



**A Final Year Internship Report
on
Laravel Developer
at
Tulips Technologies Pvt. Ltd.**

**Submitted To
Office of Dean,
Faculty of Management
Tribhuvan University**

**In partial fulfillment of the requirement for the Degree of Bachelor of
Information Management (BIM)**

**Under the Supervision of
Er. Dhiraj Kumar Jha
Project Coordinator
Orchid International College**

**Submitted By
Rajan Prajapati
TU Registration No: 7-2-939-95-2018
TU Exam Roll No: 8924/18
Orchid International College**

March 2023



SUPERVISOR'S RECOMMENDATION

I hereby recommend that this report has been prepared under my supervision by Rajan Prajapati in partial fulfillment of the requirements for the degree of Bachelor of Information Management (BIM) to be processed for evaluation.

Er. Dhiraj Kumar Jha

Project Coordinator

Department of Information Management

Orchid International College

Bijayachowk, Gaushala

CERTIFICATE OF APPROVAL

The undersigned certify that they have read and recommended to the Department of Information Management for acceptance, an internship report submitted by **Mr. Rajan Prajapati** in partial fulfillment for the degree of Bachelor of Information Management (BIM).

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STUDENT DECLARATION

I hereby declare that the internship report submitted to the Office of the Dean, Faculty of Management, Tribhuvan University is my original work done in the form of partial fulfillment of requirements for the Bachelor of Information Management (BIM) under the supervision of “Er. Dhiraj Kumar Jha”. This work is independent and is not published or submitted elsewhere any part of this report and the report as a whole.

Date:

Signature:

Name: Rajan Prajapati

BIM VIII Semester

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ABSTRACT

This document gives the overview of my three months internship period at Tulips Technologies that was carried out for the fulfillment of the final semester course of Bachelors' in Information Management in Orchid International College. The objective of the intern is to gain the experience in real-time working environment. Different tools have been used like Visual Studio Code, Xampp, and Mysql. This Internship have been very helpful for me to develop and polish my skills and gain experience in real-time working environment.

ACKNOWLEDGMENTS

I am highly indebted to our college, and our coordinator Er. Dhiraj Kumar Jha for their guidance and constant supervision regarding the report. Also, I am grateful to Björn Söderberg and Aman Bajracharya, CEO and Mentor of Tulips Technologies Pvt Ltd who provide me with the opportunity to do my internship and be familiar with the organization's culture. I would also like to thank the entire team member of the organization for helping me to move ahead with my internship objective.

Sincerely,

Rajan Prajapati

(8924/18)

LIST OF FIGURES

Figure 3.1: Organization Hierarchy of Tulips Technology Pvt Ltd	9
Figure 4.1: Activity Diagram.....	12
Figure 4.2: Use-case Diagram.....	13
Table 4.1: Use Case Description (Add Data).....	14
Table: 4.2 Use Case Description (Update Data).....	14
Table: 4.3 Use Case Description (Delete Data).....	15
Table: 4.4 Use Case Description (Set Schedule Time).....	15

TABLE OF CONTENTS

INTERNSHIP COMPLETION LETTER	
<i>SUPERVISOR'S RECOMMENDATION</i>	<i>i</i>
<i>CERTIFICATE OF APPROVAL</i>	<i>ii</i>
<i>STUDENT DECLARATION</i>	<i>iii</i>
<i>ABSTRACT</i>	<i>iv</i>
<i>ACKNOWLEDGEMENT</i>	<i>v</i>
<i>LIST OF FIGURES</i>	<i>vi</i>
<i>LIST OF ABBREVIATIONS</i>	<i>ix</i>
CHAPTER I-INTRODUCTION	1
1.1 BACKGROUND.....	1
1.2 OBJECTIVES	1
1.3 LITERATURE REVIEW	2
1.4 METHODOLOGY	3
1.4.1 Organization Selection	3
1.4.2 Placement.....	3
1.4.3 Duration	3
1.4.4 Activities.....	3
CHAPTER II-BRIEF INTRODUCTION TO THE INDUSTRY	4
2.1 INTRODUCTION TO IT INDUSTRY	4
2.2 IMPORTANCE OF IT	4
2.3 HISTORY OF IT NEPAL.....	6
2.4 OPPORTUNITIES AND CHALLENGES OF IT	7
CHAPTER III-INTRODUCTION TO THE ORGANIZATION	8
3.1 INTRODUCTION	8
3.2 GOALS.....	8
3.3 MISSION	9
3.4 VISION OF TULIPS TECHNOLOGIES.....	9
3.5 ORGANIZATION HIERARCHY.....	9
CHAPTER IV ANALYSIS OF ACTIVITY DONE/PROBLEM SOLVED	10

<i>4.1 UNDERSTANDING THE SYSTEM AND WORKING ENVIRONMENT.....</i>	<i>10</i>
<i>4.2 ANALYSIS OF ACTIVITIES DONE.....</i>	<i>10</i>
<i>4.3 TOOLS USED.....</i>	<i>10</i>
<i>4.3.1 Xampp.....</i>	<i>10</i>
<i>4.3.2 Google Chrome</i>	<i>10</i>
<i>4.3.3 MYSQL.....</i>	<i>11</i>
<i>4.3.4 Visual Studio Code</i>	<i>11</i>
<i>4.4 SYSTEM ANALYSIS AND DESIGN.....</i>	<i>12</i>
<i>4.4.1 ACTIVITY DIAGRAM</i>	<i>12</i>
<i>CHAPTER V CONCLUSION</i>	<i>16</i>
<i>5.1 CONCLUSION</i>	<i>16</i>
Appendices	

