MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Final Year Internship Report On

WEB DEVELOPMENT INTERNSHIP

Submitted By:

VIKAS VIMAL

0901CS181118

Faculty Mentor:

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Asst. Professor

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR - 474005 (MP)

MAY-JUNE 2022

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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WEB DEVELOPMENT INTERNSHIP

A final year internship report submitted in partial fulfillment of the requirement for the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

Submitted by:

Vikas Vimal

(0901CS181118)

Internship Faculty Mentor:
Mr. Devanshu Gupta, Deqode

Submitted to:

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR - 474005 (MP)

MAY-JUNE 2022

deqode.

Date - 25th May 2022

Certificate of Internship

This is to certify that **Vikas Vimal** is appointed for the Internship from **28th February 2022** as a **Solution Engineer Trainee** at Deqode.

You are adaptive, sincere, and hardworking towards the duties assigned to you during the Internship.

We wish you a rewarding future ahead.

Yours sincerely

Mohini Bansal

Head – HR

For & on behalf of Deqode

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CERTIFICATE

This is certified that **Vikas Vimal (CSE - 0901CS18118)** has submitted the Internship report titled **Web Developer Intern** of the work he has done under the mentorship of **Prof.Amit Kumar Manjhvar**, in partial fulfillment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

26/05/22

Prof. Amit Kumar Manjhvar
Faculty Mentor
Assistant Professor
Computer Science and Engineering

Dr. Manish Dixit
Professor and Head,
Computer Science and Engineering

Dr. Manish Dixit
Professor & HOD
Department of CSE
M.I.T.S. Gwalior

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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DECLARATION

I hereby declare that the work being presented in this Internship report, for the partial fulfillment of requirement for the award of the degree of Bachelor of Technology in CSE at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentor ship of **Prof. Amit Kumar Manjhavar**, **Professor**, and Department of CSE.

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Vikas Vimal
0901CS181118
IV Year,
Computer Science and Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

ACKNOWLEDGMENT

The full semester internship has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** to allow me to continue my disciplinary/interdisciplinary internship as a curriculum requirement, under the provisions of the Flexible Curriculum Scheme (based on the AICTE Model Curriculum 2018), approved by the Academic Council of the institute. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering, for allowing** me to explore this internship. I humbly thank **Dr. Manish Dixit**, Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Prof. Amit Kumar Manjhavar**, Professor, Department of Computer Science and Engineering, for his continued support and close mentoring throughout the internship. I am also very thankful to the faculty and staff of the department.

Vikas Vimal

0901CS181062

IV Year,

Computer Science and Engineering

ABSTRACT

The purpose of Mattersuite litigation System is to automate the existing manual system by the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their records data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with.

Mattersuite as described below, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help Court in better utilization of records. The court can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

The aim is to automate its existing manual system by the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. Basically the project describes how to manage for good performance and better services for the clients.

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INTERNSHIP OVERVIEW

Introduction

I am working in a backend team and we are developing a project related to layers name as MatterSuite is a litigation app which helps layers to automate their law practice. MatterSuite complete matter management software enhances your firm's efficiency by allowing you to easily manage your legal cases with tools to master and organize case facts, hearings, motions, evidence, discovery, and calendaring for your law firm MatterSuite's litigation software brings together a comprehensive suite of tools that you need to manage litigations.

Objectives

Complete case details under one roof

Manage complete case details like court hearings, case description, oppositions, legal discovery everything under one head. Create new cases and work on the same with the team with the help of effective communication tools. Law practice management is now made simpler by getting all the essential tools to solve a case under one head.

Manage your evidence

Attorneys are buried in paperwork as they manage and organize heaps of documents. Amidst this heap, there is a high possibility of losing vital evidence. Quit worrying about losing important documents & organize and store numerous documents in one place with Matter Suite law firm software.

Improve and manage legal workflow

Attorneys have hectic workloads and often end up multitasking. Using case management software, manage your legal workflow by properly defining the case stages, and have greater insights into case timelines. It will also reduce risks and protect your company against the repercussions of litigation.

Never miss a hearing

Attorneys are all about busy schedules. Hence, managing time is a crucial task for legal practitioners as they bill their time. Using MatterSuite matter management software you can easily log in to important events, tasks, hearing dates, trial dates. Reduce no-shows by setting reminders beforehand.

Scope

Build stronger cases by tracking and managing matters and evidence intelligently.

TECHNOLOGIES & DEVELOPMENT TOOLS USED

1. HTML

The Hyper Text Markup Language or HTML 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 (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, and other items. HTML elements are delineated by tags, written using angle brackets. Browsers do not display the HTML tags but use them to interpret the content of the page.

2. CSS

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

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, which reduces complexity and repetition in the structural content.

3. Java Script

JavaScript is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. Over 97% of websites use JavaScript on the client side for web page behavior, often incorporating third-party libraries. All major web browsers have a dedicated JavaScript engine to execute the code on user’s devices.

JavaScript is a high-level, often just-in-time compiled language that conforms to the ECMA Script standard. It has application programming interfaces (APIs) for working with text, dates, regular expressions, standard data structures, and the Document Object Model (DOM)

4. SQL

SQL (Structured Query Language) is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS). It is particularly useful in handling structured data. SQL offers two main advantages over older read write APIs such as ISAM or VSAM. Firstly, it introduced the concept of accessing many records with one single command. Secondly, it eliminates the need to specify how to reach a record.

Originally based upon relational algebra and tuple relational calculus, SQL consists of many types of statements, which may be informally classed as sub-languages, commonly: a data query language (DQL), a data definition language (DDL), a data control language (DCL), and a data manipulation language (DML). The scope of SQL includes data query, data manipulation (insert, update and delete), data definition (schema creation and modification), and data access control.

SQL was one of the first commercial languages to use Edgar F. Codd's relational model. The model was described in his influential 1970 paper. It became the most widely used database language.

5. Node js

Node is a javascript's open source runtime environment that runs on a V8 engine. Node js uses javascript which is designed to be highly readable. Node js basically used for writing server side code efficiently and makes it easy for developers to understand the code written because both in frontend and backend javascript is used when they are working in Web Development Domain.

javascript has become one of the most popular programming languages in the world in recent years. It's used in everything from building websites and desktop apps, microservices, software testing

Javascript is popular for a number of reasons:

- It has a simple syntax that mimics natural language, so it's easier to read and understand. This makes it quicker to build projects, and faster to improve on them.
- It's versatile. Javascript can be used for many different tasks, from web development.
- It's beginner friendly, making it popular for entry-level coders.
- It's open source, which means it's free to use and distribute, even for commercial purposes.

