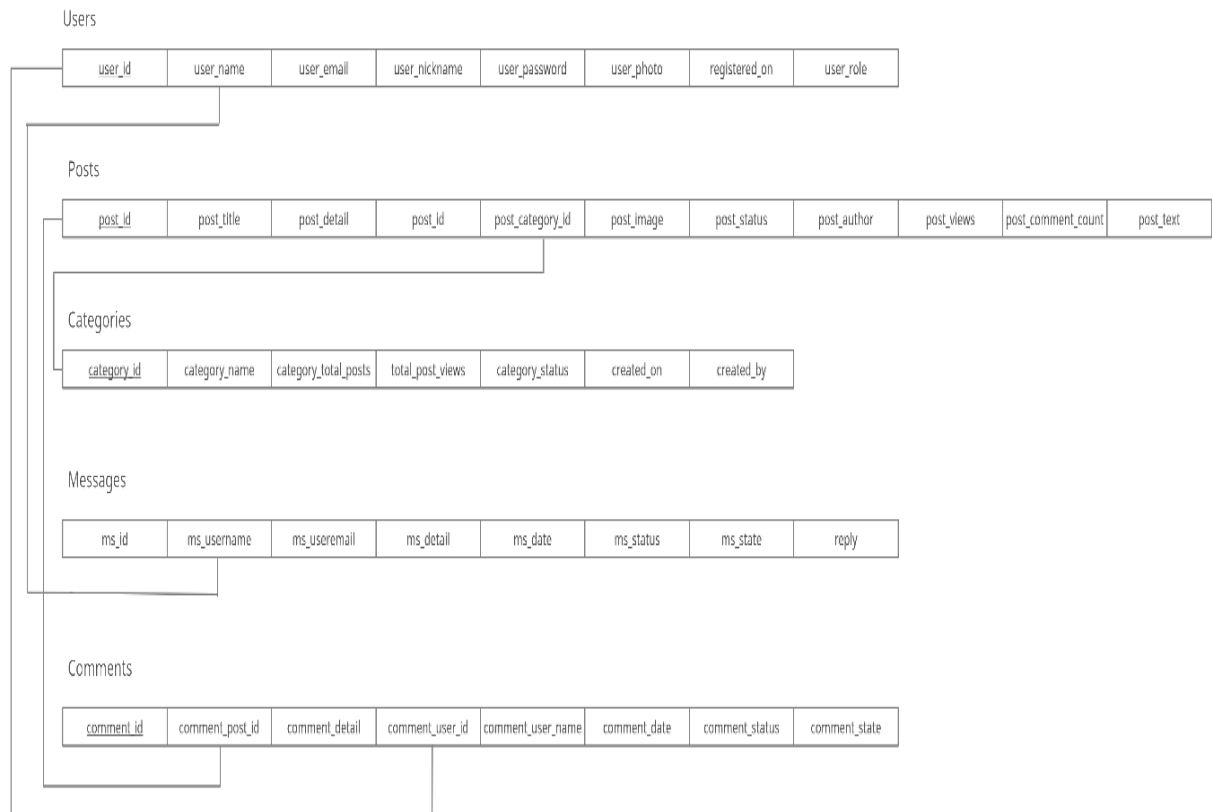


**Fig 3.2: ER Diagram of win-walk System**

### 3.3 Schema Diagram

In any data model it is important to distinguish between the description of the database and the database itself. The description of a database is called the database schema, which is specified during database design and is not expected to change frequently.

A displayed schema is called a schema diagram. A schema diagram displays only some aspects of a schema, such as the names of record types and data items, and some types of constraints.



**Fig 3.3: Schema Diagram**

## **CHAPTER: 4**

# **IMPLEMENTATIONS**

This chapter of the report describes the Functions, packages and modules used in the project:

### **4.1 Libraries and Frameworks**

#### **PHP**

PHP is Hypertext Preprocessor is a general-purpose programming language originally designed for web development.

#### **HTML**

Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript.