LIST OF ABBREVIATIONS

BIM	Bachelor of Information Management
CEO	Chief Executive Officer
COO	Chief Operating Officer
IT	Information Technology
Ltd	Limited
Pvt	Private
TU	Tribhuvan University

CHAPTER I-INTRODUCTION

1.1 Background

As a student studying Bachelors in BIM we need to learn a lot about technology, growing IT industry and Management as well. Knowledge could be achieved from Theory (Books, Internet, Professor). Besides from this, we should also be able to achieve knowledge practically. Since BIM (Bachelor in Information Management) itself explains that it is the course of both theory and practical knowledge. We should also be able to gain in the industry of IT working as an intern which will be beneficial for our future reference.

As a part of the BIM program, I accomplished this internship program at Tulips Technologies Pvt Ltd, New-Baneshwor, Kathmandu. As stipulated by the University, the duration of the internship was three months. An internship is a professional learning experience that offers meaningful, practical work related to a student's field of study or career interest. An internship consists of an exchange of services for experience between the student and the organization. An internship is an opportunity for on to explore about the field that one is interested to. It is an opportunity to polish your skills and learn more and explore more about the growing industry and to be able to your ability.

1.2 Objectives

Some of the objectives are:

- To be able to develop web applications using Laravel and backpack.
- To be able to secure applications through authentication and authorization.
- To be able to find bugs, report them and correct them if possible.
- To be able to learn about Laravel packages.

1.3 Literature Review

Laravel is a popular open-source PHP web framework used for developing web applications. It provides a robust set of tools and features that simplify the development process and promote code reusability (Taylor Otwell, 2020).

Laravel follows the Model-View-Controller (MVC) architectural pattern, which enhances the separation of concerns and improves code organization (Mancini, 2018). The framework offers numerous features such as routing, database migration, templating engine (Blade), and an ORM (Object-Relational Mapping) called Eloquent, which simplifies database interactions (Verburg, 2017).

Backpack is a project management tool specifically designed for Laravel projects. Backpack provides a set of admin panels and CRUD (Create, Read, Update, Delete) operations that can be easily integrated into Laravel applications. It aims to simplify the development of Laravel-based admin interfaces and offers features like user management, role-based permissions, file management, and dashboard customization.

"An exploratory study on the use of GitLab for collaborative software development" by Aranda, M., et al. (2019): This study explores the adoption and usage patterns of GitLab in a collaborative software development environment. It investigates how teams utilize GitLab's features, such as issue tracking, merge requests, and continuous integration, and examines the benefits and challenges of using GitLab for collaboration.

1.4 Methodology

1.4.1 Organization Selection

Selecting a proper organization that you could be a fit for is also a challenging job. I have searched for a lot of vacancies and went for interviews but I felt I could fit in the Tulips Technologies Pvt Ltd where I had an opportunity to learn more and more. So, I selected Tulips Technologies Pvt Ltd where the mentors and the environments are very supportive so to interns in their work. There was a vacancy for an intern in the job portal from Tulips Technology so I decided to drop my resume. The next day, I got a call for an interview. After the interview, they selected me as a Laravel intern.

1.4.2 Placement

Tulips Technologies as an intern in Laravel Developer, I got to do Back End Development, Manual Testing, Error Reporting etc. For the Back End development, I learned and used a package named Backpack which made my job a lot easier. Not only these I used Mysql, Xampp. Error Reporting is done with the help of Google Docs.

1.4.3 Duration

The requirements duration of internship for BIM, affiliated with Tribhuvan University, demanded time is Three months. So, I worked for the following time frame:

Start Date: 17 March 2023

End Date: 17 June 2023

Duration: Three Months

Office Hour: 10:00 am to 6:00 pm

1.4.4 Activities

During internship periods, I got to learn about different software and packages of Laravel. The supportive mentors also helped a lot to learn about new ideas and standards. I also knew about different updates in Laravel Frameworks. Some of the lists of activities are:

- Flow of the MVC pattern
- Proper way of using Route, Middleware, Controller, Seeders, Requests etc.
- Learned how to install and use different packages.

CHAPTER II-BRIEF INTRODUCTION TO THE INDUSTRY

2.1 Introduction to IT Industry

Information technology (IT) is the use of computers to create, process, store, retrieve and exchange all kinds of data and information. IT forms part of information and communications technology (ICT). An information technology system (IT system) is generally an information system, a communications system, or, more specifically speaking, a computer system- including all the hardware, software, and peripheral equipment — operated by a limited group of IT users.

The IT industry is constantly evolving and changing, with new technologies and trends emerging all the time. In the coming year, several trends are likely to have a significant impact on the industry.

One of the biggest trends in the IT industry right now is the increasing adoption of cloud computing. Cloud computing allows businesses to access and use a shared pool of resources, such as servers, storage, and applications, over the internet. This can help companies save money, increase efficiency, and improve scalability. As more and more companies move to the cloud, the demand for cloud-based services and solutions is expected to continue to grow.