It supports functional and structured programming methods. It can be used as a scripting language or can be compiled to byte-code for building large applications. It provides very high-level dynamic data types and supports dynamic type checking.

6. Bootstrap

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. Is used for easier and faster web development It contains HTML, CSS and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. It can also use JavaScript plug-ins.

Bootstrap was created by Mark Otto and Jacob Thornton at Twitter. It was released as an open source product in August 2011 on Git-Hub. As of April 2022, Bootstrap is the eleventh most starred project on Git- Hub.

Following are the main advantage of Bootstrap:

- It is very easy to use. Anyone having basic knowledge of HTML and CSS can use Bootstrap.
- It facilitates users to develop a responsive website.
- It is compatible on most browsers like Chrome, Firefox, Internet Explorer, Safari and Opera etc.

7. VS-Code

Unlike many other code editors, Visual Studio Code has an in-built debugger, making the development flow less 'clicky' and maintains a single view with code and debugger. This makes the process of bug tracking, and code run- throughs a lot easier and faster.

Following are the Some Features are:

- Coding assistance and analysis, with code completion, syntax and error highlighting, linter integration, and quick fixes.
- Integrated Many languages debugger
- Integrated unit testing, with line-by-line code coverage.

Node Js

Node Js is basically a high-level Javascript-based web framework, free and open-source, that follows the model–template–views or model–views–controller (MTV-MVC) architectural pattern. Node's primary goal is to ease the creation of complex, database- driven websites. The framework emphasizes re-usability and "plug ability" of components, less code; low coupling, rapid development, and the principle of don't repeat. JavaScript is used throughout, even for settings, files, and data models. Node js also provides an optional administrative create, read, update and delete interface that is generated dynamically through introspection and configured via admin models.

Node Js enables rapid development of secure and maintainable websites. Node js takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It is a lightweight and standalone web server for development and testing.

The basics of web development using Node js is to build blog applications that have the (CRUD) Create, Read, Update, Delete functionality. It provides a lot of features to the developers "out of the box," so development can be rapid. However, websites built from it are secured, scalable, and maintainable at the same time.

The MVC design pattern (Model View Controller) describes about:

- **Model –** The Model is the logical data structure behind the complete application and represents by a database (generally relational databases such as MySQL, Postgres).
- **View –** The View is the user interface that you see in the browser whenever you visit a website. They represent it through HTML/CSS/JavaScript files.
- **Controller –** The Controller is the middleman that connects the view and model together. It means the controller is the passing data from the model to the view.

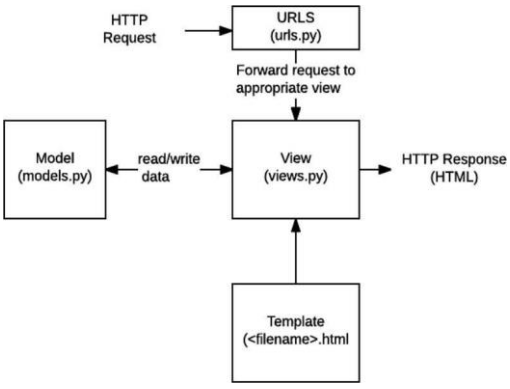


Fig.01 - How Node js framework works.

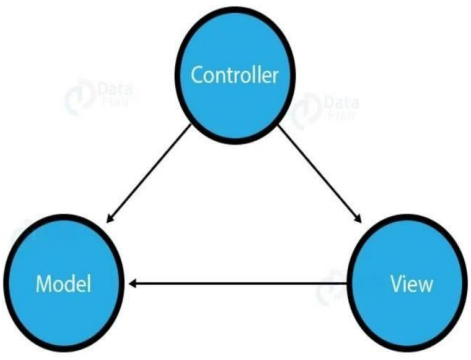


Fig.02-The MVC design pattern.

Purpose

The Purpose of document is to:

- To define the technical & operational feasibility
- To ensure that requirements of the proposed system are complete and clear
- To provide a basis for the subsequent design, development and testing phases of entire application.
- To ensure that there are no misunderstanding or omissions in functionality

Features

- Single Website for Layers.
- Admin and User can login with an email id registered with it.
- Clean design and easy to use.
- Layers can update ,delete their own Matter
- Admin Layers will have access to the complete site.

MODULES AND THEIR DESCRIPTION

MatterSuite complete matter management software enhances your firm's efficiency by allowing you to easily manage your legal cases with tools to master and organize case facts, hearings, motions, evidence, discovery, and calendaring for your law firm Matter Suite's litigation software brings together a comprehensive suite of tools that you need to manage litigations, organize evidence & documents, track cases, motions, and trials.

