

RIDE IT

**ELAVENDHAN K P - 21Z306
LISHANTH P S S - 21Z316
PRADEESHA S - 21Z329
SHANMITHA P - 21Z346
SRINITHI R - 21Z357
SUPRIYA K - 21Z360**

19Z415 - AICTE ACTIVITY POINT PROGRAMME

report submitted in partial fulfillment of the requirement for the award of degree of

BACHELOR OF ENGINEERING

Branch: COMPUTER SCIENCE AND ENGINEERING

Of Anna University



May 2023

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
PSG COLLEGE OF TECHNOLOGY
(Autonomous Institution)**

COIMBATORE – 641 004

PSG COLLEGE OF TECHNOLOGY

(Autonomous Institution)

COIMBATORE – 641 004

RIDE IT

Bonafide record of work done by

**ELAVENDHAN K P - 21Z306
LISHANTH P S S - 21Z316
PRADEESHA S - 21Z329
SHANMITHA P - 21Z346
SRINITHI R - 21Z357
SUPRIYA K - 21Z360**

Dissertation submitted in partial fulfillment of the requirements for the degree of

BACHELOR OF ENGINEERING

Branch: COMPUTER SCIENCE AND ENGINEERING

of Anna University

MAY 2023

.....

Dr. V Santhi

Programme Coordinator

.....

Dr.G.SudhaSadasivam

Head of the Department

The candidate was examined in the review held on

.....
Panel member 1

.....
Panel member 2

ACKNOWLEDGEMENT

The AICTE Activity Point Programme project work had paved the way for personal development and creativity as proud volunteers with a sense of achievement and ready to take up projects having a social impact and creating digital awareness. We feel privileged to be associated with such a curriculum in **PSG College of Technology**.

We are extremely grateful to our **Principal Dr.K.Prakasan** for facilitating and extending untiring support in successful completion of the project. We are extremely glad to extend our gratitude to the department **Head Dr. G. Sudha Sadasivam** and **Programme Co-ordinator Dr.V.Santhi** for offering us this opportunity which has made us strengthen our soft skills, leadership qualities and team spirit. We extend our thanks to **Department Placement Co-ordinator Dr.K.Sathiya Priya** who has been the pillar of support.

We would like to take this opportunity to place my sincere thanks to our **Tutor Ms.S.Arul Jothi** for her guidance in our project work and would also like to thank our **Panel members** who have spent their valuable time to aid us for coming out with the good project.

We would like to place our sincere thanks to **Darsana R & Harshada R** for offering us this opportunity and they have rendered their utmost support and made us aware of social issues that gave us the vision to have societal commitment leading to community service.

CERTIFICATE

Certified that this report titled “ ” for the **AICTE ACTIVITY POINT PROGRAMME** project work (19Z415) is a bonafide work of “Elavendhan(21Z306), Lishanth(21Z316),Pradeesha(21Z329), Shanmitha(21Z346), Srinithi(21Z357), Supriya(21Z360)” who have carried out the work for the partial fulfillment CC t of the requirements for the award of the degree of Bachelor of Engineering in Computer Science and Engineering.

Place: Coimbatore

Date : 02-05-2023

Tutor

(Ms. S ARUL JOTHI)

Department Placement Coordinator

(Dr. K SATHIYA PRIYA)

COUNTERSIGNED

Dr.G.Sudha Sadashivam

HEAD

Department of Computer Science and Engineering

PSG College of Technology, Coimbatore - 641004

CONTENTS

CHAPTER	Page No.
Abstract.....	4
1. INTRODUCTION	5
1.1 Introduction	
1.2 Problem Statement	
2. ACTIVITY PLAN	7
2.1 Proposed Plan	
2.2 Estimated time	
3. SYSTEM DESIGN	8
3.1 System requirements	
3.2 Module description	
4. IMPLEMENTATION	13
4.1 Experimental results	
4.2 Discussion on the proposed activity	
5. ACTIVITY LOG	18

ABSTRACT

The primary reason why people don't prefer electric vehicles is because of the unavailability of charging stations. Charging stations, unlike petrol bunks, aren't available everywhere. There always exists a fear as to what might happen if the vehicle runs out of battery. People are worried about more straightforward and faster commuting methods in our country rather than saving the Earth from the ill effects caused by pollution. The project mainly deals with a simple solution to make charging stations more accessible. The solution involves using public electricity and solar panels for the easy and hassle-free charging of Electric Vehicles. This project consists of a scaled down prototype.