#### **CSS**

Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

Functional Modules

#### **JavaScript**

JavaScript, often abbreviated as JS, is a high-level, interpreted scripting language that conforms to the ECMAScript specification. JavaScript has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions.

#### **Bootstrap**

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

## 4.2 Functional Modules

The functional modules included in the project are listed below:

### **Insert Module:**

This module provides the functionality of collecting the required data from the designed interface and transmitting it to the appropriate table present in the database designed for this project. If the provided data does not satisfy the given constraints, it must refrain from storing it into the database.

### **Update Module:**

This module again has the functionality of collecting the data from the designed interface, but it updates the already existing tuple that matches the provided primary key of the tuple to be updated, by replacing the existing attribute values with the newly collected data. Again, if the newly provided data does not satisfy the given constraints, it must refrain from updating the corresponding tuple.

### **Delete Module:**

The delete counterpart is loaded with the ability to delete a single or multiple records from the table. It searches for the tuple, in the query specified table, based on the provided value for an attribute. Admin can delete in the interface, based on which delete module searches for the record corresponding to that provided attribute value and deletes the record.

### **Retrieve Module:**

The retrieve module has a basic functionality of accessing the entire specified table from the database and displays it.

### **Trigger Module:**

Trigger in the database is a set of statements that are executed after an event occurs on the specified table. This is useful for logs wherein every change in database can be logged which helps keep a track of all changes/transactions on the database.

## CHAPTER 5

# SOFTWARE TESTING

Software testing is an investigation conducted to provide stakeholders with information about the quality of the software product or service under test. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. Test techniques include the process of executing a program or application with the intent of finding software bugs, and verifying that the software product is fit for use.

### 5.1 Types of testing

#### 5.1.1 Functional Testing

- Unit testing
- Integration testing
- System testing

#### 5.1.2 Non-Functional Testing

- Performance Testing
- Compatibility Testing
- Reliability Testing

### 5.2 Test Cases

#### 5.2.1 Admin Module

**Table 5.1 :** Test cases for Admin Interface

Sl. No	Functionality	Comments	Remarks
1.	Login	Login interface for Admins	Pass
2.	Dashboard functionalities	All functions in dashboard are tested	Pass

**5.2.2 User Module****Table 5.2 : Test cases for User Interface**

<b>Sl. No</b>	<b>Functionality</b>	<b>Comments</b>	<b>Remarks</b>
1.	Login	Login interface for users	Pass
2.	Sign Up	Sign Up interface for users	Pass
3.	Password Reset	Password Reset Interface for user	Pass
4.	Commenting	Interface for posting comments for admin post	Pass
5.	Messaging	Interface to message admin personally	Pass

## CHAPTER 6

### CONCLUSION

The website provides a rich user interface to allow the users to have a great user experience. For implementing this system, PHP, HTML, CSS, JavaScript and MySql are used.

The system comprises of following features:

- User signup/ login.
- Commenting, messaging feature.
- Showing the posts by recent posts, most viewed and by categories.

### SCOPE OF ENHANCEMENT

There are also few features which can be integrated with the system to make it more flexible.

Below list shows the future points to be considered:

- Implementing an option to share the posts on any social media.
- Making it more versatile, so that registered user can also share their posts.
- Notification for user on post posted by admin.

## REFERENCES

- [1] [www.w3schools.com](http://www.w3schools.com)
- [2] [developer.mozilla.org](http://developer.mozilla.org)
- [3] [www.stackoverflow.com](http://www.stackoverflow.com)
- [4] [www.coursera.org](http://www.coursera.org)
- [5] [www.youtube.com](http://www.youtube.com)
- [6] [www.wikipedia.org](http://www.wikipedia.org)
- [7] [www.udemy.com](http://www.udemy.com)