DIAGRAM

- **ER Diagram**

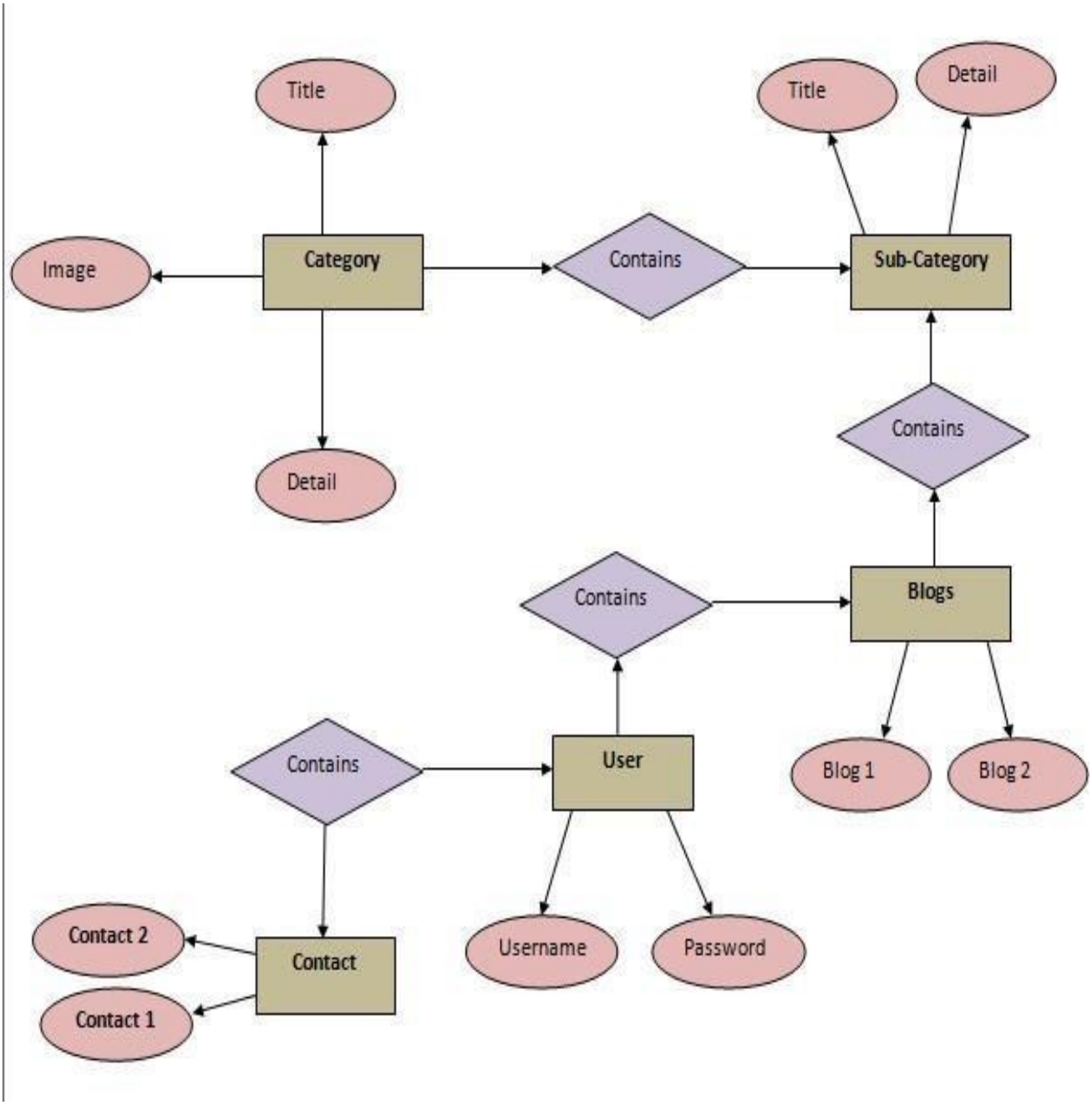


Fig.03- ER Diagram

- ## Data Flow Diagram (DFD)

A data-flow diagram (DFD) is a graphical representation of the "flow" of data through an information system. DFDs can also be used for the visualization of data processing (structured design). On a DFD, data items flow from an external data source or an internal data store to an internal data store or an external data sink, via an internal process.

- ## Context Level

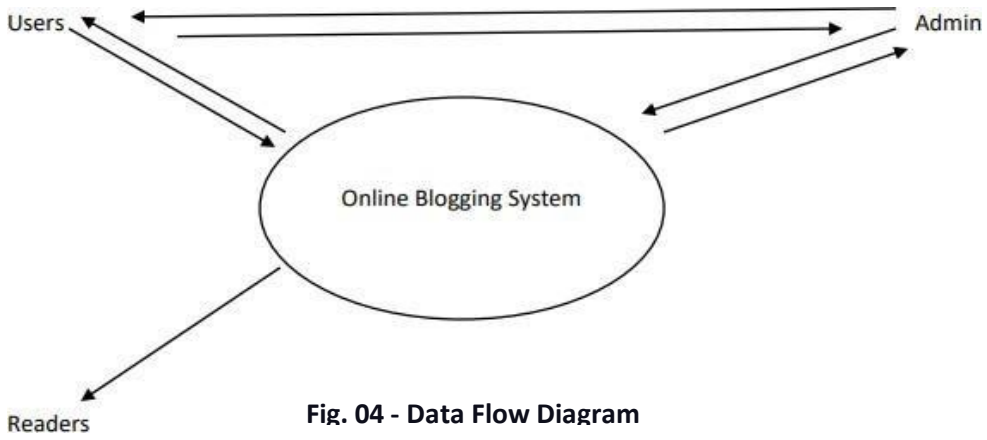


Fig. 04 - Data Flow Diagram

This context diagram shows the entire Online Blogging System as a single process

- ## High Level Diagram

This level shows all processes at the first level of numbering, data stores, external entities and the data flows between them. The purpose of this level is to show the major high-level processes of the Online Blogging System and their interrelation. These High level diagram can be broken down to more detail in this level, e.g. the "Login" data flow could be split into "Create and Publish the content" and "Content Removal" and still be valid.

SYSTEM REQUIREMENT

Hardware Requirements

The selection of hardware is very important in the existence and proper working of any software. When selecting hardware, the size and requirements are also important.

- Processor - Intel CORE i3
- RAM - 8.0 GB
- Hard Disk Drive - 256 GB

Software Requirements

Operating System – Ubuntu Database – db postgresql Web Server: localhost
Browser–Google Chrome etc.

FUTURE ENHANCEMENT

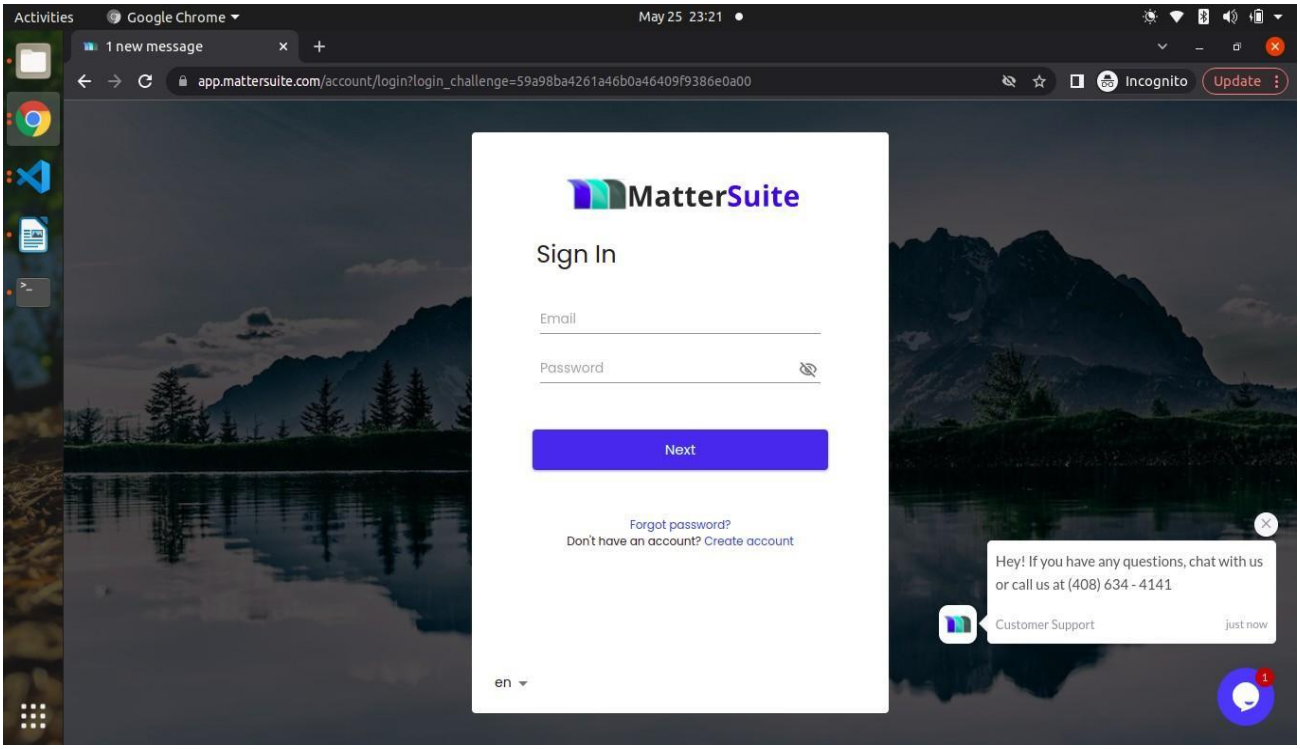
This project was developed to fulfill the requirement of layers and courts platform for Hearing and cases purposes. However, there is lots of scope to improve the performance of the Mattersuite in the area of user interface, database performance, and query processing time etc.