2.2 Importance of IT

Information technology, or IT, plays a pivotal role in our modern society, revolutionizing the way we access and utilize information. Firstly, IT enables seamless access to a vast repository of knowledge, empowering individuals to explore diverse subjects with ease. From academic research to practical skills, the abundance of information available at our fingertips has broadened our horizons and expanded our intellectual capabilities.

Secondly, IT has significantly enhanced communication across distances. With the advent of email, instant messaging, and video conferencing, people can connect and collaborate effortlessly, regardless of geographical barriers. This improved communication has fostered global connectivity, enabling individuals, businesses, and organizations to collaborate and exchange ideas in real-time, leading to rapid innovation and problem-solving.

Moreover, IT has transformed the business landscape by streamlining operations and boosting efficiency. Through the utilization of advanced software, cloud computing, and automation tools, companies can optimize their processes, increase productivity, and respond swiftly to market demands. This digital transformation has opened up new opportunities for businesses to reach wider audiences, expand their customer base, and achieve sustainable growth in an increasingly competitive marketplace.

Additionally, IT has revolutionized the way we learn and acquire knowledge. With the integration of technology in education, students now have access to a wealth of resources and interactive learning platforms. Online courses, educational apps, and virtual classrooms have made learning more engaging, personalized, and accessible. Students can learn at their own pace, explore interactive multimedia content, and connect with peers and experts from around the world, fostering a global community of learners.

In conclusion, information technology has become an integral part of our daily lives, shaping the way we access information, communicate, and learn. It has opened up new possibilities, fostering innovation, collaboration, and efficiency across various domains. As we continue to embrace technological advancements, the impact of IT on society will only continue to grow, empowering individuals, businesses, and institutions to thrive in a rapidly evolving digital landscape.

2.3 History of IT Nepal

There is not a long history of computers in Nepal. Nepal hired some types of calculators and computers for its census calculation. Following list shows its history in Nepal. In 1978 BS an electronic calculator called “Facit” was used for census. In 1988 BS census IBM 1401 a second generation mainframe computer was used. In 1991 BS a center for Electronic Data Processing, later renamed to National Computer Center (NCC), was established for national data processing and computer training. In 1998 BS ICL 2950/10 a second generation mainframe computer was used for census. Now-a-days probably each and every institutions, business organizations, communication centers, ticket counter are using computers as well.

The history of computer in Nepal is not that old since Nepal has not given any contribution in the development of evolution of computer. It was in 1988 B.S. when HMG brought IBM 1401 (a Second Generation computer) on rent for Rs. 1 lakhs and 25 thousand per month to process census data. Later the computer was bought by National Computer Center (NCC). In 1998 B.S., a fourth generation computer was imported with the aid of UNDP and UNFPA from England for 20 lakhs US dollars. Its name was ICL 2950/10. This computer had 64 terminals and it is kept in museum now.

At that time British Government helped to develop manpower of NCC. In the meantime Nepalese students went to India, Thailand and USA for the computer education themselves. In 1999 B.S., microcomputers such as Apple, Vector, Sins, etc were imported by private companies and individuals. Many private companies like Computer Consultancy (CC), Management Information Processing System (MIPS), Data System International (DSI), etc were established. Such private companies started selling computers and training people in order to produce manpower in Nepal itself. Nowadays, computers with faster processing and larger storage are found cheaply in Nepalese market. Students are given computer education from school level. At present Computer Association of Nepal (CAN) is the governing body of Nepal.

2.4 Opportunities and Challenges of IT

Some challenges are:

- Technical Complexity.
- Harm and effect on Privacy.
- User Adoption.
- Security issues and Ethical Concerns.

Some of the opportunities are:

- Career Growth.
- Entrepreneurship.
- Better AI.
- Improve and Increase of Automation.
- Improved Communication.
- Innovations.

CHAPTER III-INTRODUCTION TO THE ORGANIZATION

3.1 Introduction

Tulips Technologies (Pvt.) Ltd is registered under Company Act 2063 of Nepal offering IT-Enabled Solutions, and Services to its client. It has been offering the local and international community with finest of software products and solutions that not just fulfilling their needs today but offer them a competitive advantage for tomorrow.

The company had recently completed its 15 years of establishment. The company have mostly Swedish projects.

Today we provide a wide variety of IT inter-related services, which include the design and development of software solutions, hosting of websites, and web-based systems, and electronic advertising and marketing all in the best state-of-the-art functionality.

We have a proven and commendable record in delivering the best quality software engineering products and services, standing out for quality in this rapidly expanding sphere of innovation business.

Tulips Technologies partners with our clients to help them achieve their business and IT needs. We have experience, knowledge and skills to advises, design, engineer and implement solutions to medium to large-scale systems that take businesses to new heights.

3.2 Goals

- To provide quality customer service.
- Partner with customers to provide the best solution.
- To foster innovation and technology.
- To improve the technical and analytical skills of employees.
- To enhance customer experience.

3.3 Mission

MISSION "To help our clients to achieve their goals through IT solutions."

Our aim is to build long-term partnerships with our customers. With their support, we aim to maximize the potential of our traditional business, through a combination of enhanced quality of service, creative marketing, innovative pricing and cost-efficiency.

At the same time, we'll pursue profitable growth by migrating our customers to new wave products and services. We will interlink each & every business people and their customers, in villages and cities with worldwide business people, without categorizing them into classes.