# APPENDIX A: SNAPSHOTS

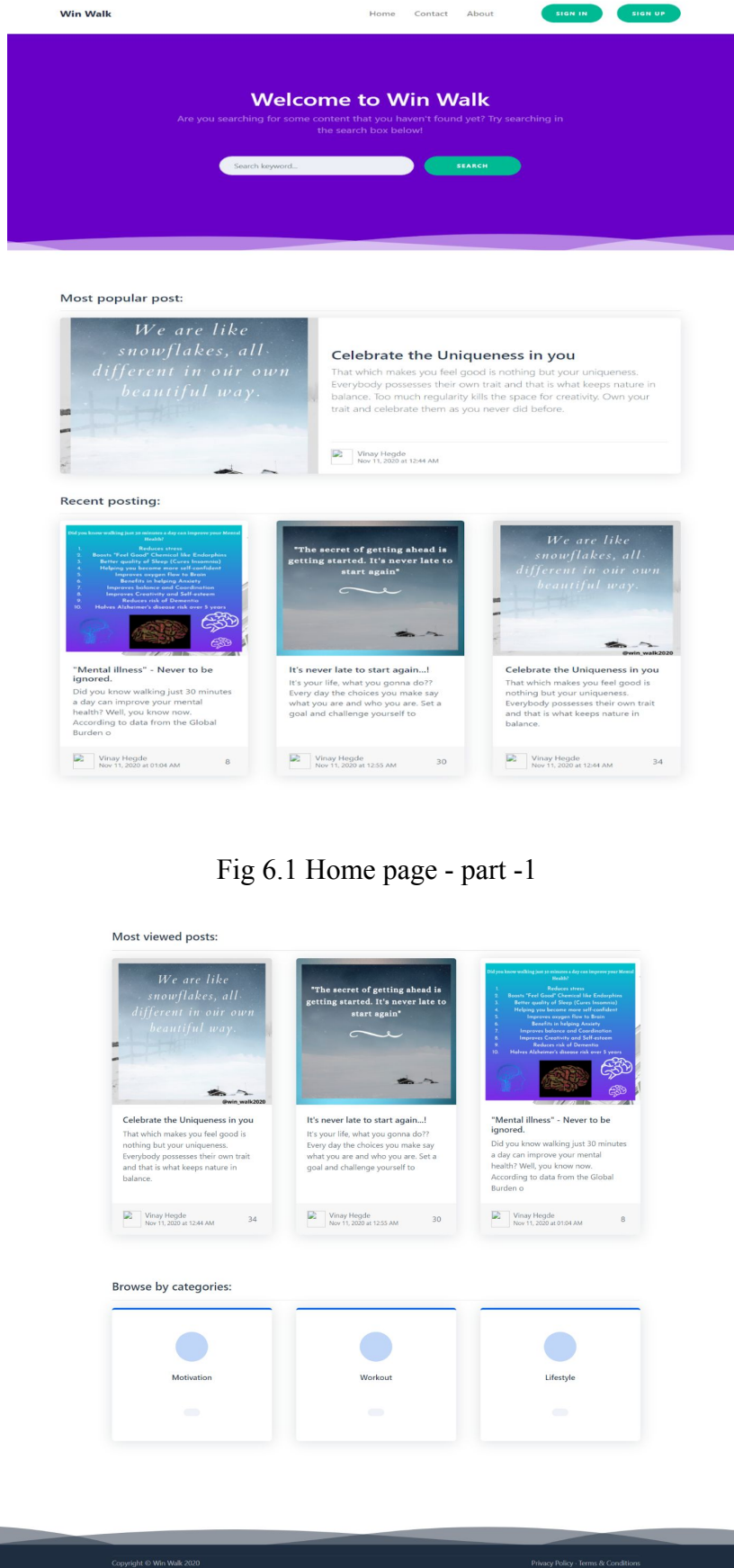
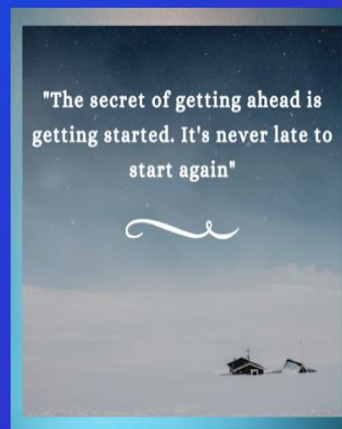


Fig 6.2 Home page - part 2

## It's never late to start again...!



Category: Motivation, Posted by: Vinay Hegde

### It's never late to start again...!

It's your life, what you gonna do?? Every day the choices you make say what you are and who you are. Set a goal and challenge yourself to reach your goal. As it sounds legit, It's never late to start again. Start your journey today and share your experience with us. Together we can make a difference...!