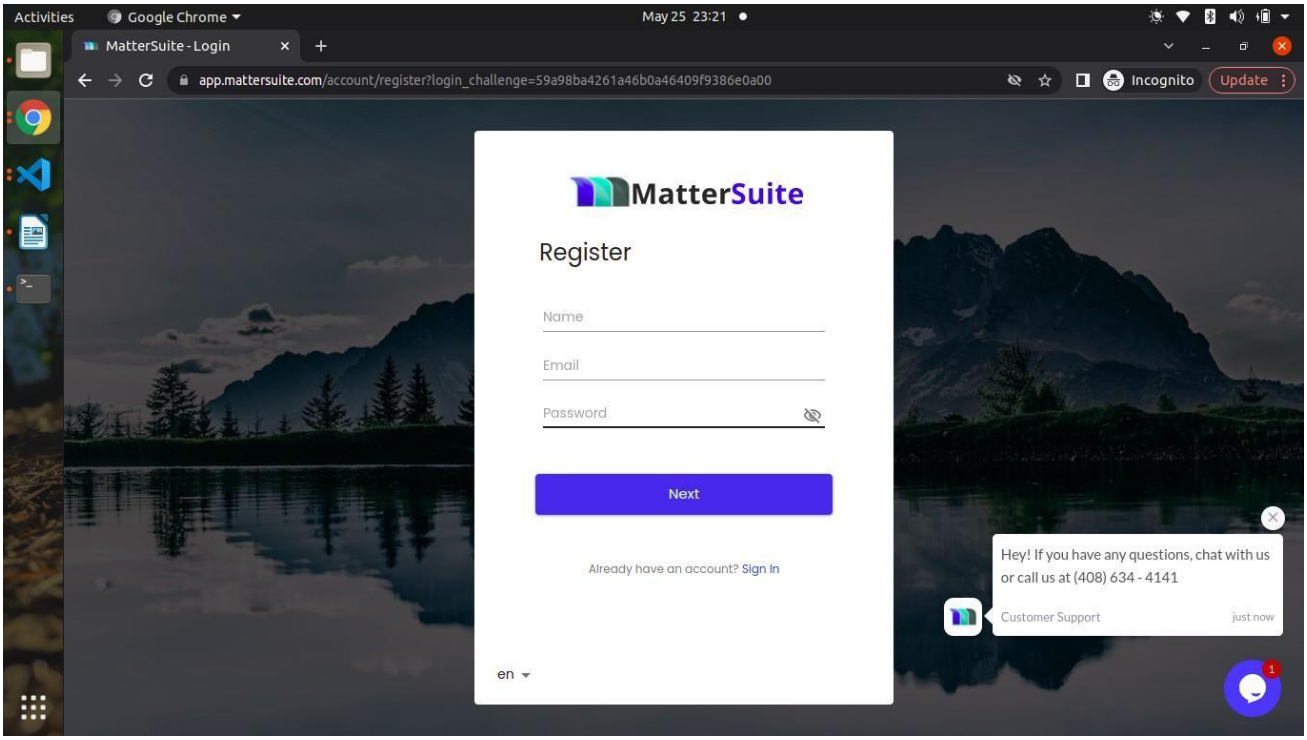
The aim of the proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces manual work.

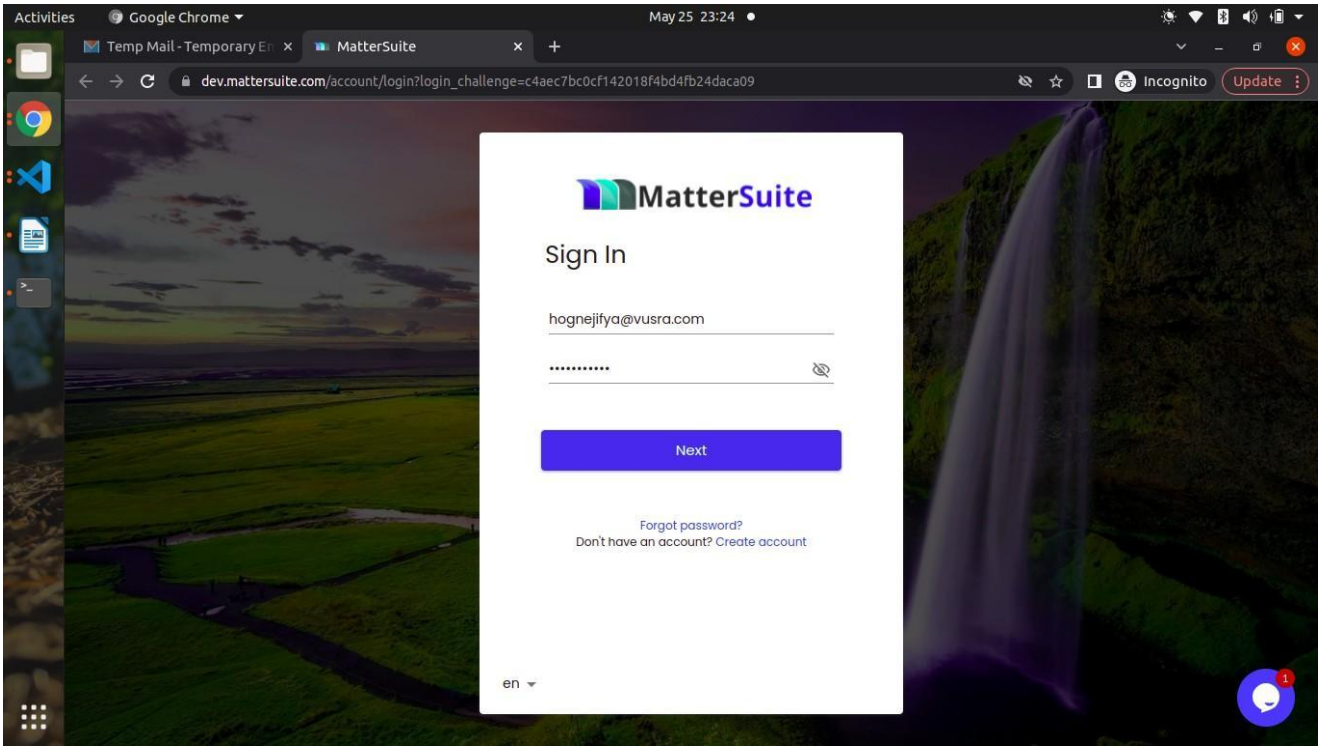
So, there are many things for future enhancement of this project. The future enhancements that are possible in the project are as follows:

- Security of data.
- Ensure data accuracy.
- Greater efficiency.
- Better service.
- Development of mobile applications which can run on multiple OS and devices.
- Try to make as user friendly an interface as possible.
- More functionality can be added.

Screenshots of Mattersuite






Activities
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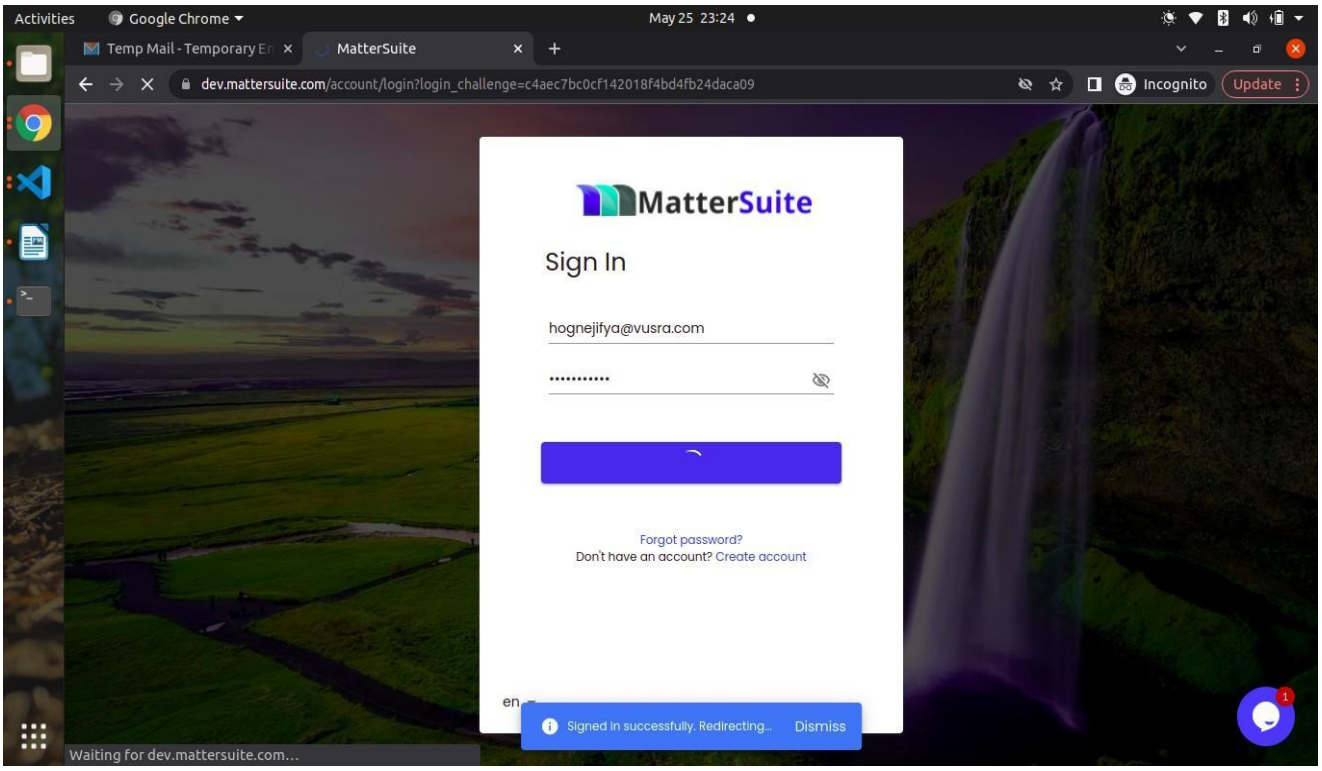
Incognito
Update
MatterSuite
Sign In
hognejifya@vusra.com
Next
Forgot password?
Don't have an account? Create account
en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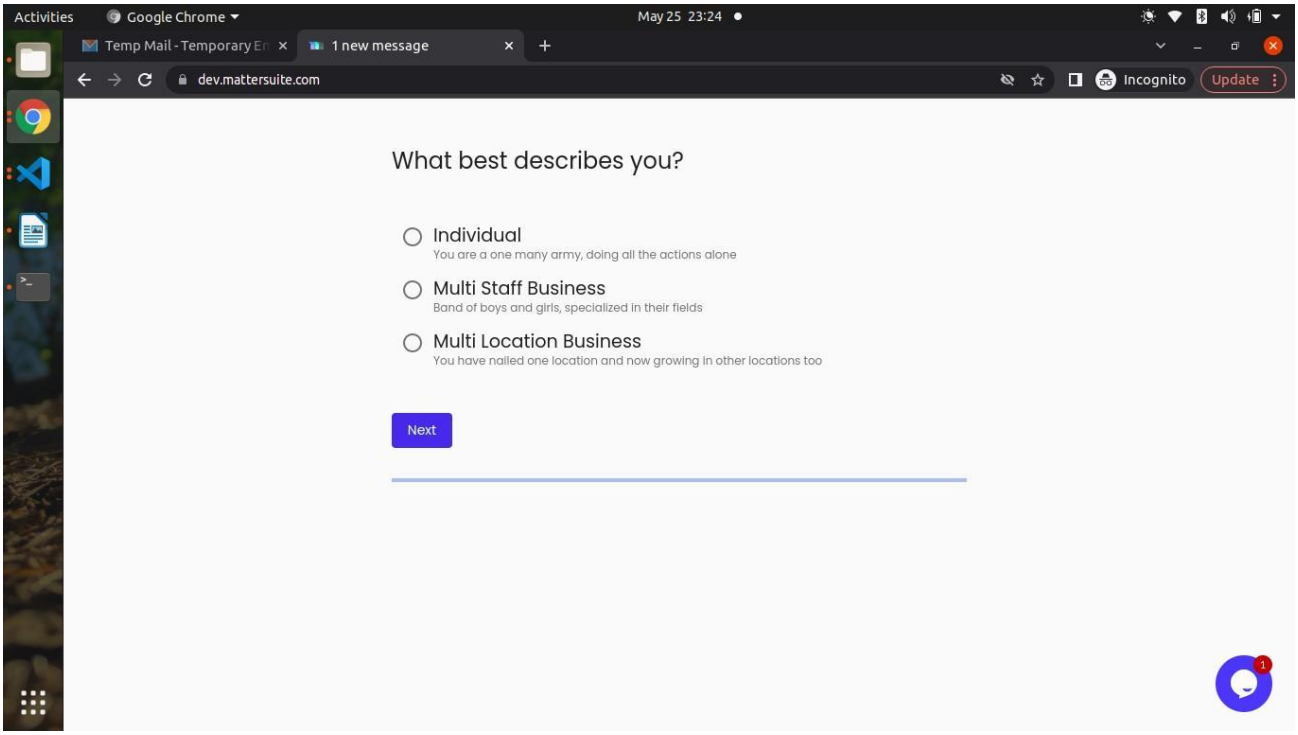
Incognito
Update
MatterSuite
Sign In
hognejifya@vusra.com
Forgot password?
Don't have an account? Create account
en
Signed in successfully. Redirecting...
Dismiss
Waiting for dev.mattersuite.com...