3.4 Vision of Tulips Technologies

VISION "Innovate in various industries and provide a technological solution."

To provide Innovative IT Solutions and IT related Services with a global vision for business enterprises in a developing competitive environment.

3.5 Organization Hierarchy

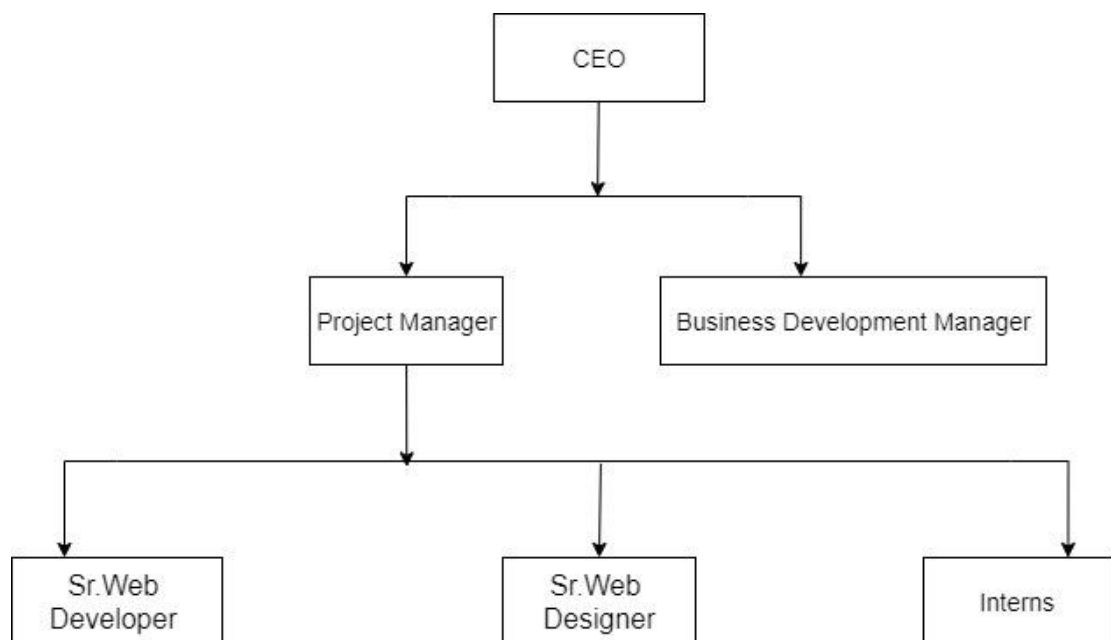


Figure 3.1 : Organization Hierarchy of Tulips Technologies

CHAPTER IV ANALYSIS OF ACTIVITY DONE/PROBLEM SOLVED

4.1 Understanding the System and Working Environment

This phase is simply included along with the working environment of Tulips Technologies. The supervisor was very helpful and supportive in helping the intern to understand the IT infrastructure and working procedure of the development process in the organization. This phase also includes a proper understanding of communication procedures, reporting mechanisms and the functional hierarchy of the firm.

4.2 Analysis of Activities Done

During the internship period, I was assigned the task to develop a project named Project_health that will keep track of the projects created by the organization. Laravel with its package name Backpack is used for the Development of the project. MVC pattern is used for the development of this Module.

During this period, I learned:

- Flow of the MCV pattern
- Proper way of using Route, Middleware, Controller, Seeders, Requests etc.
- Learned about postman and API
- Learned web scraping using guzzle/Goutte
- Learned into installed and use different packages

4.3 Tools Used

Various tools were used during the internship some of the tools are:

4.3.1 Xampp

XAMPP is a popular web development environment that provides a complete package of tools and software needed to develop and test web applications. The software is free and open source, which means it can be used without any cost, and its source code can be accessed and modified by developers.

4.3.2 Google Chrome

A web browser is used to run the system. Google Chrome is a freeware web browser developed by Google. The browser was first publicly for Microsoft Windows (XP and later versions) on September 2, 2008 in 43 languages, officially a beta version.

4.3.3 MYSQL

MySQL is a popular open-source relational database management system (RDBMS) that is widely used in web applications, enterprise systems, and other data-intensive applications. It was created by MySQL AB, which was later acquired by Sun Microsystems, and subsequently by Oracle Corporation.

4.3.4 Visual Studio Code

Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.

4.4 System Analysis and design

4.4.1 Activity Diagram

An activity diagram is a type of UML (Unified Modeling Language) diagram that visually represents the flow of activities or processes within a system. It is used to model the behavior of a system or a specific process, showcasing the sequence of actions, decision points, and parallel activities involved.