#### Comments

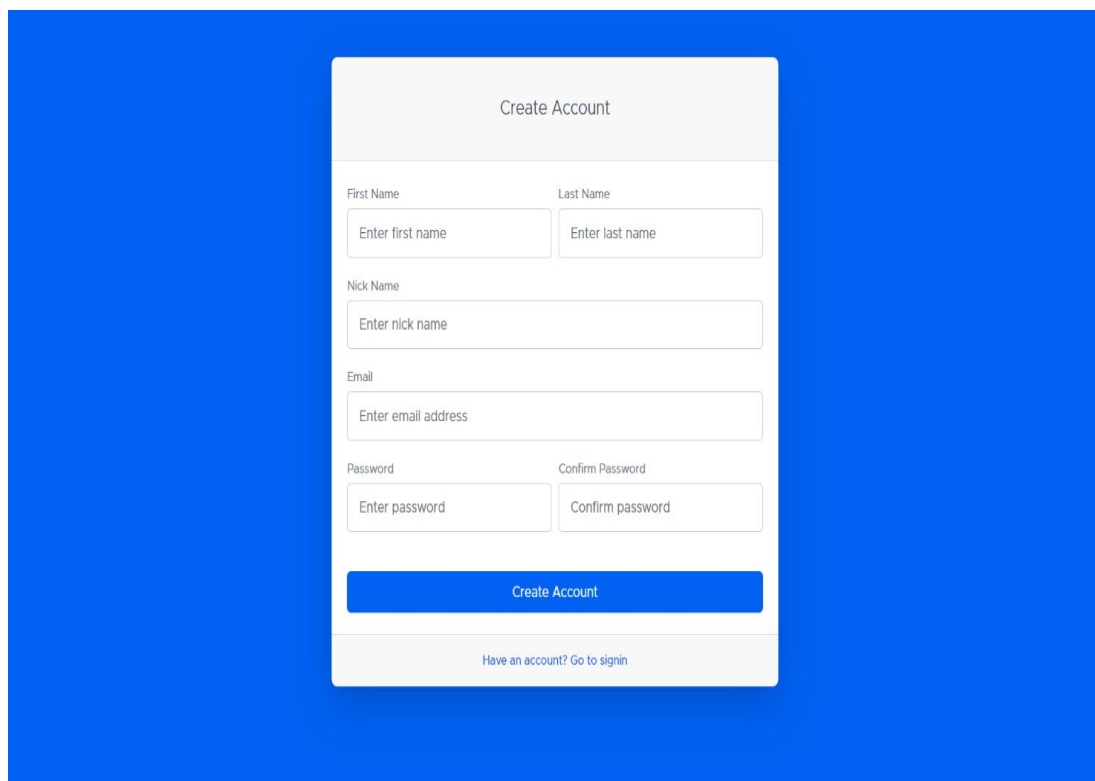
No comments

[Add Comment](#)

Type here...