Activities
Google Chrome
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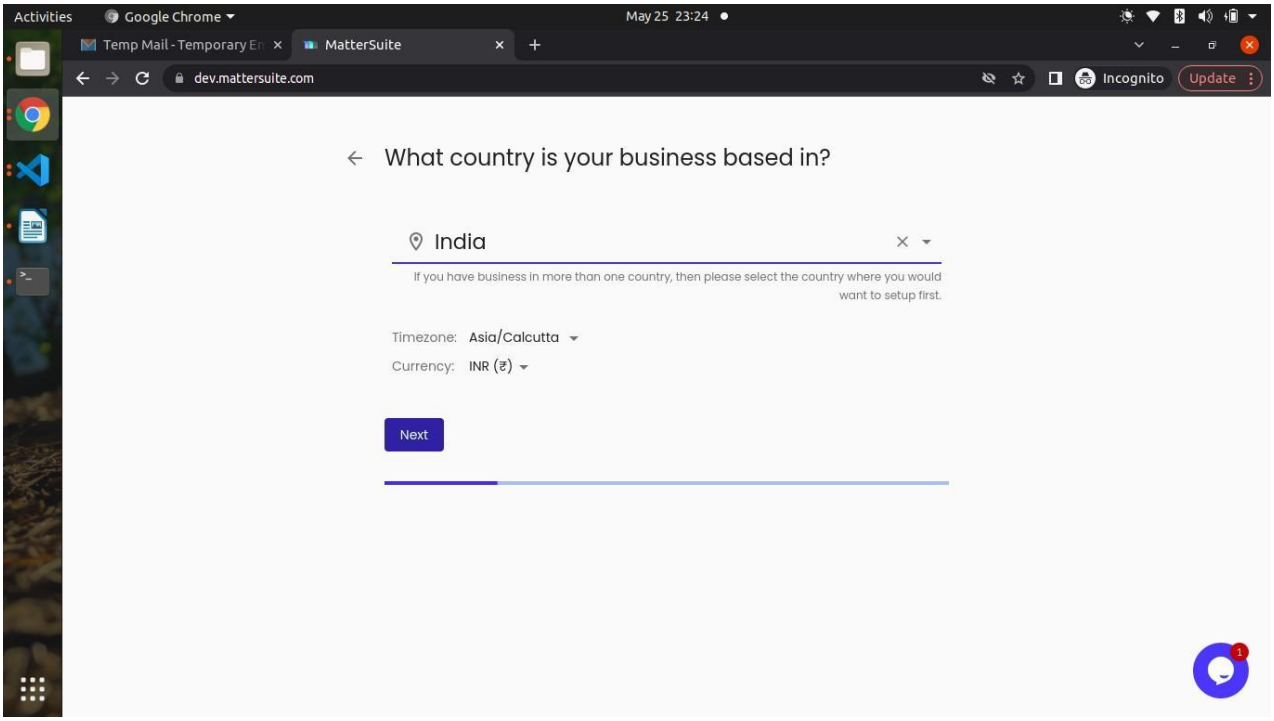
1 new message
dev.mattersuite.com
Incognito
Update
What best describes you?
Individual
You are a one many army, doing all the actions alone
Multi Staff Business
Band of boys and girls, specialized in their fields
Multi Location Business
You have nailed one location and now growing in other locations too
Next