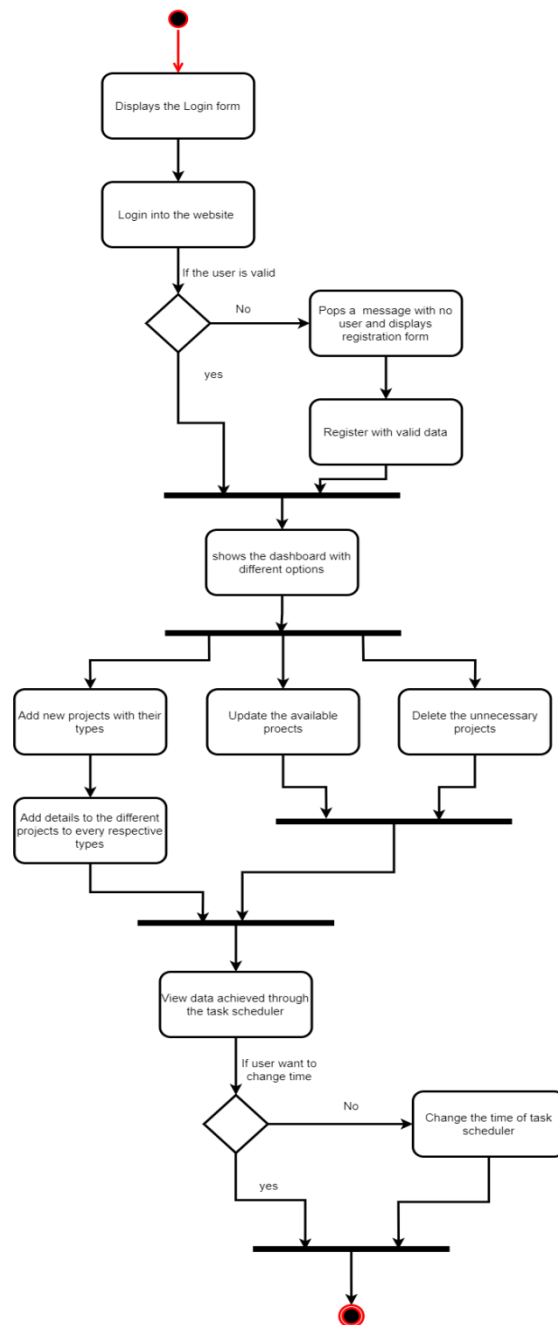


Fig 4.1: Activity Diagram

4.4.2 Use-case Diagram

A use case diagram is a visual representation of the interactions between actors (users or external systems) and a system. It is commonly used in software development to capture the functional requirements of a system and to describe the various ways users can interact with it.