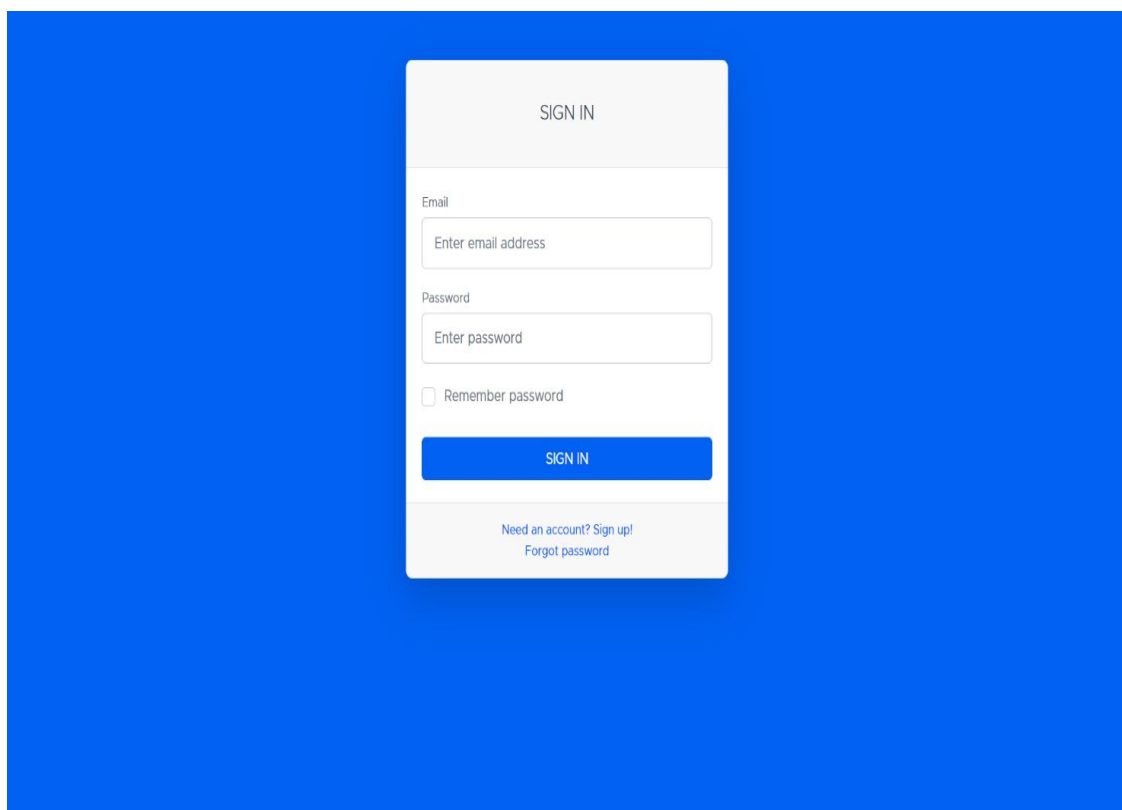
[Post Comment](#)