Activities
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MatterSuite
dev.mattersuite.com
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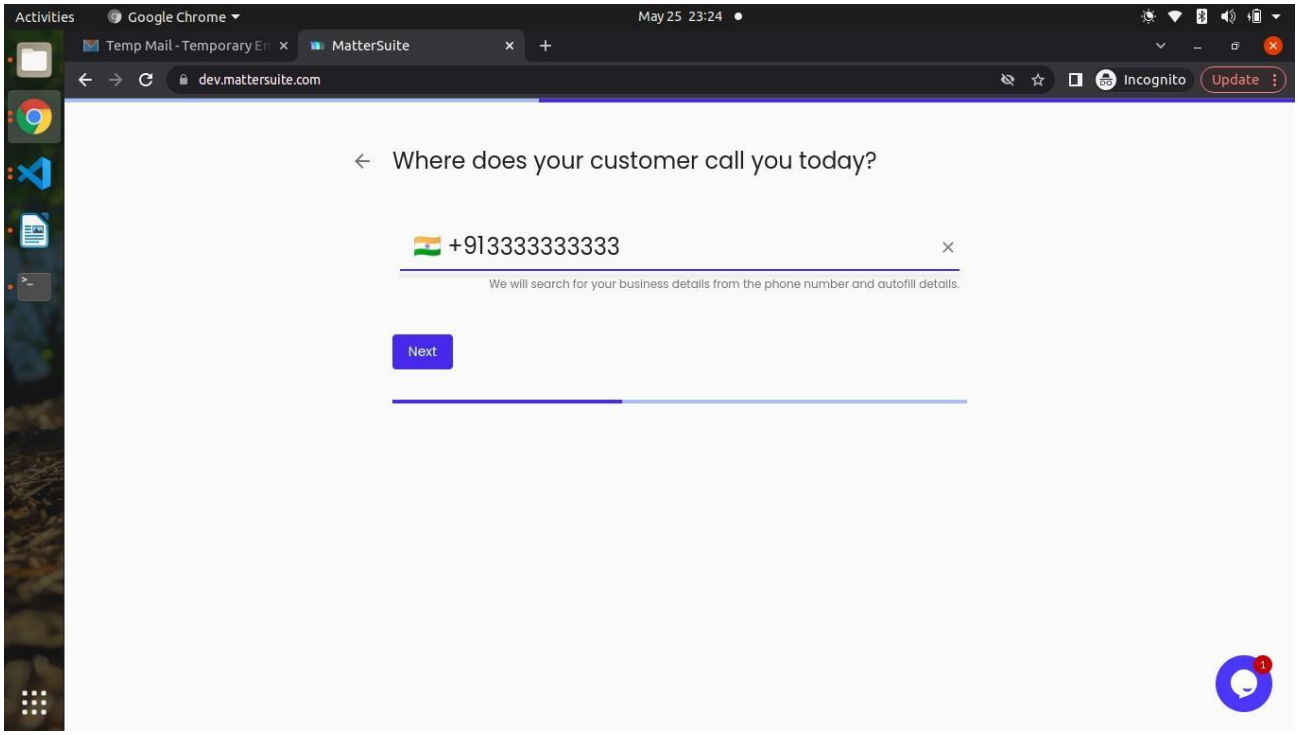
Update
What country is your business based in?
India
If you have business in more than one country, then please select the country where you would want to setup first.
Timezone: Asia/Calcutta
Currency: INR (₹)
Next


Activities
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MatterSuite
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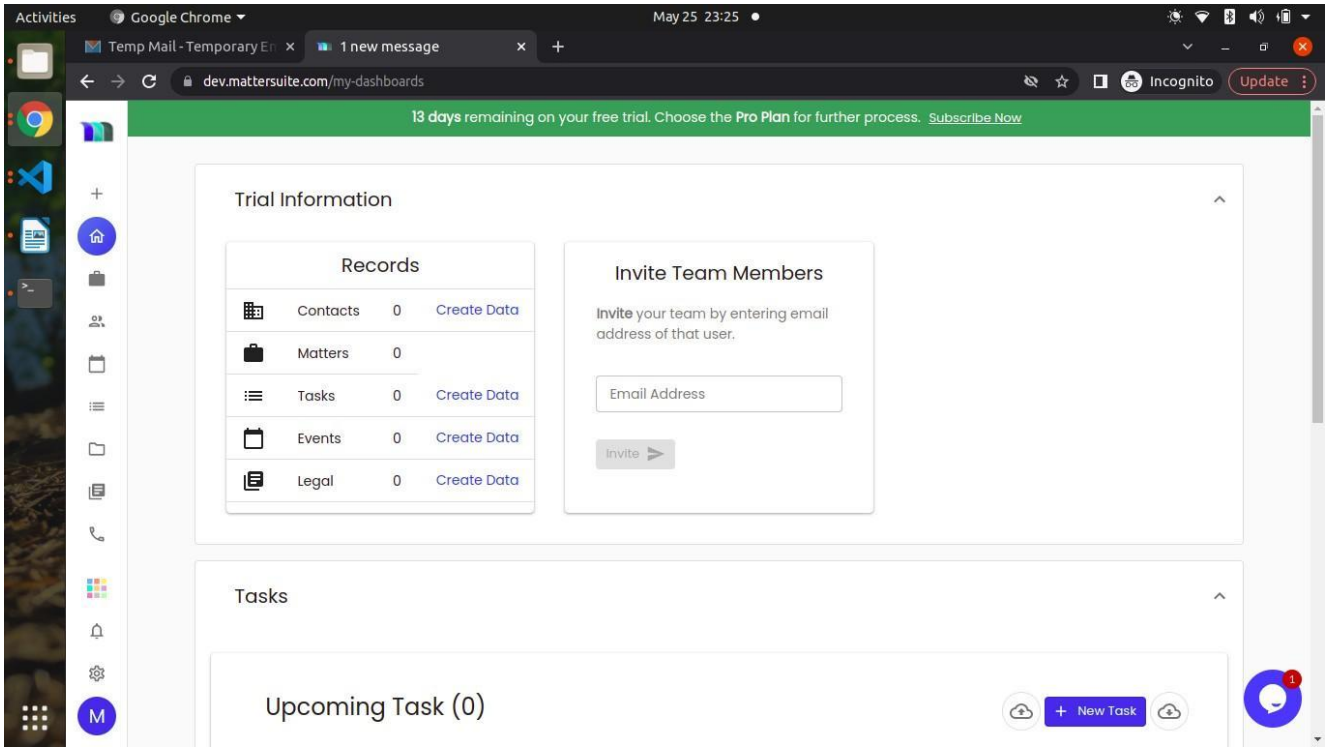
Update
Where does your customer call you today?
+913333333333
We will search for your business details from the phone number and autofill details.
Next