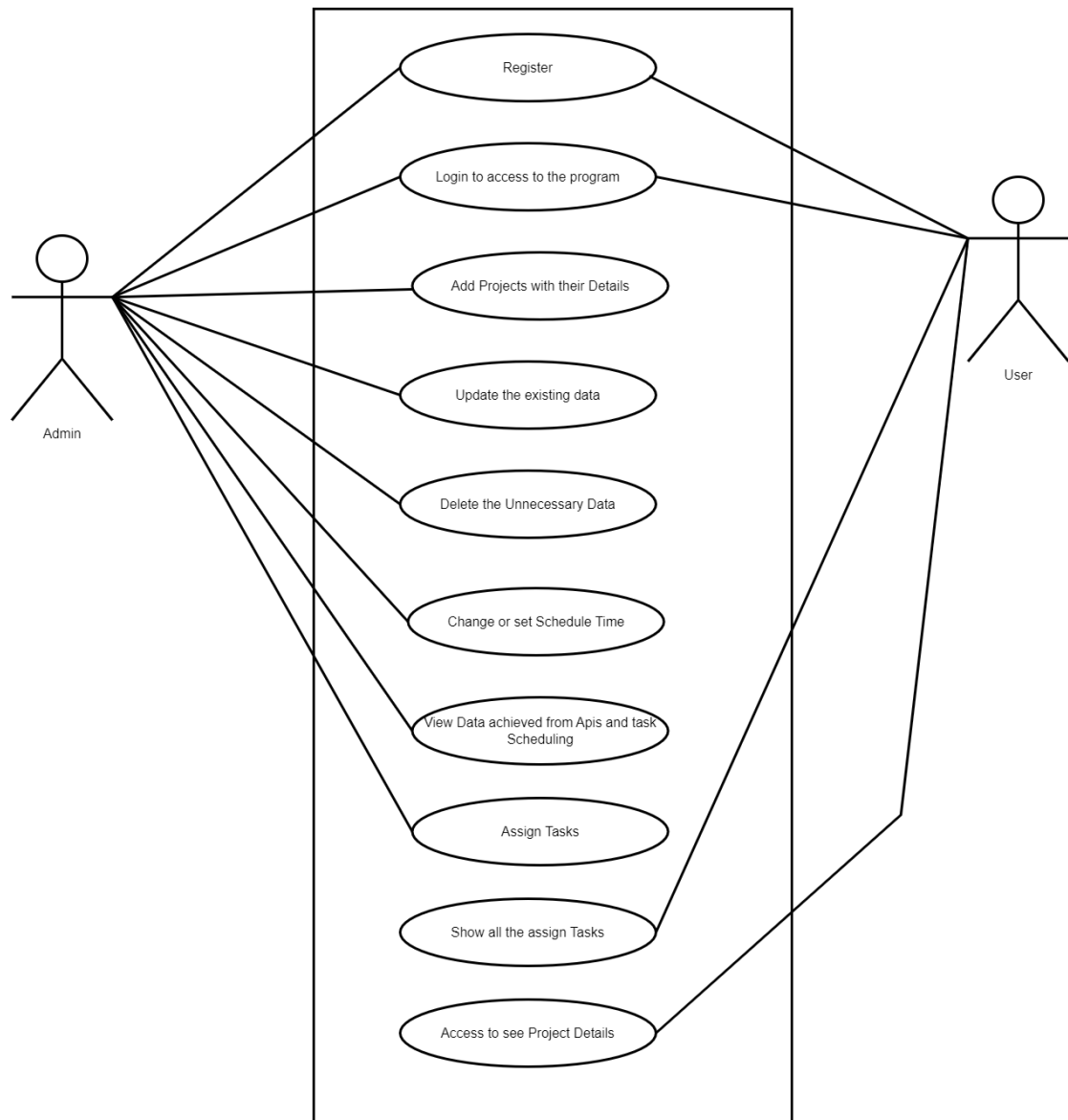


Fig 4.2: Use-case Diagram

4.4.3 Use-case Description

A use case description is a textual representation of how a particular system or software application is expected to be used by its users. It outlines the interactions between the users and the system, describing the various steps and actions involved in achieving specific goals or tasks.

Table 4.1 Use Case Description (Add Data)

Use-case Identifier	UC1: Add Data
Primary Actor	Admin
Secondary Actor	User
Description	Admin shall be able to add data like projects and other details.
Pre-condition	Admin should be login into the system
Post-condition	Admin can able to add new data.
Success Scenario	New entry successful.
Failure Scenario	The new data entry is unsuccessful.

Table 4.2 Use Case Description (Update Data)

Use-case Identifier	UC1: Update Data
Primary Actor	Admin
Secondary Actor	User
Description	Admin shall be able to update existing data like projects and other details.
Pre-condition	Admin should be login into the system
Post-condition	Admin can be able to update existing data.
Success Scenario	Update successful.
Failure Scenario	The update fails.

Table 4.3 Use Case Description (Delete Data)

Use-case Identifier	UC1: Delete Data
Primary Actor	Admin
Secondary Actor	User
Description	Admin shall be able to delete existing data like projects and other details.
Pre-condition	Admin should be login into the system
Post-condition	Admin can be able to delete existing data.
Success Scenario	Delete successful.
Failure Scenario	The delete fails.

Table 4.3 Use Case Description (Set Schedule Time)

Use-case Identifier	UC1: Set Schedule Time
Primary Actor	Admin
Secondary Actor	User
Description	Admin shall be able to set as well as change the schedule time.
Pre-condition	Admin should be login into the system
Post-condition	Admin can be able to set and change time of task scheduler.
Success Scenario	New Time Set Successful.
Failure Scenario	Time set Fails.

CHAPTER V CONCLUSION

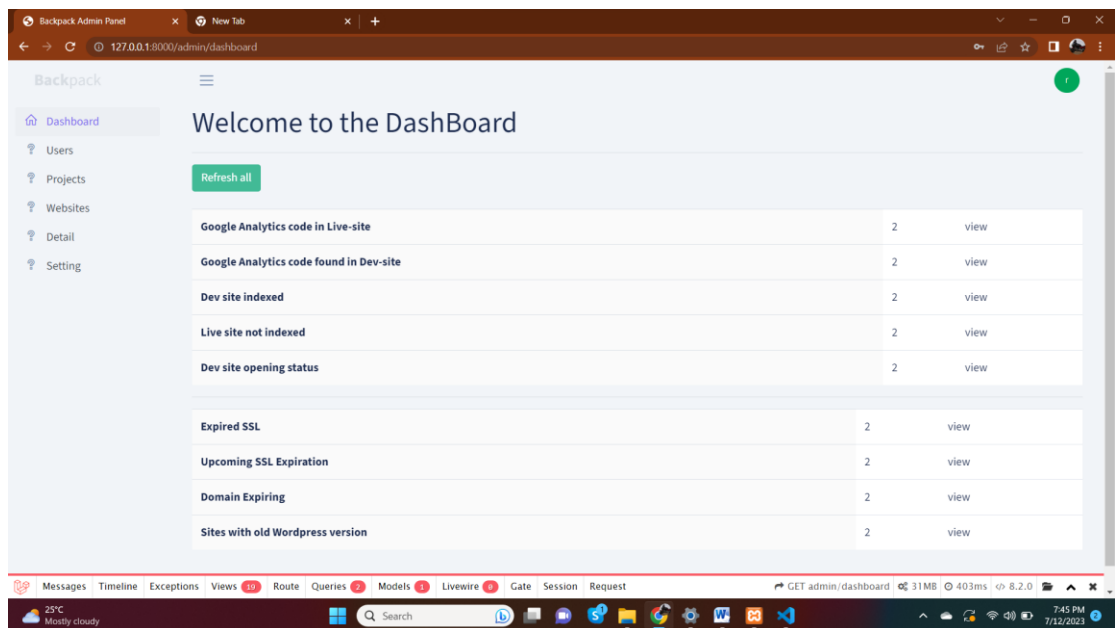
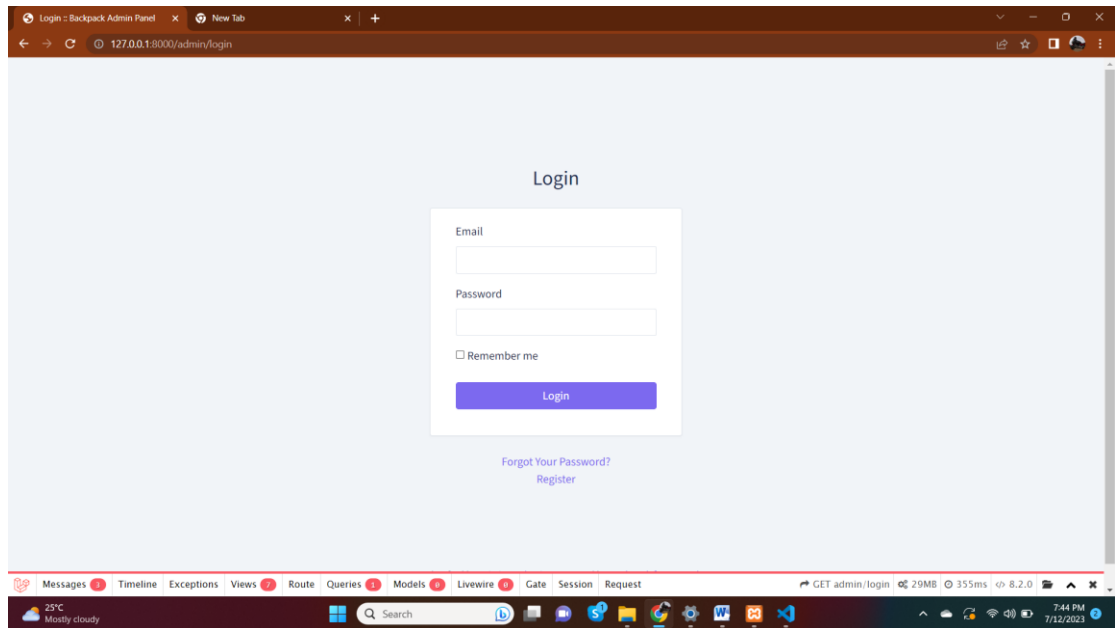
5.1 Conclusion