A universal charging station charges vehicles of different companies with different batteries with varying charging capabilities, increasing the demand for EVs and ensuring reliability. The easiest way to acknowledge this concept is that the charging mechanism takes to play by simply altering the Current and Voltage to deliver a specific power required by the battery for fast charging. The controllers perform controlled power delivery.

Sharing charging stations are an effective solution for daily usage of electric vehicles charging, however, the area with high demand cannot provide enough stations while there are plenty of stations left idle in remote areas with less demand. The core of the problem is the imbalance of demand and supply. In other words, we need to allocate the charging station to the appropriate locations to balance demand and supply. This study aims to solve the problem of locating charging stations for public electric vehicles (PUEVs), to improve the sharing charging level. We take into consideration the factors affecting charging station locations including mileage, PUEV distribution and passenger distribution.

CHAPTER 1

INTRODUCTION

1.1 Introduction

The E Vehicles charging stations are available only in a few places. Our project area is to identify the locations of E Vehicles charging locations and booking slots for preferred time. Our project work mainly focuses on implementing this in an application/website.

BENEFITS:

- Contribute to building the EV Infrastructure.
- Appeal to employees.
- Tax exemptions.
- Business goodwill.
- Increase the sales.
- People will be able to access the availability of EV stations conveniently.

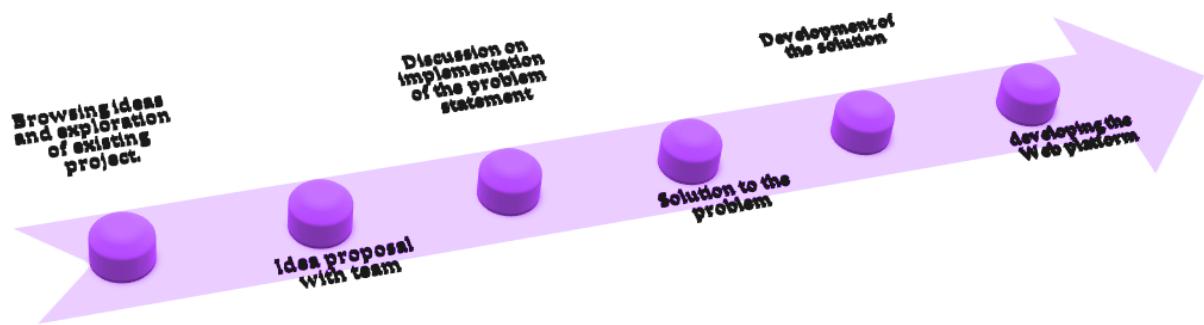
1. 2 Problem Statement

This application will be useful for the common people, who are using Electric Vehicles. This application will display the locations of EV charging stations and it will have slots for booking in the preferred time, as per the user's wish. This application will be user-friendly and easy to access.

CHAPTER 2

ACTIVITY PLAN

2.1 Proposed Plan



2.2 Estimated time

Our plan is to develop a front-end of a web page that helps people to locate and reserve the EV charging station which will be done during this semester and followed by developing the back-end for the next semester. This project covers a whole two semester as we will learn the course Software Engineering that helps to develop the back-end of the web platform.

CHAPTER 3

SYSTEM DESIGN

3.1 System requirements

Django

Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it 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's free and open source. Django is especially helpful for database driven websites.

Django requires Python. The latest version of Django is 4.1 which requires Python 3.8 and above versions. It has a virtual environment so we don't need to worry about the hardware requirements.



3.2 Module description

Authentication system:

An authentication module is a plug-in that collects information from a principal requesting access to a protected resource and checks the information against entries in a data store. If the information provided meets the authentication criteria, the user is validated.

Booking system:

An online booking system is a software solution and reservation system that makes it simple for guests to book and pay for your tours and activities online. Some of these systems also include reporting software for tour operators and other user-friendly tools that help you improve efficiencies and boost bookings.