Fig 6.3 Post page



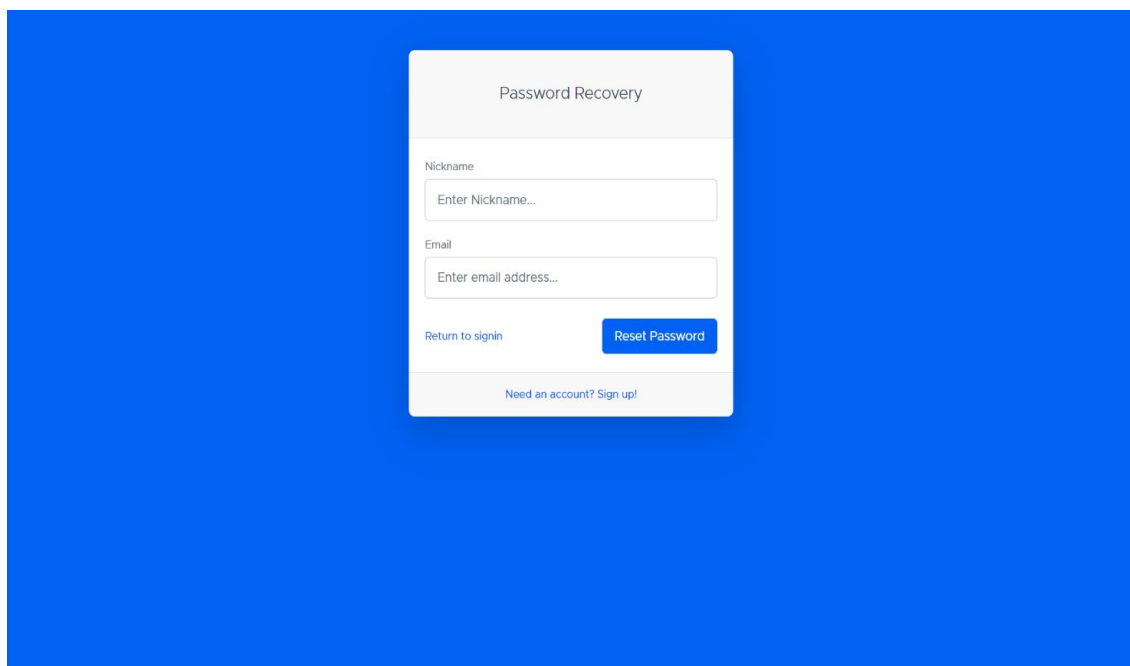
The image shows a 'Create Account' form on a blue background. The form is a white card with a light gray header containing the title 'Create Account'. Below the header, there are input fields for 'First Name' and 'Last Name', each with a placeholder 'Enter first name' and 'Enter last name' respectively. Below these is a 'Nick Name' field with a placeholder 'Enter nick name'. Then there is an 'Email' field with a placeholder 'Enter email address'. Below the email field are two side-by-side password fields: 'Password' with placeholder 'Enter password' and 'Confirm Password' with placeholder 'Confirm password'. At the bottom of the form is a blue button labeled 'Create Account'. Below the button is a link that says 'Have an account? Go to signin'.

Fig 6.4 User Sign-up page



The image shows a 'SIGN IN' form on a blue background. The form is a white card with a light gray header containing the title 'SIGN IN'. Below the header, there is an 'Email' field with a placeholder 'Enter email address'. Below the email field is a 'Password' field with a placeholder 'Enter password'. Below the password field is a checkbox labeled 'Remember password'. At the bottom of the form is a blue button labeled 'SIGN IN'. Below the button are two links: 'Need an account? Sign up!' and 'Forgot password'.

Fig 6.5 User Sign-in page



The image shows a 'Password Recovery' form centered on a solid blue background. The form is a white card with a light gray header containing the title 'Password Recovery'. Below the header, there are two input fields: 'Nickname' with the placeholder text 'Enter Nickname...' and 'Email' with the placeholder text 'Enter email address...'. Below these fields are two buttons: a blue button labeled 'Return to signin' and a blue button labeled 'Reset Password'. At the bottom of the form, there is a link that says 'Need an account? Sign up!'.