I am very thankful to the organization and all the team members who have helped me a lot in need. It was a wonderful experience to work at an IT company like Tulips Technologies. I was able to polish my skills and able to learned a lot more of the stuff and also about the growing IT industry. It was a platform for me to learn about the professional environment and develop a professional attitude by comparing it to our studies. From this internship, I am now able to develop web-based applications using the Laravel framework and with the package Backpack, able to secure applications as well as able to find bugs, able to use various packages and implement them appropriately in the application to make it more standard.

5.2 Lesson Learnt

Throughout my experience in Laravel development, I have learned valuable lessons including embracing Laravel's ecosystem, leveraging its ORM tool (Eloquent), building modular and reusable components, adopting test-driven development (TDD), and utilizing caching and optimization techniques. These lessons have improved development speed, code quality, scalability, flexibility, and application performance. By implementing these practices, the organization can benefit from efficient project delivery, cleaner codebases, scalability, and enhanced software performance.

Appendices



Projects : Backpack Admin Panel x New Tab x +

127.0.0.1:8000/admin/projects

Backpack

Dashboard
Users
Projects
Websites
Detail
Setting

Projects Showing 1 to 7 of 7 entries. [Reset](#)

[+ Add projects](#)

Search...

Project name	Project start	Project deadline	User	Status	Created	Actions
Tulips	-	-	-	Inactive	15 Jun 2023, 07:31	Preview Edit Delete
sokfotograf.se	-	-	-	Active	6 Jun 2023, 12:05	Preview Edit Delete
Tema	-	-	Sabin Tako , Ram	Inactive	27 Apr 2023, 09:59	Preview Edit Delete
abc	-	-	Rajan Prajapati , Sabin Tako	Inactive	12 Apr 2023, 09:19	Preview Edit Delete
Jambotours	-	-	Rajan Prajapati , Sabin Tako	Inactive	12 Apr 2023, 07:23	Preview Edit Delete
Siwi	-	-	Sabin Tako , Ram	Inactive	12 Apr 2023, 06:52	Preview Edit Delete
Northtrack	-	-	Rajan Prajapati , Ram	Inactive	12 Apr 2023, 06:52	Preview Edit Delete

Project name Project start Project deadline User Status Created Actions

Messages Timeline Exceptions Views Route Queries Models Livewire Gate Session Request