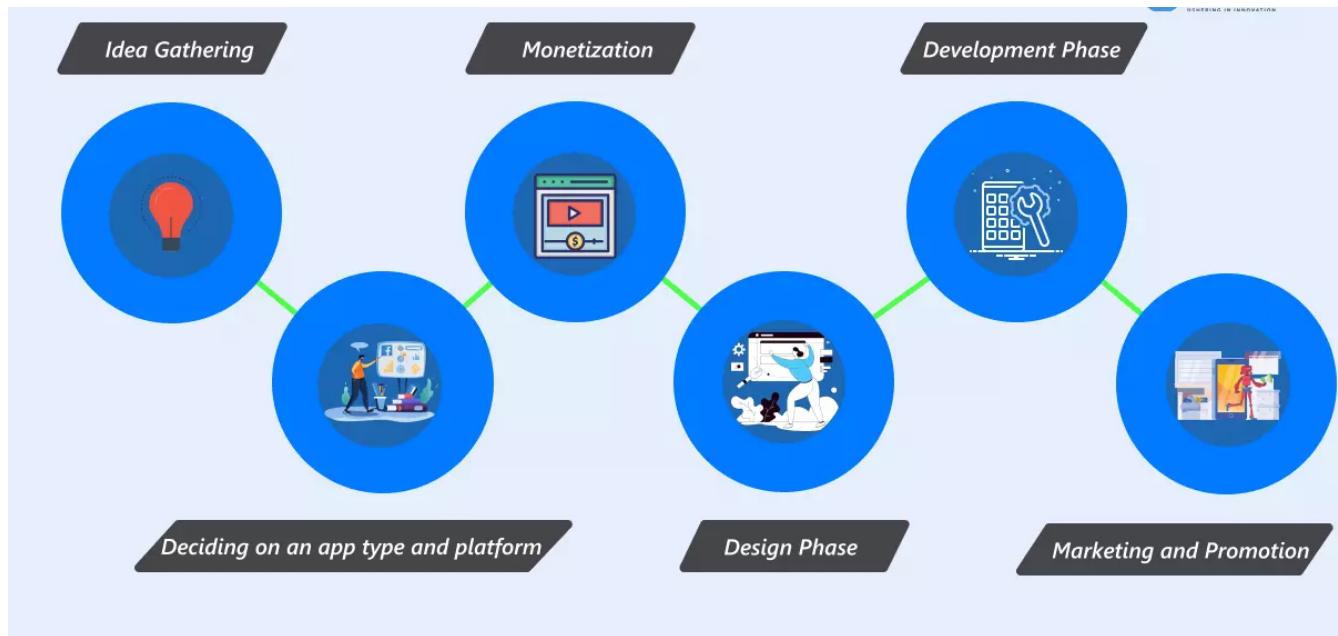
Live tracking:

Real-time locating systems (RTLS), also known as real-time tracking systems, are used to automatically identify and track the location of objects or people in real time, usually within a building or other contained area.