Fig 6.5 Forgot password page

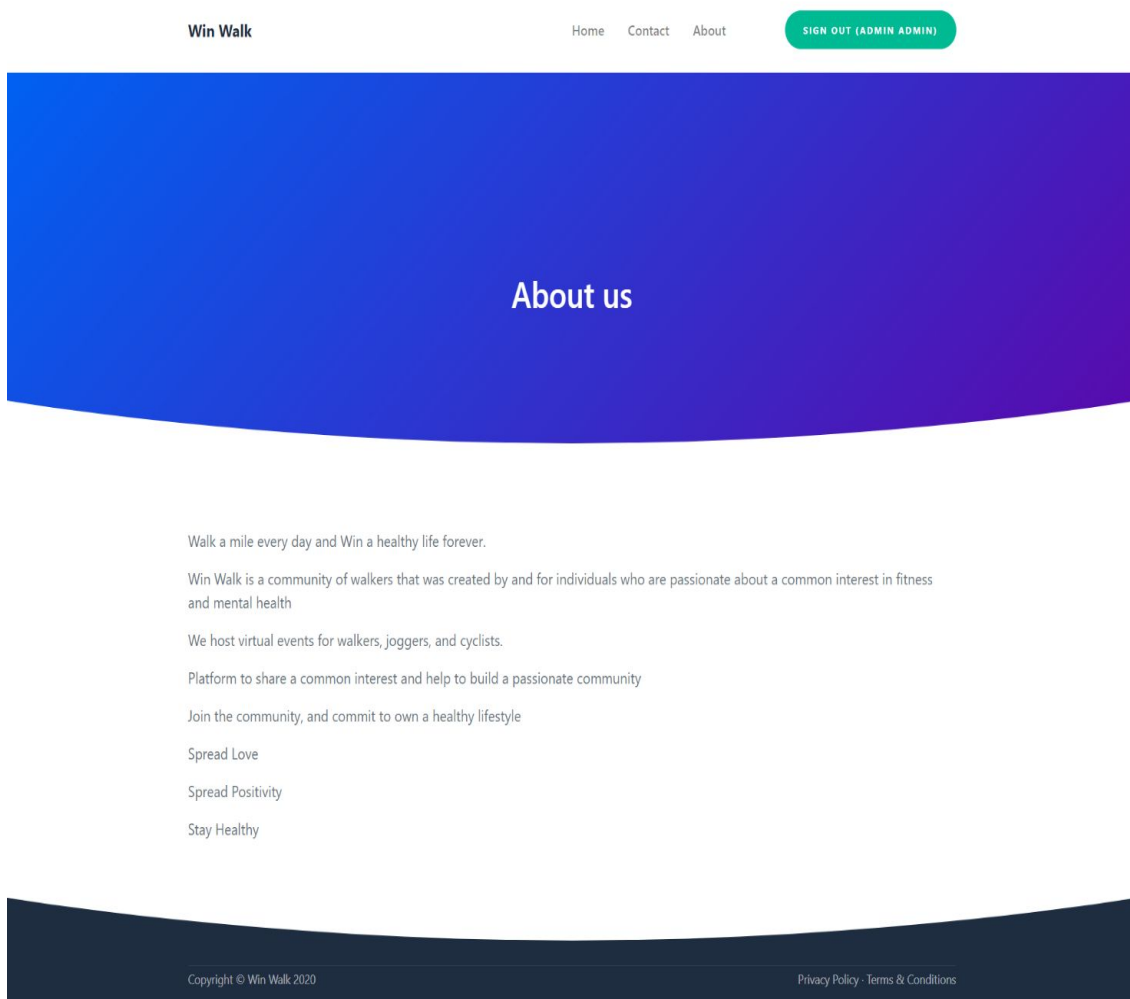


Fig 6.6 About us page

**Win Walk**[Home](#)[Contact](#)[About](#)[SIGN OUT \(ADMIN ADMIN\)](#)

## Contact Us

We will get back to you!

Full name

Email

admin admin

admin@gmail.com

Message

Enter your message...

SUBMIT REQUEST

Your messages:

Answers:

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Fig 6.7 Contact us page

**Admin Panel**

DashboardPostsCategoriesUsersCommentsMessagesProfile

## Dashboard




All Posts3View Details

Comments1View Details

Categories3View Details

Users7View Details

**Most Popular Posts:**

ID	Post Title	Post Category	Total Views	Photo	Author	Posted On
8	Celebrate the Uniqueness in you	Motivation	35		Vinay Hegde	Nov 11, 2020 at 12:44 AM
9	It's never late to start again..!	Motivation	31		Vinay Hegde	Nov 11, 2020 at 12:55 AM
10	"Mental illness" - Never to be ignored.	Lifestyle	8		Vinay Hegde	Nov 11, 2020 at 01:04 AM

Logged in as:  
admin admin

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Fig 6.8 Backend Dashboard Page










**Admin Panel**

- Dashboard
- Posts
  - All Posts**
  - Add New Post
- Categories
- Users
- Comments
- Messages
- Profile