25°C Mostly cloudy

7:45 PM 7/12/2023

Add website : Backpack Admin x New Tab x +

127.0.0.1:8000/admin/website/create

Projects
Websites
Detail
Setting

Project Name *

Northtrack

Project Type *

Live-Site

Website Url

GA Tags

Admin Login URL

Pingdom Register

☒ Yes
☐ No

Worldfence Register

☒ Yes
☐ No

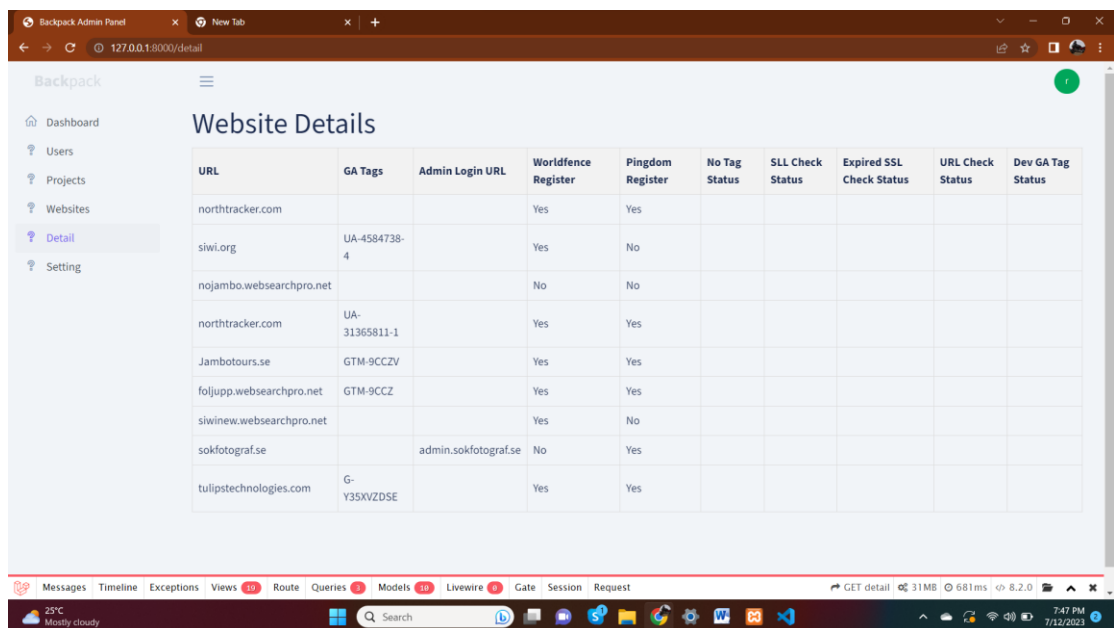
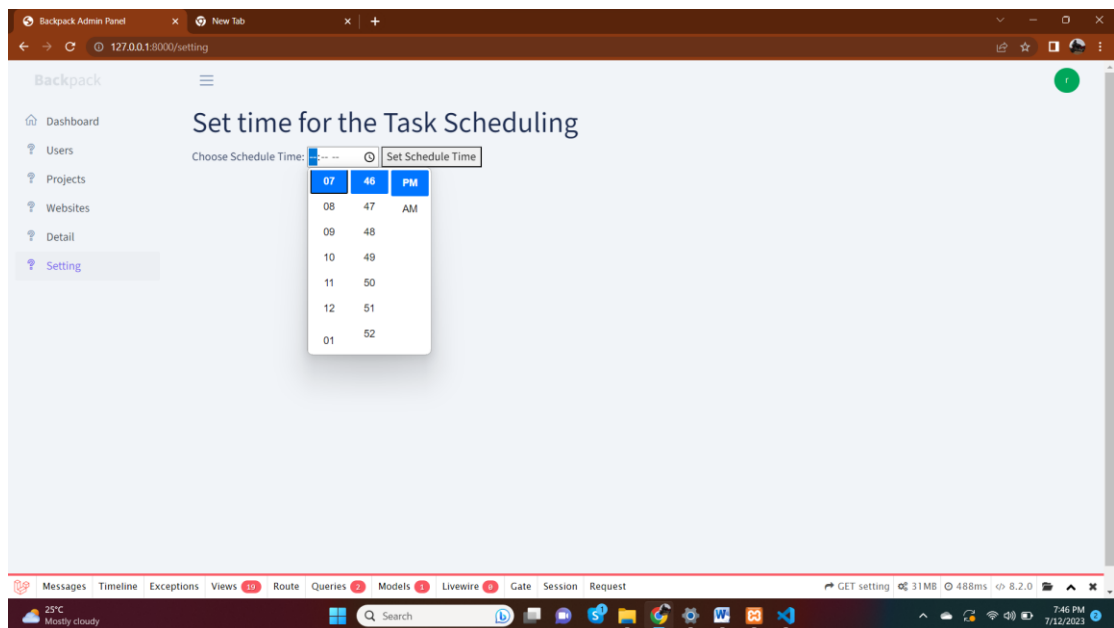
Status

☐ Inactive

Messages Timeline Exceptions Views Route Queries Models Livewire Gate Session Request

25°C Mostly cloudy

7:46 PM 7/12/2023



Backpack Admin Panel x New Tab x +

127.0.0.1:8000/tags

Backpack

- Dashboard
- Users
- Projects
- Websites
- Detail
- Setting

ID	Website	Live Tag	DB Tag	Status
4	siwi.org	UA-4584738-4	UA-4584738-4	Matched
9	northtracker.com	UA-31365811-1	UA-31365811-1	Matched
19	Jambotours.se	GTM-9CCZV	GTM-9CCZV	Matched
20	foljupp.websearchpro.net		GTM-9CCZ	No Google Analytics tracking code found on this website.
22	sokfotograf.se			No Google Analytics tracking code found on this website.
23	tulipstechnologies.com	G-Y35XVZDSEW	G-Y35XVZDSE	Not Matched

Messages Timeline Exceptions Views 19 Route Queries 0 Models 1 Livewire 0 Gate Session Request

25°C Mostly cloudy

7:47 PM 7/12/2023

Backpack Admin Panel x New Tab x +

127.0.0.1:8000/Upcoming-ssl-expiry

Backpack

- Dashboard
- Users
- Projects
- Websites
- Detail
- Setting

Upcoming Expiring SSL

URL	Remaining Days
sokfotograf.se	39
tulipstechnologies.com	54

Messages Timeline Exceptions Views 19 Route Queries 0 Models 1 Livewire 0 Gate Session Request

25°C Mostly cloudy

7:48 PM 7/12/2023