CHAPTER 4

IMPLEMENTATION

4.1 Experimental results



1: Idea Gathering

2: Deciding on an app type and platform

3: Monetization Model

4: Design Phase

5: Development Phase

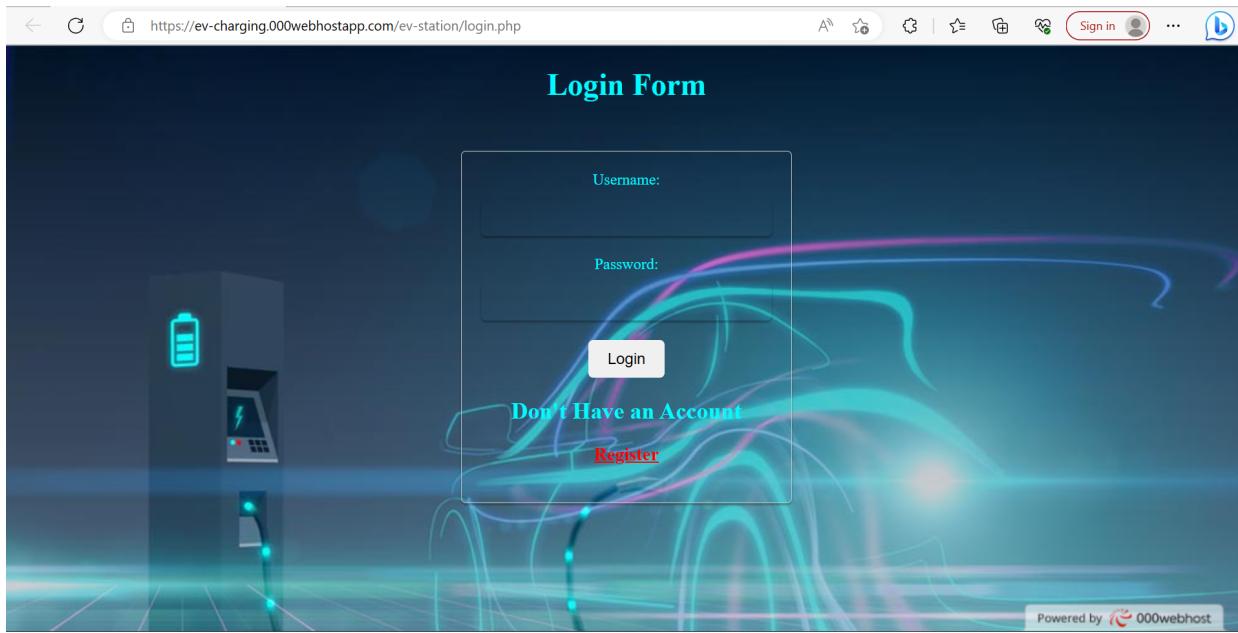
6: Testing and deployment

4.2 Discussion on the proposed activity

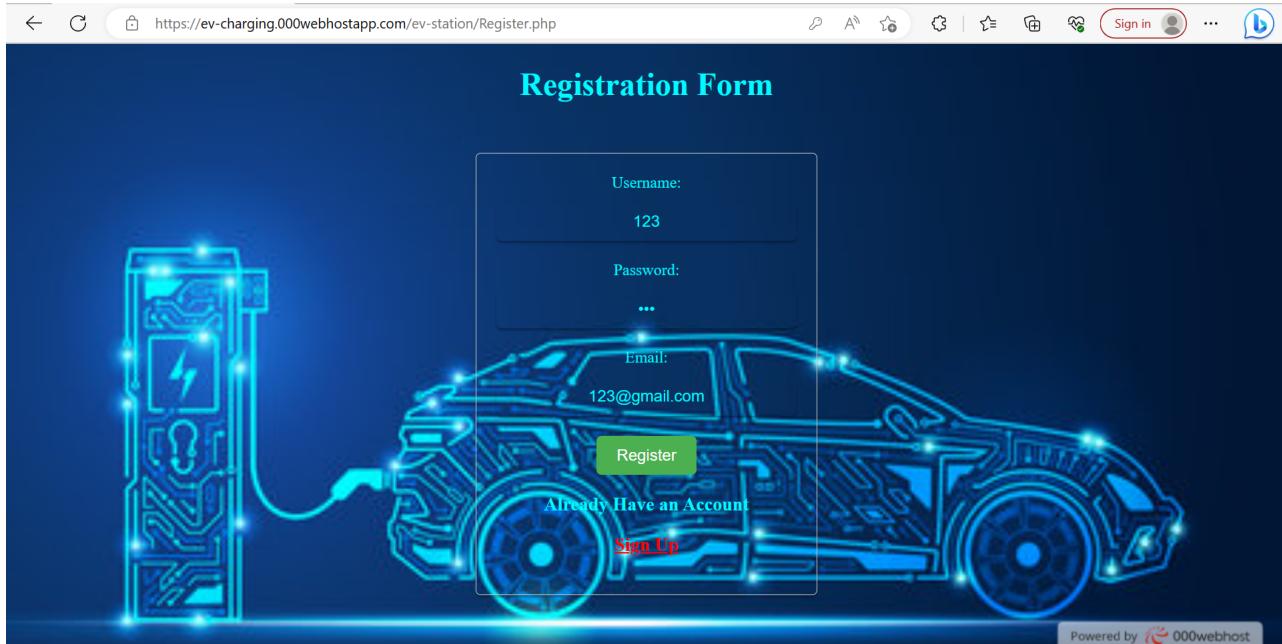
- ❖ It would be better to conclude that new inventions bring new opportunities with electric vehicles.
- ❖ WEB development in these EVs business is profitable as more people move towards electric vehicles and adopt them quickly.