Activities
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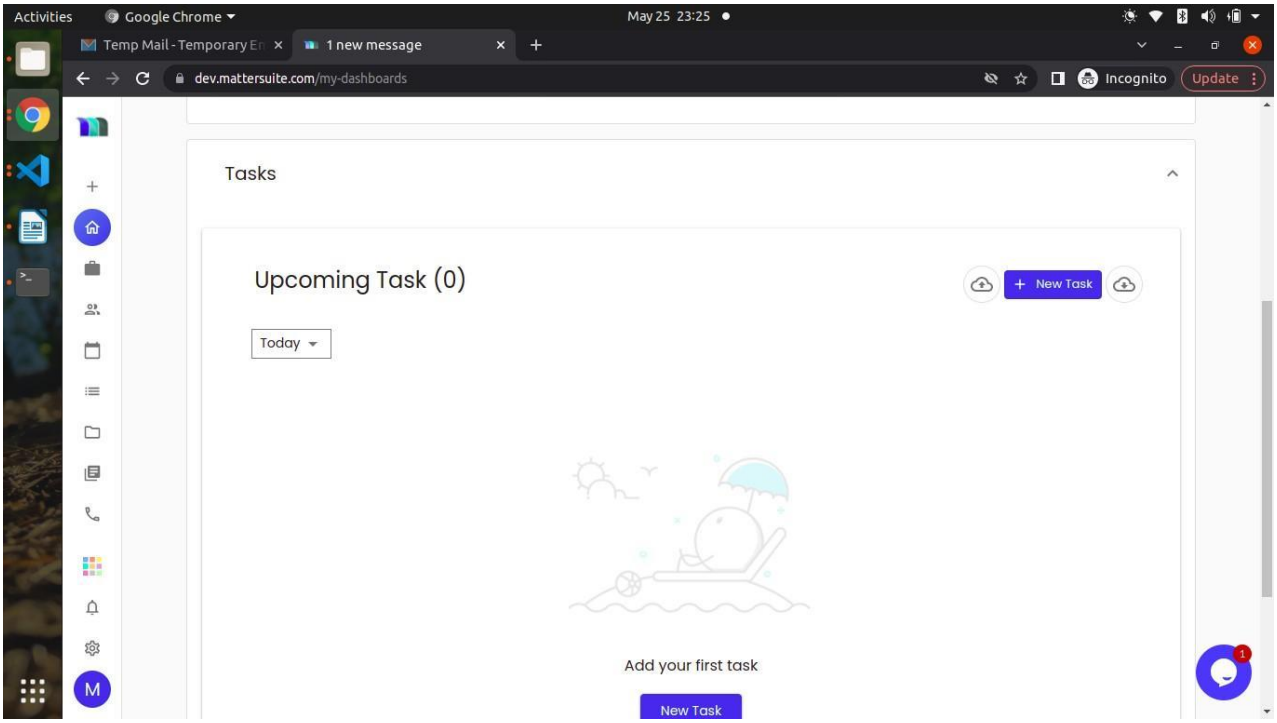
Temp Mail - Temporary Em
1 new message
dev.mattersuite.com/my-dashboards
Incognito
Update
13 days remaining on your free trial. Choose the Pro Plan for further process. Subscribe Now
Trial Information
Records
Contacts 0 Create Data
Matters 0
Tasks 0 Create Data
Events 0 Create Data
Legal 0 Create Data
Invite Team Members
Invite your team by entering email address of that user.
Email Address
Invite
Tasks
Upcoming Task (0)
New Task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Update
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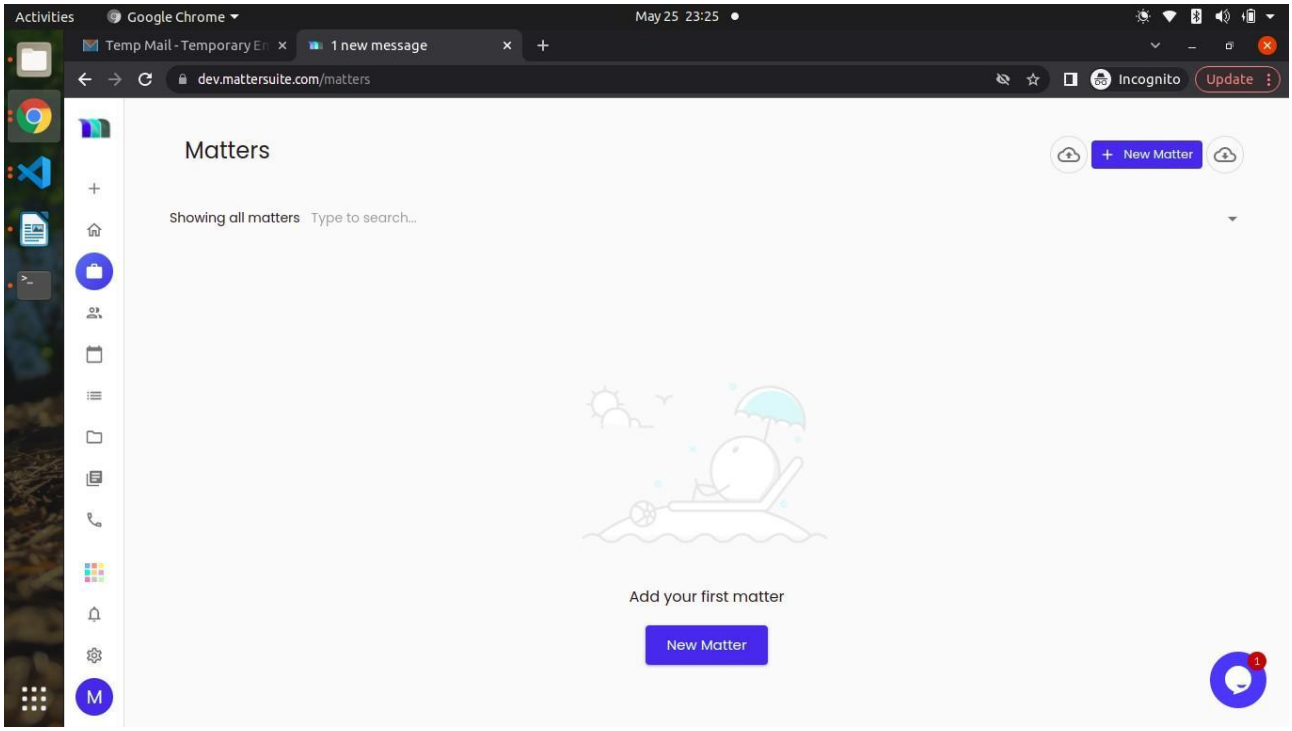
Upcoming Task (0)
New Task
Today
Add your first task
New Task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Update
Matters
New Matter
Showing all matters
Type to search...
Add your first matter
New Matter

CONCLUSION

Front-end tools are easy to learn. Due to the presence of styling framework like Bootstrap framework creating a responsive website has became an easy task. Javascript is easily understandable language; it benefits both developers and the non-developers who want to learn programming. Due to its large number of inbuilt libraries and modules, we don't require to write the complete code, it thus saves time and human effort. Node is a large framework that includes everything whether we require it or not. Due to this, it is considered that it gives slow performance, but the flexibility in Node is a big advantage.

Our project is only a humble venture to satisfy the needs to manage their project work. Several user friendly coding have also adopted. This package shall prove to be a powerful package in satisfying all the requirements. The objective of software planning is to provide a frame work that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses. We have included as many features as we can make the site viable and usable and also web application very friendly to use for all user to make blog. Our proposed system is online and real time based on Internet. Users can visit our website to read & write. After login and register users can add, see, delete and update their own blog posts.

REFERENCES

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