Logged in as: **admin admin**

## All Posts

All Posts

ID	Title	Status	Category	Author	Image	Date	Details	Comments	Views	Edit	Delete
8	Celebrate the Uniqueness in you	Published	Motivation	Vinay Hegde		Nov 11, 2020 at 12:44 AM	That which	0	35		
9	It's never late to start again..!	Published	Motivation	Vinay Hegde		Nov 11, 2020 at 12:55 AM	It's your	0	31		
10	"Mental illness" - Never to be ignored.	Published	Lifestyle	Vinay Hegde		Nov 11, 2020 at 01:04 AM	Did you kn	0	8		
ID	Title	Status	Category	Author	Image	Date	Details	Comments	Views	Edit	Delete

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Fig 6.9 All Posts Page

**Admin Panel**

- Dashboard
- Posts
  - All Posts
  - Add New Post**
- Categories
- Users
- Comments
- Messages
- Profile

Logged in as: **admin admin**

## Try Creating New Post

Create New Post

Post Title:

Post Status:

Select Category:

Choose photo:

No file chosen

Post Details:

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Fig 6.10 Add New Post Page

Admin Panel

- Dashboard
- Posts
- Categories
- Users**
- Comments
- Messages
- Profile

Logged in as: admin admin

## All Users

ID	User Name	User Email	Photo	Registered on	Role	Edit	Delete
9	Vinay Hegde	hegdevinay96@gmail.com		Nov 11, 2020 at 06:18 PM	admin		
11	admin admin	admin@gmail.com		Nov 11, 2020 at 06:22 PM	admin		
12	Yamini Acharya	yaminiacharya04@gmail.com		Nov 11, 2020 at 09:30 PM	Subscriber		
13	Siddharth M V	siddharth.bhat1996@gmail.com		Nov 11, 2020 at 03:16 PM	Subscriber		
14	Sirisha DG	sirishagopal2924@gmail.com		Nov 11, 2020 at 08:54 PM	Subscriber		
15	Chethan Kumar M	Chethanmanjunath555@gmail.com		Dec 12, 2020 at 07:34 PM	Subscriber		
17	Rakesh Mariyaplar	rakeshm723@gmail.com		Jan 1, 2021 at 09:56 PM	Subscriber		

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Fig 6.11 All Users Page

Admin Panel

- Dashboard
- Posts
- Categories
- Users**
- Comments
- Messages
- Profile

Logged in as: admin admin

## Create New User

Create New User

User Name:

Nick Name:

User Email:

User Password:

User Role:  
 Admin

Choose photo:  
 No file chosen

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Fig 6.12 Add New User

Admin Panel

Dashboard  
Posts  
Categories  
**Users**  
Comments  
Messages  
Profile

Logged in as:  
admin admin

## Updating User

Edit User

User Name:  
Vinay Hegde

User Nick Name:  
Vins

User Email:  
hegdevinay96@gmail.com

Role:  
Admin

Choose photo:  
Choose File No file chosen

Update now!

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Fig 6.13 Update User

Admin Panel

Dashboard  
Posts  
**Categories**  
Users  
Comments  
Messages  
Profile

Logged in as:  
admin admin

## Categories

All Categories

ID	Category Name	Total Posts	Created By	Status	Edit	Delete
1	Motivation	2	Vinay Hegde	Published		
2	Workout	2	Vinay Hegde	Published		
3	Lifestyle	2	Vinay Hegde	Published		

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Fig 6.14 Categories



Admin Panel

Dashboard Posts Categories Users **Comments** Messages Profile

## All Comments

ID	User Name	User Email	In response to	Details	Date	Status	Approve	Unapprove	Delete
6	Rakesh Mariyaplar	rakeshmr723@gmail.com	"Mental illness" - Never to be ignored.	Good Post	Jan 1, 2021 at 10:57 AM	approved			

Logged in as: admin admin

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Fig 6.15 All Posts Comments

Admin Panel

Dashboard Posts Categories Users Comments **Messages** Profile

## Messages

ID	User Name	User Email	Message	Date	Status	Response	Delete
5	Rakesh Mariyaplar	rakeshmr723@gmail.com	U are doing a great	Jan 1, 2021 at 10:58 AM	Processed		

Logged in as: admin admin

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Fig 6.16 All Messages