Before developing such websites, it makes sense to research and find their profit potential. Many reasons exist for such adoption, such as:

1. e-vehicle rides are more economical and pollution-free, in comparison to petrol and diesel vehicles. Hence, it further increases the demand for charging stations.
2. EV charging apps are simple and easy to use
3. Using a website is a better option than the available online sources. They are trustworthy, mindful of your security and are put together by a very knowledgeable group of people.
4. Since most of the cost is related to electricity consumption, by showing the price info upfront can help customers budget better. Investors can set different prices based on price band, day or time.
5. Building a mobile website gives you a wide range of advantages, like increased exposure and improved customer retention.

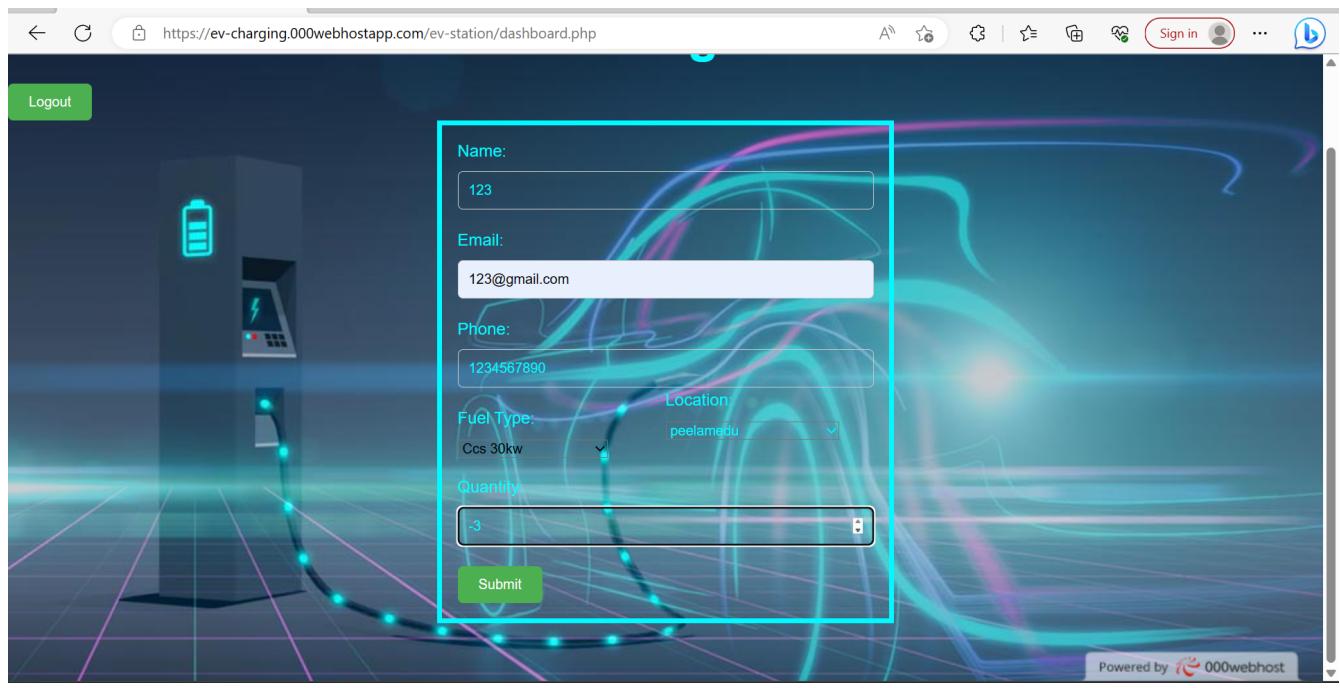
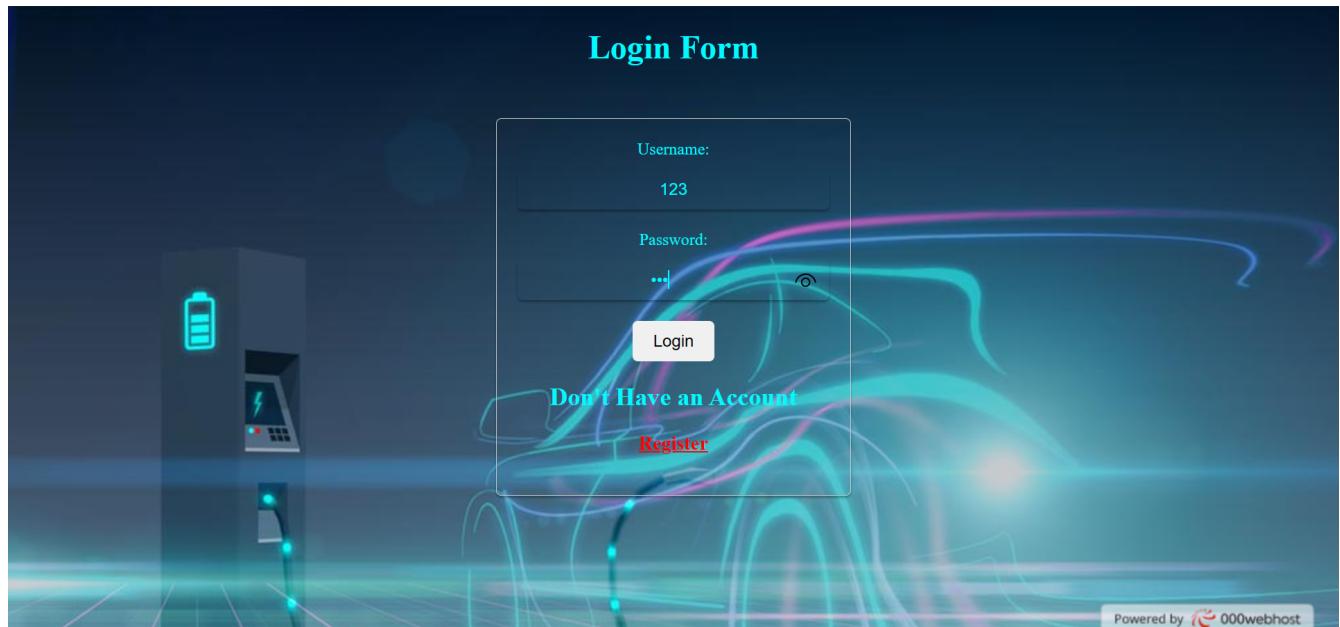


An electric vehicle (EV) charging station website login typically refers to the process of accessing a website that provides services related to EV charging, such as locating charging stations, making reservations, monitoring charging status, and processing payments.



To use an EV charging station website, you may need to create an account by providing your personal information such as name, email, and phone number. Once you have created an

account, you can log in using your credentials, which may include a username and password, or alternatively, you can use a social media account to log in.



It's essential to keep your login credentials secure, and you should not share them with anyone. Additionally, it's essential to follow the website's guidelines and instructions for using their services to ensure a smooth and safe experience for all users.

CONDUCTING SURVEYS:

1) Have you ever used an e-vehicle charging station?

Yes, I have used an e-vehicle charging station before.

2) If yes, where was it located and what was your experience like?

The charging station was located at a hotel near Neelambur and my experience was very positive. The station was easy to use and the charging time was reasonable. The charging station was located in a public parking lot and my experience was not great.

3) What factors do you consider when selecting an e-vehicle charging station?

I consider the location, charging time, and cost when selecting an e-vehicle charging station.

4) How long does it take for you to fully charge your e-vehicle at a charging station?

It takes me around 2 hours to fully charge my e-vehicle at a charging station.

5) What are some of the challenges you have faced when trying to locate an e-vehicle charging station?

Some of the challenges I have faced include not being able to find a charging station nearby or the charging station being out of service.

CHAPTER 5

ACTIVITY LOG

S. No	Activity list	Date/s of activity completed	No. of hours spent
1	Idea planning with team	03.01.2023	4 hrs
2	Idea proposal and planning with team members.	04.01.2023	4 hrs
3	Second proposal document with initial teams.	05.01.2023	6 hrs
4	Discussion on implementation of the problem statement.	07.01.2023	6 hrs
5	Conducting survey and exploration of existing project.	10.01.2023	6 hrs
6	Discussion and development of idea.	27.01.2023	6 hrs
7	Developing app interface.	03.02.2023	6 hrs
8	Implementation of front end.	26.02.2023	6 hrs
9	Partial implementation of back end.	15.03.2023	6 hrs
10	Combining front end and back end.	14.04.2023	6 hrs
11	Drafting of the report	01.05.2023	4 hrs

